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# Stress Reduction and Wellness

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## Chapter 23

# Stress Reduction and Wellness

Seung-A Kim

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### DIAGNOSTIC INFORMATION

#### Daily Life Stress

Modern society has induced a plethora of new media through which people of all ages can be affected by *stress*, including life stress (Holmes & Rahe, 1967), academic stress (Misra & Castilo, 2004), occupational stress (McClenahan, Giles, & Mallett, 2007), music performance anxiety stress (Kenny, 2005), social stress (Meyer, 2003), traumatic stress (Sutton, 2002) and acculturative stress (S. Kim, 2011). The complex nature of modern society is responsible for increasing levels of stress in our daily lives (Edlin & Golanty, 2010). The Annual Stress Report (2012), conducted by the American Psychology Association (APA), found that 44% of respondents felt that the degree of stress in their lives had increased over the past five years. Moreover, one in five respondents were identified as suffering from chronic stress. Stress includes psychological and physiological manifestations (Fink, 2000; Lovallo, 2005). The effects of stress can be significant, as stress can result in serious illnesses such as depression, insomnia, heart disease, cancer, weight problems, or, in extreme cases, suicide (McEwen & Stellar, 1993; McGrady, 2007; Walker, Wingate, Obasi, & Joiner, 2008). Although there have been efforts to increase awareness of the effects of stress on health, only 31% of the respondents indicated that their own stress level could cause poor health conditions. The first step in increasing awareness of stress is to understand the mechanisms of stress.

#### What Is Stress?

There are three major perspectives in the development of stress theory (McGrady, 2007; Lovallo, 2005), known as the *general adaptation syndrome* (GAS) (Selye, 1956), *appraisal and coping* model (Lazarus & Folkman, 1984), and *allostasis* theory (McEwen & Stellar, 1993). Hans Selye, the father of stress research (Lovallo, 2005), observed that the stress response is “nonspecific,” meaning that it has a consistent pattern known as the *general adaptation syndrome* (GAS). He identified three stages of the stress response—*alarm reaction*, *stage of resistance*, and *stage of exhaustion*. When homeostasis—or the ability of the body and mind to regulate itself—is threatened by physical or psychological challenges, we experience tension. Our body automatically responds to the stress with a counterreaction known as *fight or flight*, which is the *alarm reaction*. The entire sympathetic nervous system (SNS) is activated, while the activity under the parasympathetic nervous system (PSNS) is reduced. Blood starts to flow toward the muscles, forcing the heart to beat faster to compensate for the extra oxygen the body needs. The pituitary gland, which controls bodily hormonal functions, starts to secrete hormones such as adrenocorticotrophic hormone (ACTH). This leads to the stimulation of the adrenal glands, which then release the stress hormones cortisol, epinephrine (adrenaline), and norepinephrine. These hormones are responsible for anxiety, stress, and feelings of helplessness (Krout, 2007). This emotional state is also known as the *stage*

*of resistance*, and is the stage where we are susceptible to disease. If this stage is prolonged, it may be possible to exhaust all of the resources needed for the body to return to homeostasis (Cannon, 1929). Eventually, the functions may stop and approach the *stage of exhaustion*. Although Selye's theory described the impact of physical stressors on our bodies, it does not sufficiently explain the cognitive processes that are involved in the stress response.

Thus, stress is viewed as an ongoing relationship between individuals and their environments, especially since individuals do not react in the same way to different stressors. Based on the cognitive stress theory, Lazarus and Folkman (1984) discussed the psychological process of stress. They proposed two important concepts to illustrate the stress response—appraisal (evaluating the event based on one's resources, possible consequences, and their meanings) and coping (how an individual manages this event). Within this framework, stress is defined as: "A relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources" (Lazarus & Folkman, 1986, p. 63). Lazarus (1991) also identified three types of stress: *harm*, *threat*, and *challenge*, and noted that these types of stress elicit different types of emotional responses.

Sterling and Eyer (1988) introduced the concept of *allostasis*, which explained the complex phenomenon of the process of adaptation in response to challenges. This concept is "the idea that when a demand has not been removed or neutralized, maintaining homeostasis may be a source of ongoing wear and tear on the system" (Lovallo, 2005, p. 37). When *allostasis*—or the ability of the body to maintain homeostasis in response to stressors—is functioning well, one's resilience is strengthened. However, when *allostasis* is not functioning well, the chronic stress causes *allostatic load*, which may eventually lead to serious illnesses as described above. Ultimately, an individual will become less capable of coping with new challenges. Moreover, the manner in which an individual reacts to the same stressor differs, depending on his or her relationship with internal and external environments. Thus, social and cultural influences on stress should be considered to understand the whole context under which stress occurs.

### Age, Gender, and Stress

Age and gender play a significant role in stress (Mroczek & Almeida, 2004). Children have their own stressors relating to schoolwork and peer pressure. Their stress levels can be exacerbated by family conflicts, divorce, and other unfortunate events. Adults may feel stressed as a result of multiple responsibilities, including family, friends, work, and interpersonal relationships. In later stages of life, older adults may encounter lower daily stress levels compared to their younger counterparts. However, older adults may react to stress more emotionally (Mroczek & Almeida, 2004). Thus, "the importance of developmental factors in understanding emotion and well-being" is emphasized (p. 356). In addition, stress responses differ by gender (Hall, Chipperfield, Perry, Ruthig, & Goetz, 2006; Matud, 2004). Women may be more vulnerable to anxiety and stress than men, as they generally score higher on chronic stress assessments. In addition, it is reported that women are more likely to use emotion-focused coping strategies to deal with their stress (Matud, 2004). This trend may occur because women are socially and culturally conditioned to be more emotionally expressive than men.

### Personality and Stress

Certain personality traits may be susceptible to stress, since personality can influence one's coping skills and attitudes toward life (John, Naumann, & Soto, 2008; Ward, Leong, & Low, 2004). For example, neuroticism, which is also known as a risk factor for mood and anxiety disorders, is strongly linked to certain levels of stress (S. Kim, 2011). Similarly, individuals who display perfectionistic traits have a tendency to have increased negative reactions to stressful situations as well as poorer coping skills

compared to individuals who are not perfectionists (Montello, 2008; Wei et al., 2007). On the other hand, although the results have been inconsistent (S. Kim, 2011), other personality traits such as openness are associated with lower levels of stress (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004). Individuals who have high *openness to experience* (John et al., 2008) are most likely to cope with stress better than individuals who are more rigid.

## Culture and Stress

Although stress is common to all people, the relationship between one's own culture and stress has been studied (Berry, Kim, Minde, & Mok, 1987; Spector, 2012). As Cuellar (2000) asserts, "culture has been viewed as having a potential impact on numerous aspects of health, illness, and adaptation" (p. 49). For example, African-Americans (Walker et al., 2008) and Hispanic/Latino Americans (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005) experience higher levels of chronic stress than other ethnic and racial groups. This contributes to an increased prevalence of hypertension and diabetes (McCabe, Bostwick, Hughes, West, & Boyd, 2010), as well as substance abuse (Spector, 2012) and other psychological issues (Nadeem, Lange, & Miranda, 2009). Sources of chronic stressors related to culture (e.g., perceived discrimination, neighborhood, socioeconomic conditions, acculturation) may be attributed to neighborhood stress (Meyer, 2003) and acculturative stress (National Institute of Health, 2011).

## Acculturative Stress

Acculturative stress (Berry et al., 1987) is a unique type of stress in which difficulties with cultural adjustment are manifested in particular symptoms such as anxiety, depression, confusion, low self-esteem, and psychosomatic illnesses (Shin, Antonio, Son, Kim, & Park, 2011; Wilton & Constantine, 2003). At various points in the acculturation process, individuals may experience culture shock, resulting in a wide range of physical, social, and psychological consequences. For example, children and adults of immigrant families may display a high rate of acculturative stress and depression (Lara et al., 2005). Racial and ethnic discrimination are significant sources of acculturative stress (APA, 2012). Acculturation strategies, gender, age of immigration, socioeconomic educational backgrounds and social support may also play a role in acculturative stress (Berry et al., 1987). It is also widely reported that acculturative stress is associated with maladaptive coping skills (Wilton & Constantine, 2003). According to S. Kim's (2011) study, English proficiency, neuroticism, and academic stress predict acculturative stress among international students studying music therapy. The greater the cultural differences between one's own culture and the host culture, the higher the degree of acculturative stress. Existing stigmas regarding treatment, as well as language and cultural differences, prevent certain ethnic or race groups from seeking help to cope with these issues (Nadeem, et al., 2009).

Thus, music therapists should thoroughly assess the client's acculturation process and include treatment goals such as maintaining a sense of identity and social support when feeling overwhelmed and stressed. It is important to note that "music therapists must commit themselves to learning about the [client's] various cultural needs and musical preferences; examine their own personal cultural values and how they may be in conflict with those of the [client]; and develop authentic skills in multicultural empathy" (Dileo & Magill, 2005, p. 228). In addition, a therapeutic approach should be chosen with the client's culture and degree of acculturation in mind. For example, Asian and Hispanic groups may express their stress somatically. There are various somatic approaches that may be helpful in treating these clients. It should be noted that yoga, Qigong, and meditation have developed in the East, whereas

progressive relaxation, biofeedback, and cognitive methods are based on Western philosophies which focus more on practical problems rather than one's inner state (Woolfolk, Lehrer, & Allen, 2007).

As discussed above, stress is a complex phenomenon. It is known that the stress response is associated with various factors, such as individuals' differences including age, gender, personality, ethnicity, race, culture, resources, coping skills, and environment. Thus, stress must be understood within a certain context and in a comprehensive way and effective coping skills and stress reduction strategies must be developed: "If you want to improve your performance of any kind, you must control your rest as well as your work" (Gregorek & Gregorek, 2009, p. 65).

## NEEDS AND RESOURCES

### Types, Symptoms, and Sources of Stress

Stress can be classified as positive or negative. For example, when students are assigned to do a project, their reactions to the same task may vary. *Eustress*, a type of positive stress that some may experience, can be a reaction as a result of the energy and motivation needed to complete the task. *Distress*, a type of negative stress, can be a reaction as a result of the assignment being mundane, unchallenging, or too overbearing. Whether the individual is experiencing positive or negative stress, the characteristics of the physiological response are the same. Any change to homeostasis can be stressful. Based on frequency, duration, and intensity, stress can also be divided into three categories—acute, episodic acute, and chronic (APA, 2012). In addition, individuals display various symptoms, as well as various sources of stress.

Acute stress is a short-term stress that most individuals experience daily. The symptoms are easily recognizable and relatively manageable. The physical symptoms include headache and/or stomach and chest pain. The emotional symptoms include feelings of irritability, worry, anxiousness, depression, and/or lack of concentration. Physiologically, individuals may experience a shortening of breath, a rise in blood pressure, an increase in heart rate, and cold hands and feet. It is important to note that these symptoms may disappear when the source of stress is addressed. However, these symptoms may also be experienced more frequently as episodic acute stress.

When an individual experiences episodic acute stress, he or she reacts to stressors intensely. These individuals have a tendency to become impatient, overbearing, and worrisome, and remain hostile to their surroundings. There are overlaps between Type A personalities and individuals experiencing episodic acute stress. In addition, individuals facing episodic acute stress may experience intense headaches, asthma, heart disease, and hypertension. Furthermore, feelings of helplessness, depression, and inadequacies may occur. This in turn weakens the individual's immune system, increasing the chances of physiological problems such as chronic pain, appearance of ulcers, development of chronic fatigue, and digestive problems. Factors that may cause episodic acute stress are related to poverty, family dysfunctions, feelings of helplessness, and/or traumatic childhood experiences. Therefore, individuals experiencing episodic acute stress may need to seek professional help in order to develop a wellness plan and better coping skills.

Chronic stress is an extension of the aforementioned symptoms that can be prolonged and more severe. Chronic stress can lead to suicide or violence and the development of heart attacks, strokes, or cancers. This type of stress may originate from traumatic experiences or early childhood memories that may affect one's personality. A challenge that mediators face is that people experiencing chronic stress often do not recognize their own symptoms or do not recognize their need for treatment because they are accustomed to these emotions and physiological effects. In order to properly deal with chronic stress, medical care and psychological interventions are required (APA, 2012; Woolfolk et al., 2007).

The duration and intensity of all the different kinds of stress may be relieved when an individual learns to accept some of his or her challenges, foster meaningful relationships with others, strengthen resilience, and develop positive thoughts. The physical symptoms of stress may be alleviated by regular medical check-ups, regular exercise, and healthy nutrition. Behaviorally, it may be helpful to examine responsibilities, develop time management skills, identify the sources of the stress, and engage in a wellness program regularly.

Given all the complexity that accompanies stress, how can music therapy help clients decrease stress? The literature review explains how many of the areas discussed above can be addressed through music therapy. Most importantly, individuals can develop proper coping skills through music therapy sessions. Priestley (1994) notes that “everyone must be aware of the stress caused by the need for constant and often traumatic changes to which one must make readjustment without time for the assimilation of the emotional resonances that they cause” (pp. 188–189) and that the role of the therapist is to “find [the client’s] optimum stimulation level” (p. 189).

### Musical Characteristics of Clients with Stress

The type of stress and the symptoms being experienced by the client is often manifested musically in sessions. Some examples based on the author’s observation are included here. In the case of *acute stress*, clients may have difficulty with following directions due to constant ruminations. Clients may move from one activity to another at a faster pace and have difficulty with engaging in relaxation or imagery. In addition, clients may also feel uncomfortable with silence. Further, clients may make constant demands of the therapist during the session or show apathy toward the music and the therapist. Clients with *episodic stress* may exhibit a restless mind and an incoherent and disorganized attitude; they may express strong emotions by playing an instrument loudly, clashing cymbals, or by abruptly ending their playing. On the other hand, some may exhibit a lack of interest in engaging in a musical activity, be unmotivated to contribute musical ideas, and be unwilling to try a new instrument or an activity. In either case, these clients may inhibit their creativity and flexibility in musical expression and react to any change intensely during the session. Because clients are most likely to be impatient, they can easily fall into conflict with other members in the group.

The clients with *chronic stress* may simply refuse to participate in the sessions as they may not acknowledge or be aware that they are experiencing chronic stress. Even though they agree to come to the session, they may remain inactive during the session because they may feel emotionally stuck or depressed. They may have difficulty expressing and connecting with their own feelings and often seek validation from others. They may demonstrate a lack of expressiveness and can be resistant to certain music or relaxation experiences. It is notable that individual differences among the clients in each type of stress should be considered as their coping skills and environments differ.

### Coping Strategies and Music Therapy

Lazarus (1991) pointed out that coping with stress is a process that requires a person’s ongoing efforts in willpower and action in order to overcome overwhelming situations. Problem-focused coping focuses on a person’s coping skills in dealing with the environment and the impact of the coping skills on psychological stress. Emotion-focused coping postulates that the way a person perceives and interprets his environment affects the person’s psychological stress. Thus, when identifying the sources of stress and current coping skills, the first method examines what situational factors cause stress and how the person acts in response. The latter method evaluates how a stressful situation makes the person feel and what the person does to feel better (Lazarus & Folkman, 1984). Table 1 illustrates how these coping skills are addressed in

music therapy. The techniques listed in the table are described in detail in this chapter. Note that (p) denotes problem-focused coping and (e) denotes emotion-focused coping for stress. Both coping methods can be addressed in music therapy sessions.

Table 1. Coping Strategies

Music Therapy Focus	Goals for Developing Coping Strategies	Techniques Used in Music Therapy
Mind	<ul style="list-style-type: none"> <li>a) Identify stressors (p)</li> <li>b) Examine the client's value, goals, "optimum stimulation level" (Priestley, 1994, p. 198) (p)</li> <li>c) Identify one's strengths (p)</li> <li>d) Evaluate current resources and coping skills (p)</li> <li>e) Help the clients prioritize their responsibilities (p)</li> <li>f) Sort out the stressors that can be avoided or altered (p)</li> <li>g) Help the client react to the stressor by adapting to or accepting it (e)</li> </ul>	<ul style="list-style-type: none"> <li>a) Take care of my cultural being</li> <li>b) Assertiveness training</li> <li>c) Journaling</li> <li>d) Imagery</li> <li>e) Music therapy improvisation and desensitization</li> </ul>
Body	<ul style="list-style-type: none"> <li>a) Promote exercise regularly (p)</li> <li>b) Set aside relaxation time to help reduce the intensity of emotional reactions (e)</li> </ul>	<ul style="list-style-type: none"> <li>a) Music-assisted breathing</li> <li>b) Yoga, tai chi</li> <li>c) Psychodynamic movement</li> </ul>
Spirit	<ul style="list-style-type: none"> <li>a) Spend time and share feelings with a support group, which buffers the person from the negative effects of stress (e)</li> <li>b) Engage in an enjoyable activity daily (p)</li> <li>c) Connect with others (e)</li> <li>d) Utilize community resources (p)</li> <li>e) Keep a sense of humor (e)</li> <li>f) Adopt a perspective to look at challenges as opportunities (e)</li> </ul>	<ul style="list-style-type: none"> <li>a) Chanting</li> <li>b) Community jam</li> <li>c) Celebrating life</li> <li>d) Group work</li> <li>e) Tai Chi</li> <li>f) Imagery</li> <li>g) Expand creativity</li> <li>h) Use one's energy in a more productive way</li> </ul>

## Wellness Development

Practiced in many Eastern cultures and ancient societies (Roskam, & Reuer, 1999), the wellness model (Dunn, 1977) advocates a holistic approach that connects the mind, body, and spirit (Grocke, 2009;

Shoemark, 1987). A state of well-being is defined as “an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction with the environment in which he is functioning” (Dunn, 1977, pp. 4–5). As a preventive intervention as well as a cost-effective method, wellness programs include nutrition, physical exercises, stress reduction, regular medical check-ups, mind-body interventions, and meditations (Belgrave, Darrow, Walworth, & Wlodarczyk, 2011; Ghetti, Hama, & Woolrich, 2003). The wellness model is based on the belief that the individual is capable of affecting one’s health status by actively participating in treatment decisions, promoting a healthier lifestyle, adopting a more optimistic attitude, being more involved in the community, and maintaining preventative measures (Krout, 2007; Scheve, 2004). In other words, the individual takes responsibility for his or her own health. Wellness programs are available in a variety of settings, including educational settings, geriatric workplaces, and community centers (Belgrave et al., 2011; VanWeelden & Whipple, 2004). These settings often include music-assisted wellness programs. The emphasis placed on the wellness program varies depending on where the person is in their stage of life and depending on the needs of the person. Wellness techniques are developed both for therapy sessions and for individuals to reduce stress and increase relaxation. Thus, an individualized wellness program is recommended. However, it is notable that currently group wellness programs are more cost-effective and therefore used more often.

Clientele of all age groups can benefit from wellness programs (Grocke, 2009). Children are of an “ideal age” (Ghetti et al., 2003) to learn about what constitutes a healthy lifestyle and proper coping skills. In addition, “music may be a medium to help young people reduce their negative emotions” (Labbé, Schmidt, Babin, & Pharr, 2007, p. 163). Parents, teachers, and members of the community can work together to help promote the well-being of children. For example, using song lyrics and teaching children wellness concepts, (e.g., brushing one’s teeth and eating healthy foods) increases the awareness of health. Employing structured musical activities will help children engage in breathing exercises or other physical exercises and release tension, improving concentration. By participating in a variety of music ensembles, children can further develop social skills and leisure skills.

In adulthood, “self-awareness and self-responsibility” (Ghetti et al., 2003, p. 132) are emphasized. Wellness programs can be personalized, depending on the individual’s need. Stress management has been predominantly used in wellness programs for adults. More and more, many workplaces implement wellness programs and promote employees’ health: “Stress is a prevalent mental health problem in the workplace, and having a high level of perceived stress is associated with poor work performance, higher health care costs, and poor quality of life” (Clark et al., 2011). Music-assisted meditation and relaxation, such as joining in a musical ensemble, may help lower their stress levels and develop proper coping strategies.

For the elderly, maintaining a state of well-being and effective stress management is important in enabling them to continue their involvement in their community. “Self-responsibility for health, nutrition, exercise, stress management, interpersonal support, self-actualization, and spiritual development” (Ghetti et al., 2003, p. 134) are integrated into wellness programs. Music therapy can be a medium for reducing stress by achieving independence, preventing illness, delaying the normal aging process, continuing social engagements, and developing spirituality (Clair, 1996; Hanser & Mandel, 2010). Well-being means “to remain interested in life and to participate fully in it” (Clair, 1996, p. 33).

As reviewed above, stress can better be understood within a wellness model. It is recommended that one become engaged in such a program as early as possible because a healthy lifestyle will affect a person and his or her experiences throughout one’s life span. While various methods are used to manage stress among Americans (e.g., exercising, reading, spending time with friends or family, and napping), listening to music (48%) has been ranked as the most frequent method of stress management (APA, 2012).



## REFERRAL AND ASSESSMENT

## Guidelines

Referrals come from various sources, including self-referral, parents, caretakers, or professionals who work with the clients. Ongoing assessment is necessary to meet the needs of persons with stress because stress levels are often fluctuating. To utilize session time more efficiently, it may be possible in some cases to send out a music therapy assessment form and ask the client to return it prior to the first session. Then, during the assessment session, the therapist will utilize music activities to assess the client's needs and review the assessment form with him so that pertinent information can be further elicited. An individual assessment session is beneficial, even if brief, because each person understands and experiences stress in a unique way. Guidelines for an initial assessment are as follows:

- 1) **Stress Inventory:** Assess the client's perceived stress level and identify sources of stress, symptoms of stress, and current coping skills. The client's value and "optimum stimulation level" (Priestley, 1994) are also examined. Standardized stress inventories can be used, such as Holmes-Rahe's Stress Scale (1967) or Spielberger's State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983).
- 2) **Music Inventory:** Ask the client to identify his favorite music and relaxing music, as well as music that could cause stress.
- 3) **History of Music Experiences:** Any participation in musical ensembles or musical training as well as the client's wishes to learn about music or musical instruments are noted. Family musical backgrounds are also helpful information.
- 4) **Medical Information:** The client's medical conditions are noted prior to *every* session.
- 5) **Psychosocial Information:** Any traumatic experiences or personal history relating to stress are noted. Spiritual and religious information are necessary to avoid any conflicts regarding music methods.
- 6) **Music Assessment:** During the assessment session, using improvisation and songwriting assess the client's well-being in the physical, psychological, and spiritual domains in relation to stress and healing. Both the therapist and client together can identify underlying causes and stressors of which the client may not be aware. If the member is open to engaging in songwriting, this method is also helpful in identifying any irrational thoughts and expectations when setting goals, "as original musical lyrics may often reveal aspects of an individual's belief systems" (Dileo & Bradt, 2007, p. 533).

During sessions, the therapist should consider the following:

- 1) **Set realistic goals:** Clients often have a tendency to take on more than they can handle, resulting in increased stress levels. It is important for clients to routinely check their daily schedules and make any adjustments to establish realistic daily goals.
- 2) **Help the client to select a preferred music intervention.** Ultimately, he should be able to prevent stress outside of sessions through these self-help methods. Homework assignments may be helpful, e.g., providing recorded music and verbal directions for relaxation.
- 3) **Encourage the client to explore combining other creative methods.** The root of stress comes from ongoing interactions between an individual's perception and his

environment. These methods may enhance the client's flexibility, openness, and coping skills. Recommend music that research has proven to be helpful in managing stress.

- 4) Keep in mind that only the client knows what is right for himself.
- 5) Be resourceful in finding ways to help the client cope (S. Kim, 2011).
- 6) Utilize group settings for clients to have opportunities for exchanging resources and supporting each other.

Having completed the assessment, the therapist designs and implements a treatment plan to manage stress. The following guidelines for music interventions in the treatment of stress are based on the current literature in music therapy and other fields as well as this author's clinical experiences with a wide range of populations. Although these interventions may be adapted to a clinical setting, they are primarily for people with stress or those who are interested in stress prevention.

Most of these methods can be conducted in individual or group sessions with any age group. It is recommended that the therapist implement mind–body integration (Deckro, Ballinger, Hoyt, & Wilcher, 2002) with any of the music interventions for stress reduction. Also, the therapist should experience these methods personally before implementing them with clients. For some members, excessive stress may result from trauma or personality (e.g., Type A, or neurotic traits) and may need to undergo a deeper level of work to resolve the issues causing stress. A client requiring this level of intervention should be referred to a music therapist who is qualified to practice a specific advanced method. Analytical Music Therapy (AMT), Bonny Method of Guided Imagery and Music (BMGIM), or Nordoff-Robbins Music Therapy (NRMT) is recommended. More detailed information about advanced methods can be found in Bruscia (1987).

## OVERVIEW OF METHODS AND PROCEDURES

All four music therapy methods are used for treating stress, in addition to combinations of music therapy methods.

### Receptive Music Therapy

- **Music-Assisted Breathing:** Clients learn and practice diaphragmatic breathing using music to cue the deep breathing response.
- **Stress Reduction Through Movement:** The client breathes and executes gentle movements to music.
- **Tension and Release Body Relaxation:** Clients hold, tense, and relax each muscle group; this procedure is adapted from Jacobsen's (1938) progressive muscle relaxation.
- **Vibroacoustic Therapy:** is the use of the vibratory and acoustic or sound properties of music as a clinical treatment for therapeutic goals.
- **Relaxation for Children:** Children improvise live vocal music and/or use prerecorded music to promote relaxation while they are lying down and listening receptively.
- **Music and Imagery—Favorite Place:** In a relaxed state while listening to music, the client creates an image of a favorite place that will promote the relaxation response.
- **Entrainment:** The client listens to music improvised by the therapist to reduce physical pain.
- **Musical Analytical Meditation (MAM):** The client listens to music improvised by the therapist while focusing on breathing and imagery. It is preceded and followed by a verbal discussion to provide focus for the client's goals.

### Improvisational Music Therapy

- **Vocal Toning—Celebrating Your Authentic Voice:** Clients engage in vocal toning and improvise vocal phrases to express feelings.
- **Role-Playing to Enhance Assertiveness:** Clients improvise lyrics with or without a melody or improvise instrumentally over a structured harmonic accompaniment to affirm one's needs.
- **Rhythmic Drumming—Connecting to Others:** Clients play drums in a structured rhythm using imitative, call-and-response, solo and accompaniment, and free improvisation structures.
- **Psychodynamic Movement:** Clients improvise movements based on their experiences of stress while the therapist provides a grounding accompaniment and interprets the movements musically. Clients may also vocalize while moving.
- **Music Therapy Improvisation and Desensitization (MTID):** Clients access images, feelings, and sensations related to stress and to relaxation and then improvise relaxing music to replace the stressful experience with a calm and relaxing one.

### Re-creative Music Therapy

- **Chanting to Liberate Stress:** Clients create a sound or chants based on a personal affirmation, a prayer, or a line of a song and sing it repeatedly to release stress.

### Compositional Music Therapy

- **Song Composition:** Clients partially or completely create new lyrics to an existing song or compose a new song.

### Multiple Methods of Music Therapy

- **Singing and Accompanying Songs Across Cultures:** Clients sing songs from different cultures and accompany them on instruments. The instrumental accompaniment may develop into an improvisation.
- **Community Jam—Musicking Together:** Clients rehearse, perform, improvise, listen, play, and/or sing with others with the intention of enjoying music together.

## GUIDELINES FOR RECEPTIVE MUSIC THERAPY

### Music-Assisted Breathing for Groups: Breathing Tension Away

*Overview.* In music-assisted breathing, clients learn and practice diaphragmatic breathing using music to cue the deep breathing response. Diaphragmatic breathing is a healthy and normal breathing pattern during which the client uses the abdominal muscles to breathe, instead of the chest muscles. This assures that ample oxygen is delivered to the lungs and relaxes the autonomic nervous system. As a result, it elicits the relaxation state. Diaphragmatic breathing is essential in calming the mind and body and in preparation for meditation. The goals are to learn how to breathe properly, to release tension, and to be more in touch with one's own body.

This method benefits clients who have difficulty relaxing. Such clients may appear anxious, short of breath, easily irritated, and fatigued. Their daily schedule may be hectic. A client with medical conditions such as respiratory problems, cardiovascular problems, or hyperventilation should be monitored carefully. Any client who feels dizzy or light-headed should hold his breath for up to 30 seconds before exhaling. If the symptoms continue, pause the activity and return to it when the symptoms disappear. This method can be used in both individual and group music therapy settings at the augmentative level. It is beneficial for all ages. No specific training is required to implement this method.

**Preparation.** Provide a soothing and comfortable space. The client should be lying down on the floor using a mat or blankets or sitting up straight in a chair. Dim the lights, draw the curtains or blinds, and ensure that the room temperature is comfortable. Precautions must be taken to prevent any distractions (e.g., turn off cellular phone). Inform the client he should wear comfortable clothing and remove eyeglasses and jewelry if appropriate (Clair, 1996). The therapist will need a wide variety of relaxation CDs or music on an iPod or iPad with a good sound system and speakers. Note that commercial music can often be at a relatively fast tempo (Hanser & Mandel, 2010), so it needs to be carefully reviewed prior to the session. The music therapist selects a variety of musical styles for relaxation based on research studies or recommendations from other professionals. The general guideline in selecting relaxing music (Grocke & Wigram, 2007; Hanser & Mandel, 2010) includes a tempo of around 60 beats per minute, which is similar to the average heartbeat; soft volume; long phrases; consistency in dynamics; repetitive, predictable structure and form, and no sudden changes; instrumental music (the lyrics of music are involved with cognitive processing); and avoid heavy metal, punk, and strongly accented rhythmic music.

The therapist may also record her own improvised music that closely matches the client's pace and use the recording in sessions. A hand drum, rain stick, ocean drum, tone bar, woodwind instruments, or synthesizer is recommended. Nature sounds (e.g., water, wind, and waves) may also be incorporated into music.

**What to observe.** The therapist observes the clients' breathing patterns and their reactions and sensations, and assists them in using their abdominal muscles to breathe rather than their chest muscles. Also, observe whether the clients synchronize their breathing with the rhythm of the music. The music may be changed if it does not seem to work well. Anyone who becomes short of breath or dizzy should be advised to stop breathing deeply and return to a normal breathing pattern.

**Procedures.** This method is usually used at the beginning of the session; if so, it may be preceded by a greeting song that is familiar to the clients. The therapist then describes the mechanics and benefits of diaphragmatic breathing, explaining the connection between one's emotional state and breathing. The therapist invites clients to sit in a comfortable position with their feet flat on the floor and their eyes closed. This will lessen any distractions. At this time, it may be helpful for the therapist to demonstrate diaphragmatic breathing to the clients and to share what she observes in terms of their breathing patterns when they practice it. She then begins to play music softly and asks the clients to synchronize their breathing with the rhythm of the music while breathing normally and noticing their natural breathing patterns. The therapist may ask, "*Is your breath short, fast, or long? Do you breathe with your chest or stomach? What does your breathing tell you?*" Clients can then be instructed to put one hand on their chest and the other hand on their abdomen, while slowly inhaling through their noses and then exhaling out of their mouths. This should be continued for several minutes. If the client's hand moves up and down on his abdomen while he is breathing, he is performing diaphragmatic breathing correctly, enabling him to get more oxygen into his lungs. If a client has difficulty doing so, guide the client to expand his abdomen as though filling a balloon for four counts while inhaling, then four counts while exhaling, and then four counts while relaxing. This should be repeated several times, while reminding the client to breathe evenly and fully. Allow the client to breathe at his own rhythm, keeping mindful of the sensation of breathing while listening to the music. Toward the end of the experience, gradually lower the volume of

the music. Once the client has finished, guide him to gently massage his face and wiggle his fingers and toes. At the end of the music, the therapist can ask the client or clients to describe their experiences during the exercise. The therapist should take note of client feedback regarding the environment, verbal directions, and the music to help ensure the effectiveness of future sessions. If this activity is used at the end of the session, close the session with a good-bye song.

*Adaptations.* This breathing procedure can be used as an independent activity or at the beginning of every session, and it can be used with individuals as well as groups. If space is available, it should be performed lying down on the floor using mats. Also, the therapist should encourage the clients to practice the technique at home daily as often as they need. The therapist may record the verbal directions with music so that the clients can practice by themselves at home (Clair, 1996; Hanser & Mandel, 2010).

Another alternative is adapted from Davis, Eshelman, and McKay (1995). This involves making sounds with the breathing. In this technique, the client is instructed to breathe deeply and pause for a moment. Then, exhaling on a slow and even breath, the client allows a natural vowel sound to issue forth from the abdomen; the sound can be anything from a gentle sigh to a guttural animal sound. If the client wishes, he can make any movement, for example, an arm movement along with the sound. The client is instructed to continue to breathe while exploring different sounds until he finds a sound that he connects with. As above, the therapist will ask him to share his experience verbally.

## Stress Reduction through Movement

*Overview.* In this experience, the client breathes and executes gentle movements to music. Clients who experience fatigue, anxiety, restlessness, or depression may need to be energized with gentle movement experiences. When the client's body is relaxed, he becomes more sensitive to it and more aware of tension and breathing patterns that may be contributing to stress. The goals are to increase flexibility and body awareness, and to integrate mind and body.

Some clients may experience pain or aching in their body when they become more attuned to it, or when executing movements. Inform the clients that they should complete movements only within their physical comfort zone. Overstretching or strenuous movements may worsen muscle conditions. This procedure should not be done on a full stomach. Any client who recently received any surgery, has been diagnosed with a heart condition, or has had a prolonged disease is contraindicated for this method unless a doctor has medically cleared him. This method is effective in both individual and group therapy at the augmentative level. It is beneficial for all ages. No specific training is required to implement this method.

*Preparation.* Provide a soothing and comfortable space. The client should begin lying down on the floor using a mat or blankets or sitting up straight in a chair. Prepare the room as in the Music-Assisted Breathing procedure above and inform clients of attire recommendations. Refer to the information in the previous section regarding the characteristics of music that may be used. The therapist should have relaxation-appropriate recorded music, including a wide variety of relaxation CDs. A CD player, iPod or iPad, and good-quality speakers are necessary to play the music.

*What to observe.* Prevent overuse of one side of the body. Encourage clients to freely use their bodies. Observe breathing patterns to determine if clients are breathing productively or holding their breath. Observe the ease or difficulty with which clients execute movements: strength, flexibility, range of motion, and variety of movements. Some older adults may have difficulty due to physical limitations. Assist them as needed. The pace should be flexible.

*Procedures.* This method may begin in a sitting, standing, or lying down position. The client begins by taking long breaths through the nose with the mouth closed using the diaphragmatic breathing technique. Once the client is comfortable breathing in this way, the therapist facilitates deepening the

breathing by counting. If the client is not already standing, ask him to stand in a relaxed position with his feet slightly apart at shoulder's distance and to continue breathing in a normal manner. The therapist then plays the selected music and guides the client to make a slow, easy turning movement from side to side, initiated at the level of the hips. Next, the client draws an imaginary circle in the air with his chin moving counterclockwise first, and then moving clockwise. This will prevent the client from stretching the neck too far back and squeezing the vertebrae in the neck. Next, the client begins with his arms at his side, raises them slowly above the head, and then puts them back down to the side. Following this, the arms might be bent at the elbow and swung gently from side to side in front of the body. At this point, the client may lie down. Then, the client should be instructed to bring his right leg closer to the chest to provide a gentle stretch and then to let go. The same should be done with the left leg, and then with both legs together. Then, bringing both knees up to the chest and holding them gently with the arms, the client can gently make a circular motion to relax the lumbar region before stretching the leg out. Finally, the client should be instructed to find a comfortable position and continue to rest on the mat. After a minute or two, the therapist asks the client to slowly and gently roll over on one side and support the body to come back to a sitting position. A brief check-in with the client is necessary to gain understanding regarding each client's abilities and limitations and to help the client adjust his routine to better meet these needs. It is recommended to practice these exercises for a few minutes each day, preferably in the morning.

*Adaptations.* Yoga (West, Otte, Geher, Johnson, & Mohr, 2004), tai chi, popular line dancing, or other movements can be combined with music to facilitate movement. It is important to encourage the clients to acknowledge their stressors and to attempt to find balance in order to cope with ongoing stress. A beach ball can be utilized as a symbol of a stressor (as a means of letting out aggression). For example, first ask the client to imagine holding a beach ball in his hands. Ask him to describe the shape, size, color, and texture of the ball. In addition, instruct the client to be aware of how the beach ball feels in his hands. Then, the client should be told to do whatever he wants to do with the ball, whether it is throwing it, playing with it, or squeezing it. Eventually, the ball will be thrown away at the conclusion of the imaginative activity.

## Tension and Release Body Relaxation

*Overview.* Clients hold, tense, and relax each muscle group; this procedure is adapted from Jacobsen's (1938) progressive muscle relaxation. The length of the time for squeezing and relaxing is flexible. Clients become more aware of tension and relaxation as they systematically tense and relax each muscle group. This helps them to integrate relaxation for both body and mind (Clair, 1996; Scartelli, 1989). The muscle groups can be divided into a variety of specific groups, depending on the client's needs. The goals are to identify tense muscles, to release tension and to be more in touch with one's body. This method can be practiced in both individual and group therapy settings at the augmentative level. It is beneficial for all ages. No specific training is required to implement this method.

Clients with muscle tension, bodily pain, somatic symptoms, insomnia, irritability and persistent nervousness would benefit from this method. However, it would not be appropriate for clients with hypertension or myocardial infarction because this exercise may result in raising blood pressure or anxiety for them (Clair, 1996). Thus, it would be advisable if the clients consulted with their physician prior to the session. The therapist must inform the clients regarding the contraindications for this method and verify if they have had any physical injuries recently. This technique should not be practiced right after a meal or before physical exercise.

*Preparation.* Provide a soothing and comfortable space. The client should be lying down on the floor using a mat or blankets or reclining comfortably in a chair. Prepare the room as in the Music-

Assisted Breathing procedure above and inform clients of attire recommendations. Refer to the information in the previous section regarding the characteristics of music that may be used.

*What to observe.* Monitor clients, making sure they use their muscles within their comfort zone. If any client seems to be in pain, ask him to discontinue the activity. Closely monitor clients who take medication or have medical conditions. If the therapist observes any client sweating profusely, breathing fast, or shivering, give proper assistance. Clients may begin to feel anxious while doing this activity. In this case, assist them in breathing normally. Any client who feels dizzy or uncomfortable should terminate this activity and focus on breathing naturally while relaxing the body.

*Procedures.* The therapist gives a brief introduction to Jacobsen relaxation and explains that she will verbally instruct them to tense and release various muscle groups. Clients should be reminded not to overtense any part of their muscles. If they feel pain or cramps at any time, they should be instructed to simply focus on the relaxation aspect for that muscle group. She then invites the clients to find a comfortable spot in the room. When the clients are settled and ready to begin the activity, the therapist plays the selected music and instructs them to do a preliminary body scan to become aware of any muscles that are tense or in pain, suggesting that as they do this exercise, they can focus on the tensed muscle to soften and relax it. Next, guide the clients to become aware of their natural breathing rhythm as they listen to the music. Diaphragmatic breathing may also be used at this time. The therapist then instructs the clients to contract and release their muscles, systematically focusing on each part of the body.

The exercise begins with the first muscle group, the hands and arms, including forearms and upper arms or biceps. Begin with the client's dominant hand and arm, instructing him to squeeze the muscles for five to seven seconds, and then relax them for 20 to 30 seconds before moving to the nondominant hand and arm. After the arms have been completed, clients should move to the second muscle group—the head, face, throat, and shoulders. They should begin by tensing and then relaxing the forehead. This should also be done with eyes closed. Next, the therapist should instruct clients to clench their whole face, and then relax. The chest, stomach, and lower back are the third muscle group. It can be helpful to instruct clients to make the sound “shhhh” when they exhale. The fourth muscle group, the thighs, buttocks, calves, and feet, are tensed and relaxed in that order. When the therapist reaches the legs, she proceeds with dominant thighs, calves, and feet, and nondominant thighs, calves, and feet. Each muscle group should be repeated once. If the area is still tense, it can be repeated up to five times. Additionally, throughout the process, the suggestion should be made to the clients that they are feeling more and more relaxed. Finally, instruct clients to squeeze their entire body, relax, and remain in position for a few minutes. The therapist turns off the music and tells them the exercise has been completed, gently bringing the clients back to the sounds of the room and an awareness of their bodies, then counts back from five to one, and then turns the light on. The clients are told they can rub their palms together gently a few times and massage their faces gently before opening their eyes and slowly sitting up.

*Adaptations.* As both tension and release are important components frequently used in music, certain musical elements such as pitch, melody, harmony, texture, phrasing, volume, and timbre are utilized to evoke tension and relaxation responses (Bruscia, 1987). Thus, the therapist selects these musical elements to facilitate the client's physiological responses to help them relax. More detailed information about creating musical tension and release can be found in Bruscia (1987), Robbins and Robbins (1998), and Wigram (2004).

Bruscia (1987) specified five levels of tension in improvisation—hypotense, calm, cyclic, tense, and hypertense (pp. 435–436). First, the therapist should consider what degree of tension and relaxation the client needs and should choose the appropriate musical sound using consonance/dissonance and melodies/harmonies. When creating sounds to evoke muscular tension, they should be louder and have more harmonic dissonance than relaxing sounds. For example, sounds that evoke tension might include

strong accents and syncopations and have harmonies that contain seconds, sevenths, and augmented fourths in their chord structures (Robbins & Robbins, 1998). To release the tension, it is important to use melodic phrases that utilize calm, simple, repetitive, and more predictable sounds in a slower tempo. The use of melodies and simple chords, e.g., triadic, diatonic, octaves, and fifths, can aid in releasing the tension in the body. Pauses in the music and the use of dynamics are also important to consider. The therapist can also reinforce tension or release vocally.

The therapist might also record the verbal directions and encourage the clients to practice by themselves twice a day at home at their own pace (Clair, 1996; Hanser & Mandel, 2010). The therapist can also recommend music that may be suitable for this exercise. Because this activity may help to improve the quality of sleep (Clair, 1996), clients may practice this activity before going to bed.

Another adaptation is to use a short form of the procedure. Instructions for the short form would be: “*First, tighten both fists, biceps, and forearms together and then relax.*” Then, the second and third muscle groups described above can be done together. Finally, the fourth muscle group is treated similarly, saying, for example: “*Squeeze and release. Take a deep breath. Raise your feet and toes toward your face while tensing your shins. Hold and relax. Tighten your calves, thighs, and buttocks together and then relax*” (Clair, 1996, pp. 35–38). Additional procedures are introduced in Clair (pp. 279–295).

As an alternative procedure, the therapist can focus on specific physical symptoms of stress as described in Strauss (1984). The author noted that this procedure should be practiced in conjunction with proper medical care. Start with the breathing procedure as in the Music-Assisted Breathing exercise above. Then guide the client in a directed meditation with a focus on body sensation. Using relaxing music with the characteristics described above, ask the client to notice his thoughts in order to let them go. Then direct the client to an awareness of the parts of the body that are in pain or feel tense. Visualize the pain or tension or sensations in those body parts; while listening to the music, ask the clients to use the fingers of both hands to draw the healing energy from the solar plexus. Clients can be instructed as follows: “*First, place your fingers on the solar plexus for about ten seconds. Concentrate on it. Then move your fingers to the body parts that feel pain and tension, while listening to the music. Let the music energize the body part*” (pp. 95–97). Repeat this procedure until the client’s muscles feel relaxed. Suggest that clients continue to play the same music for at least three months and perform this activity every day in the same location. After practicing exercises at home, clients who are attending a group experience can discuss what relaxation techniques they used, what they learned about themselves, how they will deal with stressors in the future, and how relaxation benefits them (Reuner, 2008).

## Vibroacoustic Therapy

*Overview.* Vibroacoustic therapy is the use of the vibratory and acoustic sound properties of music as a clinical treatment for therapeutic goals. First researched and developed by Professor Olav Skille in Norway in the 1980s (Grocke & Wigram, 2007), there are various forms of vibroacoustic therapy practiced by different professionals. However, the description in this chapter is limited to the practice in which music is used for a specific clinical reason. Vibroacoustic equipment is relatively easy to build using a bed or a chair with a low-frequency bass woofer speaker. Although a variety of music styles can be used, sedative music would be best as it contains low frequencies, is rhythmically neutral, is soft in volume, and is “stable, predictable, and consistent” (p. 226).

The goals for this method include releasing tension; increasing energy; increasing self-regulation; and identifying unconscious material related to stress. Clients who wish to participate in this activity should consult with a physician prior to the treatment. Some individuals may display stress responses, physical or emotional reactions, dizziness, or discomfort. The client with “acute inflammatory conditions, psychosis, pregnancy, hemorrhaging, and active bleeding, thrombosis, hypotension, or [users of]



pacemakers” (Grocke & Wigram, 2007, p. 227) cannot receive this treatment due to side effects. Individual therapy at the augmentative level is suitable. This method is used only for adults. No specific training is required to implement this method.

*Preparation.* This method requires a vibroacoustic bed or chair built with low-frequency woofer speakers. To avoid dissonant tones, select music with low frequencies of 44 Hz and lower. Moreover, relaxing sedative music, as well as the pulsed sinusoidal and low-frequency tones (30–80 Hz) are most effective for experiencing vibrations in the body (Grocke & Wigram, 2007).

*What to observe.* If there are any unusual responses (e.g., crying, shaking), gently call the client’s name and check in with him. Also, adjust the volume according to the client’s needs for that day. He may need an additional blanket or pillow to feel more relaxed. Observe his facial expressions and postures for signs of relaxation. If he is not relaxed, ask him if there is anything that the therapist can do.

*Procedures.* First, always review with the client whether he has any health concerns or is taking any medications. Explain the procedures in detail. It is important that the client knows that he or she has control over the situation by stating that the treatment can be stopped at any time. Grocke and Wigram (2007) provide the following explanation to the client regarding the procedure: “*This 35-minute rest period is for you to relax and listen to the music you have chosen as your preferred music. I am here just to be with you, but we shouldn’t talk during this time. You can listen to the music and relax, and I will read a book*” (p. 222). The client sits in the vibroacoustic bed or chair. The client will begin by engaging in Music-Assisted Breathing. Then begin the music at a low volume and turn the bass tone to zero, gradually increasing it periodically. After the treatment is complete, the client will remain in the seat for about 30 minutes to rest.

*Adaptations.* Depending upon the client’s condition on the day of the session, the frequency and volume may be adjusted accordingly. The time of the treatment is also flexible, depending on the client’s condition.

## Relaxation for Children

*Overview.* Children improvise live vocal music and/or use prerecorded music to promote relaxation while they are lying down and listening receptively. The goals are to release tension and stress, to increase relaxation, and to engage creativity. Children who ruminate, are restless, display short attention spans, have short tempers, or have a hard time self-regulating can benefit from this method. Some may have a hard time adjusting to a relaxing environment. The purpose of the activity should be explained first, and care should be taken to guide them step-by-step. This method can be used in both individual and group therapy settings at the augmentative level. No specific training is required to implement this method.

*Preparation.* A comfortable and soothing environment with dimmed lighting is necessary. A comfortable room temperature, mats, and pillows should be provided. Suitable prerecorded music with a good sound system must be available. Lullabies, nursery rhymes, or classical music (e.g., “Twinkle, Twinkle Little Star”; Prelude: Cello Suite No.1 by Bach) that are familiar are recommended.

*What to observe.* The therapist should note which children are having difficulty settling into the experience. Observe if anyone appears uncomfortable. If a child becomes fidgety or attempts to engage with other peers, approach the child quietly and tell him that it is time to rest. If he still has a hard time, gently massage his back or hold his hand until he becomes quiet. Provide support for those clients who need more assurance. If needed, offer pillows or stuffed animals.

*Procedures.* If recorded music is being used, the first step involves choosing music that appeals to the client or group. Play a few seconds of the opening of a couple selections of soothing music and ask the clients about their music preferences. Then ask them to find a comfortable spot in the room and lie

down on the mats. The therapist informs the clients that she is dimming the lights and begins a relaxation induction that involves a breathing exercise. Soothing music is played, either recorded or improvised: “live music is always very effective because it can be tailored specifically to the [clients], matching their energy closely” (Grocke & Wigram, 2007, pp. 85–88). A 5- to 10-minute session of vocalization by the therapist using a simple harmonic structure may also create a feeling of comfort. Ask the clients to be silent while listening to the music. At times, the children may need to be redirected to the music, for example, “*Let’s listen to the music; you will be quieter, quieter, and quieter.*” The therapist should state that anyone requiring assistance should raise his or her hand. When the music has stopped, the therapist should inform the children to count down from five to one. Once the countdown ends, the lights should be turned back on. The clients can move their arms, shoulders, and legs, and slowly get up. After a brief verbal check-in, the children should put away their mats.

**Adaptations.** Music and movement may be effective as preparation for relaxation. For example, walking and jumping prior to relaxation will help the children to expend their energy and relax better. As they find a spot to lie down, beginning the relaxation with a lullaby or vocalization while the children close their eyes may be helpful. To help them better relax, while music is playing, the therapist may read a fairytale such as *Sleeping Beauty*. Seeing a silk fabric being waved gently in the air during music listening is also recommended to create a soothing visual effect. If the group is an older adolescent group, familiar self-selected music is preferable, and other props, such as a flickering candle, can be useful (Grocke & Wigram, 2007, p. 88).

### Music and Imagery—Favorite Place

**Overview.** In a relaxed state while listening to music, the client creates an image of a favorite place that will promote the relaxation response. The goals in this music imagery experience are to help the client connect with oneself—in body, mind, and spirit—and to achieve a more relaxed state through imagery and personal associations. This method can be effective when clients display somatic symptoms, are very anxious, or have a hectic daily schedule. Clients who are open to utilizing their imagination may benefit from this procedure. It is not appropriate for any clients who have poor reality orientation to participate in the music and imagery experience, as it may lead to hallucinations and delusions (Clair, 1996). In addition, this method may induce anxiety for clients who are uncomfortable in a meditative state or who experience unpleasant associations to past experiences evoked by the particular music used. This method can be used in both individual and group therapy settings at the augmentative level. It is beneficial for all ages. No specific training is required to implement this method, although advanced training in imagery and relaxation techniques is recommended.

**Preparation.** Provide a soothing and comfortable space. The client should be lying down on the floor using a mat or blankets or sitting up straight in a chair. Prepare the room as in the Music-Assisted Breathing procedure above and inform clients of attire recommendations. Improvised live music or recorded music can be used. Art materials (e.g., crayons, oil pastels, sand, board, pens, markers) may be needed. If the therapist uses improvised live music, the verbal directions can be recorded prior to the session, including breathing procedure and guidance during this experience. See Music-Assisted Breathing for indications regarding music choice.

**What to observe.** Closely observe each client's reactions, including facial expressions, body postures, gestures, and sensations. If they appear to be uncomfortable during the imagery, remind them that they can open their eyes and come out of the imagery whenever they wish.

**Procedures.** Before beginning the imaging experience, the therapist should give instructions and choose the music in collaboration with the clients. Instructions include telling the clients that they are going to enter into a relaxed state, and then they will imagine that they are relaxing in their favorite place

while listening to music for approximately 15 minutes. Because each client will imagine his unique favorite place, the clients might begin to consider where that will be before the relaxation begins. It is important to encourage clients to use their senses to observe the image they create (Meritt, 1996). They may see shapes, colors, people, and figures in addition to having olfactory and/or tactile sensations (Bonny & Savary, 1990; Bush, 1995). Also, the therapist reminds clients to remain in touch with their senses, sensations, and images. While this experience is most successful when lying down with eyes closed, clients should be instructed that if at any time they become uneasy with the feelings or images evoked, they may open their eyes and feel free to stop imaging. Next, the therapist plays a couple of excerpts from the recorded music and collaborates with the clients in choosing a musical selection that is preferred or acceptable to all in the group. Alternately, if the therapist is comfortable doing so, she may improvise music to accompany the clients' imagery experience. Appropriate music will enhance the clients' ability to access imagery related to their favorite places.

This activity can be done either sitting down or lying down. The therapist first guides the clients in the procedure described in Music-Assisted Breathing above. Verbal directions should be repeated clearly. To induce a relaxed state, the therapist should use a warm timbre in a medium-range pitch and proceed at a moderate pace to allow the client time to form the image. Note that when working with children in a group, it may be necessary to project the voice with more volume. Immediately following the breathing experience, begin to play the selected music (or improvised music), bringing the clients' attention to their breath and its natural rhythm, and helping clients relax by suggesting that as each thought appears, they allow it to fall away and bring their attention back to the music.

Following the breathing exercise, the therapist states: *"Find a relaxing position and let the tension leave your body. Let the music guide you as it takes you to your favorite place. This can be outdoors by a mountain, ocean, or your house, backyard, wherever it would be ... [pause] ... notice how this place feels. Look around, notice the smells, the temperature. ... Do you notice any particular colors or shapes? Do you see anybody, or are there other people around you? If not, are you content to be alone? Take some time to look around and find your favorite place ... [pause] ... Allow yourself to settle in and feel comfortable in your space. ... Notice the relaxing feeling that comes over you here. Notice the sounds, smells, colors. Notice how your body feels. You are content, happy, and relaxed to be here. ... If your thoughts wander, gently bring them back to your favorite place ...."*

Clients should not be left alone to image without verbal guiding for more than 30 seconds at the time. Thus, at various intervals, the therapist might suggest, *"Notice what is happening now. Has anything changed? What are you aware of? Notice the relaxed feeling in your body and allow it to deepen."* Allowing intervals of 30 seconds between verbal directions will allow clients to enter more deeply into the music and the sensations it evokes. The therapist should notify the clients one minute before the music ends, saying, *"The music will end soon."* When the music ends, direct the clients to a more alert state. Using a normal speaking voice, slowly say, *"The music has ended now. Allow the image to fade, while keeping the relaxing, pleasant feelings with you. Know that this is your special private place and that you can return here whenever you need to."* Then instruct the clients to become aware of their breathing and the sounds inside and outside the room. Ask them to wiggle their fingers and toes and gently move their heads around, and then to place their feet flat on the floor and begin to stretch their arms and any other part of the body that needs stretching. Finally, invite them to open their eyes and come to a sitting position when they are ready.

Before beginning the verbal processing, be silent for a moment and allow the clients to reflect on what they experienced. If the group is ready, have them share what they experienced, including any visual and sensory experiences, as well as any difficulties or challenges. If clients express that they had a difficult time finding imagery, this should be addressed at this time. Clients should be assured that this is not unusual. Each person has a unique way of experiencing imagery, and for some, the image may be a sensation rather than a picture. It may also take some time to be able to focus on the imagery. Some

clients might note that their mind wanders or that they are having negative thoughts. If this occurs, they should be told not to avoid these experiences. Instead, the next time they image, they should simply be aware of the thoughts and breathe with them, releasing these thoughts while exhaling. If they are pleasant thoughts, they should be encouraged simply to stay with them and enjoy them.

After the imagery experience, other creative arts, e.g., drawing, free writing, or movement, can be incorporated to further process it. The drawing “allows recall, keeps participants entrained in their own process, and may suggest new scenes or avenues of exploration, or expand upon the drawing experience” (Grocke & Wigram, 2007, p. 211). Whatever thoughts, feelings, images, and fantasies come up, clients should feel free to write them down. For young children, provide materials such as crayons or sand.

*Adaptations.* To help the clients’ imagery experiences, props such as pictures and flowers can be used. Music incorporated with natural sounds can be used (e.g., birds, water, wind). The therapist can also play live music. Another method can be to suggest that members create motions along with the music. They can be spontaneous, making motions independently or as a group. When working with children, they might be instructed to play with sand to create a favorite place or write about or draw a favorite place while listening to music.

## Entrainment

*Overview.* In this method, the client listens to music improvised by the therapist to reduce physical pain; it is adapted from Dileo and Bradt (1999, 2007). The music improvised by the therapist matches both the client’s perception of pain or discomfort and his perception of healing music that brings relief from pain or discomfort (Dileo & Bradt, 1999). Krout (2007) offers this explanation of the phenomenon, describing entrainment as “the natural predisposition for the human body and its physiologic processes to respond to and synchronize with both its internal and external environments, including sound and rhythm” (p. 137). In the stress relief model, goals of entrainment include reducing stress-related pain, releasing tensions, identifying stressors, increasing self-awareness regarding stress, and achieving relaxation.

This method can be used for clients who exhibit any symptoms of stress, but particularly for individuals with chronic stress and their caregivers. Clients with mental illnesses, hearing difficulties, musicogenic epilepsy, or brain dysfunctions are not appropriate. Cathartic reactions may occur as “relaxed states minimize the client’s defenses and allow psychological issues to be more readily evoked by music” (Dileo & Bradt, 2007, p. 527). The success of this experience is dependent on the improvised music’s capacity to accurately represent the client’s experience of pain or discomfort and relief or relaxation in sound. Thus, the entrainment session is done only in individual sessions. The music therapist should receive special training and supervision to utilize this method (Dileo & Bradt, 1999). This method is practiced at the intensive level.

*Preparation.* Provide a soothing and comfortable space. The client should be lying down on the floor using a mat or blankets or reclined in a chair. Prepare the room as in the Music-Assisted Breathing procedure above and inform clients of attire recommendations. A variety of instruments, including instruments from around the world as well as meditative instruments—for example, singing bowl, didgeridoo, drums, tone bar, ocean drum, gong, rain stick, shakers, mallets, chime, tone bar, and blowing instruments, such as Indian flutes—should be available to afford the possibility of creating a wide variety of sounds. A synthesizer or an electronic piano, tubular bells, ocean drum, guitar, xylophone, and metallophone are also recommended.

*What to observe.* Closely observe the client’s physical and emotional reactions. In particular, be sensitive about nonverbal expression, e.g., how the client responds to the music. For example, observe the client’s breathing patterns and the level of relaxation or tension in body parts. If the client is relaxed, his

breathing will also be calm. The client may experience deeper levels of an altered state and thus may require more assistance to return to an alert state at the end of the experience.

**Procedures.** In an initial discussion, the client is asked to use adjectives to describe in detail what the discomfort, stress, or pain feels like in the body. Help the client describe what the stress feels like, what shape or movement it might have, and the sounds, smells, and feelings associated with the stress. Once the therapist has a clear idea of the pain, she and the client collaborate to find a conglomeration and sequence of sounds that aptly depict the sensation of these feelings. Together, they explore the sounds that match the client's descriptions by using various instruments and adjusting the combinations, intensity, and development of the sounds with the help of the client's feedback. The same procedure is followed to create the client's unique relaxing sounds. Once the client is satisfied with the sounds for stress and the sounds for relaxation, the client lies down, the therapist positions all the instruments she will need within easy reach, and the entrainment procedure begins.

The client closes his eyes and breathes naturally, then indicates to the therapist when he is ready to have the therapist begin to play the stress sounds. The therapist's playing must *resonate* with the stress that the client is experiencing. The client uses hand signals to signify changes in the dynamics and intensity of the sound. The client uses a predetermined hand signal to indicate that he is ready to hear the relaxing or healing sounds, and the therapist continues to play these until the client indicates he is feeling relaxed. The therapist allows the client a few moments to return to an alert state, guiding him back to the room and helping him to become aware of his breathing and his body until he is able to open his eyes and sit up. The client and therapist discuss the experience, acknowledging the stressors in the client's life and their effects, and focus on ways in which music can be helpful in releasing tension and stress. This may help the client to gain further insight into how he can manage stress autonomously.

**Adaptations.** The therapist can record the music that she improvised for the session and allow the client to take it home to use when he feels stress. Another option is to suggest that the client create motions or his own sounds with music the therapist is improvising. The therapist can also join in with her voice to lend support. This might help the client to release anxieties and stress felt in the body. For example, if the client feels tension in one particular area of the body, he can move that area or make a sound that matches it in a way that helps him to release the tension. These motions and sounds can be spontaneous, or the therapist can help the client decide which movements or sounds might help before the music begins.

## Musical Analytical Meditation (MAM)

**Overview.** The client listens to music improvised by the therapist while focusing on breathing and imagery. It is preceded and followed by a verbal discussion to provide focus for the client's goals. This method is adapted from Scheiby's *Analytical Music Therapy Training* (AMT) (2005). The goals are to manage symptoms of chronic stress and traumatic stress, to release tension, and to identify unconscious material relating to stress. This method can be effective when clients display somatic symptoms, are very anxious, or have a hectic daily schedule. Caregivers or individuals who are open to utilizing their imaginations may benefit from it. This method may not be appropriate for any clients who have poor reality testing. In addition, this method may induce anxiety for persons who are uncomfortable in a meditative state or who experience unpleasant associations to past experiences evoked by the particular music used. Thus, prior to the experience, the therapist should verify that the music choice is acceptable to the clients by playing an excerpt from it. This method is used in both individual and group therapy settings at the intensive and primary levels and is beneficial for all ages. It requires specialized AMT training and supervision.

*Preparation.* Provide a soothing and comfortable space. The client should be lying down on the floor using a mat or blankets or sitting up straight in a chair. Prepare the room as in the Music-Assisted Breathing procedure above and inform clients of attire recommendations. A variety of instruments, including instruments from around the world as well as meditative instruments (singing bowl, didgeridoo, North American Indian drums, tone bar, ocean drum, gong, rain stick, shakers, mallets, chime, tone bar, bass resonator bar, and wind instruments such as Indian flute) should be prepared (Scheiby, 2005). A keyboard, marimba, Indian flute, cello, shruti box, tubular bell, ocean drum, guitar, xylimba, and metallophone are also useful.

*What to observe.* Closely observe the clients' words, breathing, vocal sounds, and bodily responses. Observe what type of music and musical instruments are effective for each individual client. Their physical, verbal, and emotional reactions will demonstrate whether they benefit from this activity.

*Procedures.* There are five steps during the session. They are:

- 1) **Assessment:** The therapist gathers significant information on the clients' physical, cognitive, and spiritual domains. In particular, she listens for themes related to stressors and helps clients to identify the sources of the stress and its effects. Next, the therapist gathers information on the clients' preferred music styles and preferred sounds of various instruments in order to choose instruments for meditation. She then provides instructions about the meditation procedure, making certain to tell clients that they can open their eyes if they wish to end the experience at any time. To begin the meditation, she asks the clients to set aside their thoughts related to stressors, find a comfortable seated position, and focus on breathing and listening.
- 2) **Facilitation of Deepening the Breath:** The therapist accompanies the clients' breathing with an improvisation using instruments such as the rain stick, ocean drum, gongs, mouth harmonica, or bass wind instruments.
- 3) **Musically Accompanied Travel:** While the client is in a relaxed position, the therapist will improvise to create meditative sounds. This is best achieved by providing musical structure, repetitiveness, and holding: "[T]he therapist can musically reflect, support, and reinforce the imagery" (Scheiby, 2005, p. 181).
- 4) **Verbal Processing:** Feelings, images, sensations, and thoughts that the clients experienced during the musical meditation are shared in the group or individual session. To increase the clients' insight, the therapist helps each client to identify stress-causing "blind spots" of which he was previously unaware. For example, the therapist might share her observation regarding a client's posture while he was listening to the music in a meditative state. Clients might also process their experiences with other modalities such as writing in a journal.
- 5) **Musical Closure Ritual:** A very clear, short, musical phrase is played to close the session, such as playing one time on the drum or playing a chord on the keyboard. Some may experience deeper levels of an altered state. The therapist then facilitates the clients' return to the present place and time, while reminding them that they can re-create the pleasant meditative state at any time.

*Adaptations.* The therapist can play improvised meditative music led by either her consciousness or by countertransference reactions (Priestley, 1975). The therapist begins to play a steady holding rhythm or ostinato on a harmonic instrument and invites the client to "let go." The therapist instructs the client to embrace all of the noise around him and to surrender to the silence. Advise the client that if he has a thought, he should try to let it go repeatedly. If the clients need more structure, the

therapist may offer more verbal directions. Also, they may discuss their preferences of musical instruments (live music). After the activity, the group may share their experiences or write in a journal.

## GUIDELINES FOR IMPROVISATIONAL MUSIC THERAPY

### Vocal Toning—Celebrating Your Authentic Voice

*Overview.* In this method, clients engage in vocal toning and improvisation to express their feelings. The goals are to discover the client's own voice, to release tension, and to prevent stress. This method can be effective for clients who experience disconnection or imbalance between body and mind or need to release tension, connect with others, or maintain wellness: "Singing and resonating with another, being empathically connected—these are the moments where we can share the different levels of experience with each other" (Uhlig, 2006, p. 83). Although structured vocal improvisation can help relieve stress and tension, it is important for clients to feel in control during improvisation, as they often feel helpless due to the inability to control their stressful situations. Clients with respiratory problems or those who are short of breath may simplify the activity. Clients who have high blood pressure or respiratory problems should also closely observe their physical reactions. This method is practiced in both individual and group therapy settings at the intensive level. This method can be used with both children and adults. No specific training to practice this method is required.

*Preparation.* A quiet and pleasant environment should be provided with chairs in a semicircle. Some melodic instruments (e.g., Tibetan gong, singing balls, tone bar, xylophone, marimba, piano, and guitar) and drums are prepared.

*What to observe.* The therapist observes whether the clients are breathing well to support their voice. Notice if the clients vocalize easily and whether their vocalizations are connected with their emotions. Some clients may need more time than others to fully engage in this activity because they may be uncomfortable or unfamiliar with using their voices. In this case, they may observe what others do and join in when they are ready.

*Procedures.* The clients find a comfortable spot in the room and either sit on a chair or stand in place. The therapist begins with the Music-Assisted Breathing experience. If they are sitting and feel comfortable doing so, clients may close their eyes. When they have completed the warm-up Music-Assisted Breathing exercise, the therapist describes the vocal improvisation to the clients, telling them that they can make any sound that resonates in a place in their body that is comfortable and natural for them. When they have finished, they take another deep breath and sound the same or another tone. The therapist asks them to focus on their internal experience while doing the vocalization. For example, to notice the following: "Is the sound coming out of your abdomen, chest, or throat? Does this sound connect to you physically? How is this making you feel? Are you feeling authentic? Are you feeling tired? Unmotivated? Pleasant? Comfortable or uncomfortable?"

Clients are then invited to join in the therapist's vocalization by imitating what the therapist does or finding a different tone that is comfortable for them. The therapist plays a long note a few times with a steady beat on the Tibetan gong or any tone bar and then vocalizes a low tone of long duration. After breathing, the therapist continues to tone the same tone to support the clients. This continues for approximately 5 to 10 minutes, depending on the energy and participation of the clients. The therapist should ask clients how different tones elicit different physiological responses, if any. The therapist may guide the inquiry by asking clients how their head, neck, chest, stomach, legs, or feet feel after each tone. Each body part should be addressed individually and within reasonable intervals so that the client may have time to evaluate and respond.

In the next phase of the improvisation, the therapist demonstrates a musical phrase and asks the clients to explore creating one as well. Variations with different rhythms—combinations of short and long tones and ascending and descending melodies—can be explored in the group. Then, the therapist accompanies their vocalization on the piano or guitar. Clients can often express their type of stress through improvisation. As the therapist provides a safe and empathetic environment, they feel that they have control over their own vocalization and that they can express any negative emotions that they may have into their improvisation. When this happens, grounding, holding and containing (Bruscia, 1987; Priestley, 1994; Wigram, 2004) are effective techniques that can be utilized. Some examples of grounding are the use of strong octaves or fifths in the bass of the piano, steady pulsed beats on a bass drum, strong chords of a stable tonal nature using typically dominant and tonic chords, and a simple ostinato. To close the improvisation, the therapist plays the gong a few times, letting the sound resonate and die out each time it is struck. During this time, clients are asked again to focus on their internal experiences before slowly opening their eyes. Afterward, clients may either write down or draw what they experienced. The therapist leads a discussion in which the clients share their thoughts and feelings, with a focus on how this method might be used to release stress in their lives.

*Adaptations.* This activity may be done in dyads while clients harmonize with each other. Clients may sit back-to-back to feel the vocal vibrations and support each other. The therapist can encourage clients to be playful—for example, making babbling sounds that represent the relationship between mother and infant. When working with children, it is necessary for the therapist to give more direction (e.g., soft, loud, an animal sound) to help children be expressive.

### Role-Playing to Enhance Assertiveness

*Overview.* Clients improvise lyrics with or without a melody or improvise instrumentally over a structured harmonic accompaniment to affirm one's needs. This method was adapted from Gregorek and Gregorek (2009) and Priestley (1994). The goals are to increase self-awareness and self-esteem, to be more assertive, and to relieve physical symptoms related to stress. Clients who exhibit somatic symptoms or who experience chronic stress would benefit from this method since the inability to voice their needs may affect their level of stress. Clients lacking in self-esteem would also benefit greatly from engaging in this activity. There are no contraindications. This method is suitable for both individual and group therapy for adults at the intensive and primary level. No specific training is required to implement it.

*Preparation.* Place chairs in a semicircle and include hand drums and mallets, gongs, and cymbals within easy reach. The room should be comfortable and similar to a home environment. Paper and pencils, music sheets, and an accompanying instrument, e.g., piano, guitar, drum, and cymbal, for the therapist are needed.

*What to observe.* Clients will demonstrate how comfortable they are in asserting themselves through their physical and emotional reactions. Some clients will need more encouragement than others. Clients who feel uneasy singing their responses may speak them over the accompaniment. Others may prefer to begin by expressing themselves through playing an instrument. The therapist should note the choice of instrument and the volume with which it is played or the content and expression of the lyrics.

*Procedures.* A greeting song is chosen by the group and sung together to open the session. Following this, group members verbally share situations in which they experienced difficulties in their daily interactions with others, and they discuss their interpersonal goals. The therapist invites each client to write down an example of a difficult social situation, and then asks each one to consider something that is essential about that situation and frame this in a thought, feeling, desire, or need. Based on these examples, the clients create a song improvisation while completing the lyrics: “*I think ... I feel ... I want ...*” The therapist provides a simple chord progression, e.g., I-IV-V-I or a blues progression, and



accompanies their singing or recitation on an instrument. Clients who are not comfortable using words to express their needs can opt to choose instruments instead. The therapist may also use a call-and-response format to structure the improvisation. Afterward, clients may journal or draw to reflect on this experience, and then verbally share what it was like for them to express their needs. They may also share strategies for dealing with difficult interpersonal situations.

*Adaptations.* Drum and cymbal can be incorporated. Clients may support and emphasize the feeling behind their words by playing the rhythm of their speech or a basic beat on the drum. For example, if a client has difficulty saying “No” to others, he may play this very strongly on the drum while repeating “No.” Clients should be encouraged to play in the tempo, rhythm, and volume that match their feelings. Another option is to incorporate role-play based on the issues and needs they wrote about. Other group members may provide instrumental accompaniment to match the words and feelings of the clients acting out the parts. The therapist may work on body language, eye contact, body posture, and tone of voice after the role-play and ask the clients to share their observations.

### Rhythmic Drumming—Connecting to Others

*Overview.* Clients play drums in a structured rhythm using imitative, call-and-response, solo and accompaniment, and free improvisation structures. The goals are to relieve stress, to develop coping skills, and to feel a sense of belonging. Clients with stress symptoms that need to be released physically or individuals who feel isolated and are trying to maintain wellness through social contact would benefit from this method. This activity may cause pain for the client with upper-body physical problems. Some elderly clients may also react to loud sounds. Some children may become overstimulated as a result of this method. This method can be practiced in both individual and group therapy settings at the auxiliary level. There are various trainings to facilitate effective drum circles, but no specific training is necessary. It is for all ages.

*Preparation.* Arrange chairs in a semicircle with ample room between them. Provide easy access to a variety of drums and percussion instruments such as hand drums, congas, bongos, djembes, doumbeks, paddle drums, tubanos, shakers, doumbek, tambourines, guiro, cowbells, and gongs along with mallets. Earplugs can be made available for those who are sensitive to loud sounds.

*What to observe.* The therapist carefully observes the clients’ physical and emotional reactions. Some may have unpleasant facial expressions due to the volume of the drum playing. If this happens, offer the client earplugs.

*Procedures.* The therapist leads the Music-Assisted Breathing experience and then invites the clients to choose a drum and introduce themselves by name rhythms on their drums. The therapist demonstrates how to play different drum tones such as the bass tone and high-pitched sounds and introduces techniques such as open, closed, slap, and palm strikes on various drums, asking the clients to experiment with these sounds on their drums. The therapist should begin to play a basic beat in the middle of the drum and then ask the client to imitate the beat on their drums. This leads into a continuous call-and-response where the therapist plays a rhythm that the group imitates and then all return to the basic beat. The alternation from basic beat to call-and-response rhythm continues with different rhythms. Next, while some clients continue to play, the rest will pause their playing and then join in again followed by the therapist’s directions. Alternatively, the therapist can divide the group into two groups and teach each group different rhythmic patterns. While the therapist plays a third rhythmic pattern, she can direct the group to experiment with different dynamics and tempi (e.g., soft, loud, fast, slow), leading with her instrument or predetermined hand signals. Clients can also take turns in being the leader in the call-and-response activity and in leading the musical elements of tempo and volume. After the drumming, the

therapist can lead the group in Music-Assisted Breathing, again followed by a short verbal discussion regarding how it felt to focus on the rhythm and drumming, and the effect this had on stress.

*Adaptations.* Chanting a song such as “Fanga Alafia” or any other vocalizations may be incorporated with the drumming (Reuner, 2008). The therapist may vocalize a melody and do a call-and-response activity with the clients. For visual stimulation, some clients may dance with colored scarves along with the drumming.

### Music Therapy Improvisation and Desensitization (MTID)

*Overview.* Clients access images, feelings, and sensations related to stress and to relaxation and then improvise relaxing music to replace the stressful experience with a calm and relaxing one. Y. Kim (2005) developed this method as part of her doctoral study. A short version of her methods is presented here; detailed information can be found in her article. The goals are to identify stressors, to release tension, and to develop coping skills. Musician clients who experience chronic stress may benefit from this method. Also, clients who are not musicians but interested in improving their performance ability may also benefit from this activity. Clients who are unmotivated or resistant to creating improvisations may need assistance or may be contraindicated. This method is designed for adults and practiced in individual music therapy at the intensive level.

*Preparation.* A variety of tuned and nontuned musical instruments, including pianos or keyboards, guitars, xylophones, drums, shakers, wind chimes, cymbals, rain stick, and ocean drum should be provided for clients. If the improvisation will be recorded, then recording and playback equipment is necessary as well.

*What to observe.* The therapist observes how the client describes his stressors and the characteristics of his relaxing music. The therapist carefully observes the client’s physical and emotional reactions and offers any suggestions for selecting music or instruments.

*Procedures.* The therapist should assist the client in identifying stressors and choosing a relaxing sound. First, the therapist will discuss the major stressors in the client’s life and then discuss how the client would ideally like to feel. The therapist and client then choose instruments that produce sounds that help the client get in touch with his images, feelings, and sensations of calm. Together, therapist and client create two or three improvised pieces of music together to evoke the relaxing, calm feelings. This may be recorded and played back afterward. The therapist and client analyze the elements of the music and the feelings, images, and sensations that were experienced while playing.

In the discussion, the therapist can invite the client to share memories and associations to the music, including early memories and family experiences. In discussing the feelings of relaxation that issue from the improvisation, the therapist can also guide the client in identifying underlying causes of stress and ways of relieving that stress. The therapist might also suggest that clients create relaxing music at home using one’s own voice or easily available sounds such as wind chimes.

The next session should focus on desensitization training. The client is directed to first think about an image related to the stress in his life and note the feelings and sensations he experiences. Following this, the client creates a relaxing image or scene and focuses on the relaxing scene for about 10 to 15 seconds, noting the changes in mind and body. Together, the client and therapist create an improvised musical piece that reflects the relaxing imagery (Y. Kim, 2005, pp. 20–21).

*Adaptations.* The improvisation may be recorded and discussed during the session. It is most effective if the client chooses an instrument that accurately represents his stress. Meditation may also be incorporated with this experience. In meditation, the clients are encouraged to listen to their own rhythms while embracing all of the sounds around them. Those who live with a hectic daily schedule may feel

uneasy being in silence. As clients practice being in silence, they become more aware of their body and mind, and learn to connect to them with greater ease.

As an alternative method, Joanna Booth developed the music, drawing, and narrative (MDN) method adapted from BMGIM (Grocke & Wigram, 2007). In her method, music is used to evoke calm and peaceful imagery, and then it is expressed in both drawing and narrative form. The therapist helps teach the client that he is in control regarding what to draw and write. While listening to this relatable music, the client should express his or her feelings by drawing. When the song is played again for the second time, the client should be encouraged to write a narrative to help “recall” and integrate the relaxing experience.

## Psychodynamic Movement

*Overview.* Clients improvise movements based on their experiences of stress while the therapist provides a grounding accompaniment and interprets the movements musically. Clients may also vocalize while moving. This method (improvised movement to improvised music) is adapted from Priestley (1975). Priestley claims that communicating with one’s own body is “the most primitive and natural form: expressive movement” (Priestley, p. 78). It is important that the therapist addresses the client’s self-awareness as a whole when targeting stress reduction. This includes the client’s body, mind, and spirit. Being aware of the client, as a whole, will help make the music more effective when combined with other modalities. Through moving and speaking and relaxing to music, one learns to relax different kinds of tension. One also learns to be aware of tense shoulders and thighs, and of feelings of anger and jealousy, and to investigate their causes and try to do something about them (Priestley, p. 84).

The goals are to release tension, to develop coping skills, and to improve connections with one’s mind and body. Clients with somatic symptoms, chronic pain, tensed muscles, fatigue, or depressive symptoms may benefit from this method. Although it is encouraged that all clients participate in the movement at some point, some may prefer to observe others in the first sessions and then gradually participate in making motions. Clients who have heart conditions or who are pregnant should be advised to not engage in this activity. Also, clients with physical problems may need assistance and should be advised to move only within their physical capacities. This method can be practiced in both individual and group music therapy settings at the augmentative level. It is used for all ages. It requires specialized AMT training and supervision (Pedersen, 2002).

*Preparation.* A safe environment and ample space between individuals are necessary. Clients should wear comfortable clothing. Live music requires the availability of a variety of melodic and percussive instruments. In some situations, recorded music may be used, and in this case, CDs and a good-quality sound system are required.

*What to observe.* The therapist should assess the client’s physical functioning prior to implementing this method. Prompts may need to be given to encourage clients who are less active or who are reticent to move. Allow clients to observe before moving if they wish. Others may need a demonstration in terms of making a motion along with music. Sensitively observe what type of music is suitable for each individual client.

*Procedures.* Depending on the client’s needs, this method may work better if the therapist starts with a more structured activity and then moves to free movement. The therapist begins with the Music-Assisted Breathing procedure as a warm-up. The therapist then asks the clients to find a comfortable spot in the room and to focus on one’s inner self, imagining how stress feels in one’s body. They might be asked to visualize the shape and sounds of stress. The therapist explains that they will express the feelings of stress in movements and that they are also encouraged to express any sounds they feel while moving. First, it is suggested to utilize lively rhythmic recorded music, e.g., Latin music, to help clients get in touch

with their bodies. While listening to this music, the therapist should encourage clients to make motions in relation to the beats and melodies of the recording (Priestley, 1975). The therapist should then provide an improvisation originating from “a deep and instinctual level,” while the clients are engaged in movements that express what the body feels like under stress (p. 81). “Most important is for the therapist to put his mind and feelings into a condition of limpid contentment and play from there” (p. 82). In order to limit any association to music, atonal improvised music is recommended to match the patient's expression to a given stimulus. To help a client who is reluctant or new to the therapeutic process, the therapist may demonstrate how to make simple motions such as waving their hands or holding their bodies, thereby providing the client with a vocabulary of movements.

After the movement comes to an end, the clients participate in Music-Assisted Breathing to center themselves. Following this, they share their experiences verbally. The therapist leads a group discussion, asking questions such as “*What did your body feel like during the movement? What sorts of thoughts or ideas did you have that you want to share? What sort of mood were you in?*” (Priestley, p. 79).

**Adaptations.** Two music therapists can colead the session, where one leads the activity and the other provides the improvisation for the client. One client may take a leadership role and move to the music, while others imitate the leader in a call-and-response structure. Clients may also practice this method in dyads. While one client creates a movement, the other takes the role of his or her stressor, thus creating a conversation in movement with each other.

Another option is to stretch to the music. In order to assist the clients' movement and stretch as best as they can, use maracas or egg shakers in both hands in either a standing or lying down position. Clients can be instructed to raise their arms high above their shoulders and then high above their heads, as if trying to reach toward the ceiling, and then over and behind their heads. Clients should be instructed to keep breathing deeply, tightening their abdominals, and holding their breath. Next, clients bend toward their feet and touch the ground. They should be instructed to slowly lift their shoulders to their ears, release tension, and return to the normal position while exhaling.

Recorded music may be used, and if so, it should have a steady beat and be rhythmically strong. Recorded music or songs may also be chosen based on a theme or according to a client's preferences. Moving to one's favorite music can increase enjoyment and pleasure, which may consequently lead to a decrease in anxiety and stress. When clients can share their favorite music with others, they feel accepted and acknowledged, which promotes a positive spirit.

## GUIDELINES FOR RE-CREATIVE MUSIC THERAPY

### Chanting to Liberate Stress

**Overview.** Clients create a sound or chants based on a personal affirmation, a prayer, or a line of a song and sing it repeatedly to release stress. The goals are to release tension, to build a stronger identity, and to create harmony between mind, body, and spirit. Repetitious chanting may deepen brain wave activity, increase warmth in the hands, and create a feeling of being centered (Campbell, 1992). Clients with tensed muscles or who are fatigued or depressed may benefit from this method. Some clients may be reluctant to try chanting due to unfamiliarity with this method or due to religious beliefs. There are no contraindications. This method is for all ages and is practiced in both individual and group therapy at the intensive level. No specific training is required.

**Preparation.** A quiet, comfortable room with chairs arranged in a circle is required. Instruments such as a drum, Tibetan gong, or singing bowls may also be used as musical support. If the therapist uses a precomposed chant, she should select one that is relatively slow and free-flowing without being sentimental or sad or heavy in mood.

*What to observe.* The therapist observes how the clients engage in chanting. If they are engaged, they should be in a comfortable posture and have calm facial expressions. On the other hand, if they are not engaged, they may chant in a soft volume or not join in chanting at all. Some clients may also react to the chanting emotionally.

*Procedures.* The therapist begins with Music-Assisted Breathing to center the clients. She asks the clients to choose an affirmation or word based on personal need, e.g., “I can do it,” “I love myself,” or to use a phrase from a prayer or a meaningful song. Clients then close their eyes, find a tone, and sing the word or phrase, using a simple melody and repeating it. The therapist can add gentle and nonintrusive instrumental accompaniment or provide a soft, steady beat on a drum. Self-produced, repeated sounds are most effective for relaxation. If a client cannot think of a word or phrase, the therapist may demonstrate a sound and ask the client to repeat it. For example, the “m” sound is a connector, “om” can move one from the objective world, and “aum” can be sung for a closure. Humming a melody is soothing and can help the members relax. Chants and words can be sung in call-and-response, with the therapist and group repeating the chant after the client sings.

*Adaptations.* Singing a lullaby or precomposed chants can be useful, particularly in the first sessions when clients are being introduced to this experience. There are also many beautiful chants across cultures, such as American Indian chants, Indian chants, and Tibetan chants. Helpful resources are *Circle of Song* by Kate Marks and *Sacred Circles/Affirhythms* by Terry Garthwaite. Both are available from [www.ladyslipper.org](http://www.ladyslipper.org). Singing or playing spiritual songs (e.g., “Down the Riverside,” “Nobody Knows the Trouble I’ve Seen”) or the client’s favorite songs can also be used for liberating stress.

#### GUIDELINES FOR COMPOSITIONAL MUSIC THERAPY

Songwriting is the main approach used in compositional music therapy for stress relief and well-being. Songwriting provides an outlet for a better awareness of stressors as well as self-expression. This is a collaborative activity in which the therapist is equipped with musical knowledge and the clients have their own enriching life experiences as a resource when creating the song. The “product” or song is not the focus, but rather, the focus is on the “creative process.” However, for some members, this creative process may induce stress. The therapist can reduce the stress experienced by some persons in this activity by presenting it in a step-by-step fashion and by adjusting the demands of the task to the comfort level of the participants. Today, music writing computer software programs are also helpful in making this activity more pleasurable.

#### Song Composition—A Song for Myself and for My Community

*Overview.* Clients partially or completely create new lyrics to an existing song or compose a new song. The goals with songwriting are to identify one’s needs, to increase self-expression through music, to discuss coping skills, and to gain a sense of accomplishment. Clients who have difficulty identifying their stressors, want to increase self-awareness about their life patterns, or want to have an opportunity to self-express may benefit from this method. Some clients may feel uncomfortable with the idea of songwriting due to the unfamiliarity of this activity. Thus, the therapist should be sure to demonstrate this method with sensitivity and flexibility; otherwise, it may become another source of stress. This is for adults and is practiced in both individual and group therapy settings at the intensive level. No specific training is required.

*Preparation.* The therapist should prepare a semicircle of comfortable chairs, a board, and markers. A variety of styles of music CDs should be provided, or assistive technology for music composition. This might include an iPod or iPad with speakers, a recording system, Midi keyboard,

and/or any music-writing software such as GarageBand, Cakewalk, Home Studio (Windows), Protastudio (guitar player), and/or Band-in-a-Box IV (Hanser & Mandel, 2010). Harmonic and accompanying instruments such as piano, guitar, and percussion should also be available to play the new song.

*What to observe.* Be sensitive toward members who seem reluctant to contribute an idea. A client with chronic stress may not be motivated to contribute ideas or may not want to engage in the cognitive process. However, these clients may feel more at ease in the musical process. Also, observe members' nonverbal expressions, particularly if a client becomes emotional or shows any physical reactions, positive or negative. Appropriate support and attention should be given to those members.

*Procedures.* The group begins by taking a few minutes for each client to center himself through breathing exercises as described in Music-Assisted Breathing. Next, the songwriting experience begins by choosing a topic. For example, the group may discuss precomposed songs that reflect on the chosen theme. If the theme is friendship as a support system, "A Little Help from My Friends" by The Beatles may be selected as inspiration. The therapist might also introduce a song (either recorded or live) that is suitable for the theme. While listening to the song, the clients should be instructed to apply the song to their personal situations and write down any thoughts, feelings, and images that occur as they are listening. The songwriting procedure has many options. The following are presented in order of most accessible to most demanding.

*Option 1: Filling In Selected Lyrics.* This is also called the cloze method. In this method, the clients fill in a few words or create new verses to a chosen song, keeping some of the original song lyrics and melody. Clients who are new to song composition may find this difficult, and the therapist can offer ideas that may make it more accessible. For example, rhyme is not always necessary. If a client cannot think of a word, another member or the therapist can offer a suggestion. Also clients should be encouraged to "pass" when they cannot come up with ideas. It is important to be flexible, so that clients do not feel an increased level of stress while participating in the stress reduction session.

To facilitate this procedure, the therapist can write words or phrases that come up for clients while listening to the original song on the left side of the board. On the right side of the board, the therapist writes the original lyrics of the song, while leaving a couple of verses blank or bracketed and color-coded. For example, the therapist may write the line "What would you do if I sang out of tune" and leave a blank for the next line. Once the song has been completed and all the ideas the group wants to express are presented, the therapist accompanies the members in singing the song with the new lyrics. This may be followed by a discussion related to internal experiences of stress and contentment while being involved in the process.

*Option 2: Creating New Lyrics.* Depending on the group stage and readiness of the members, the group may create a song with entirely new lyrics. The same procedure as above is used to select a topic. Once the topic is chosen, the group is broken into two smaller groups to discuss images, feelings, thoughts, or memories related to the topic. Based on the discussions, they will create lyrics to the song. One member in each group takes notes on the members' contributions. During the discussion, the therapist should spend some time with each group and provide assistance if necessary. When each group has completed their verse, both verses are written on the board. If necessary, the therapist and group may make changes such as rearranging the lyrics to suit the musical structure or lyrical coherence. This is followed by a performance and verbal discussion as above.

*Option 3: Creating New Lyrics and New Music.* Alternatively, the group may follow the procedure for new lyric creation above, and add to this the creation of a new melody. After creating the lyrics, the therapist plays simple chords that are suitable for the theme and the lyrics. She may begin with two simple chords, for example, play I and IV chords alternating in a steady rhythm, which is a structure that often appears in gospel songs. Other chord choices can be offered to the clients, and once two or three chords have been selected, a client can be asked to read the first line and then hum a melody for the line.

When a client hums the melody, others repeat the same melody. At this point, the therapist and group members may decide to change a few notes in the melody or to continue with the second line in the same manner. This continues until the entire melody is complete. The group may add variations. The clients can discuss a title for the song. When the songwriting is complete, the group sings the song or a volunteer may sing a solo to the group. This is followed by a verbal discussion as above.

*Adaptations.* The themes may include any stressful or unpleasant event or memory, or anything that contributes to stress. For example, clients can be asked to write a letter to their own stress while expressing their feelings, “I feel ...,” “I hope....” Any negative thoughts, pressures, and concerns may be expressed. Also, clients may write about something positive. If a client seems to have a hard time finding words or musical ideas, the therapist may suggest that he listen to their spoken words and, based on these words, they may create a rap song instead. To simplify, the group may use the chord progressions of a precomposed song. As the group becomes familiar with the procedure that is described above, the therapist can add more choices of musical styles. It is important to provide balance between structure and allowing members to make choices. The clients can also create a song for their significant others, following the guidelines above. *Example:* 12-bar blues, a steady rhythm; the 12-bar blues is predictable and the melody repeats, so members are familiar with the three-part structure.

## GUIDELINES FOR MULTIPLE METHODS OF MUSIC THERAPY

### Singing and Accompanying Songs Across Cultures

*Overview.* Clients sing songs from different cultures and accompany them on instruments. The instrumental accompaniment may develop into an improvisation. Thus, this is both a re-creative and improvisational method. This method can be used to help manage acculturative stress (S. Kim, 2011). Acculturative stress occurs when an individual feels caught between two drastically different cultures: the culture of one’s origin and the new culture. Music can be used to increase one’s cultural awareness, enhance cognitive-emotional flexibility, and apprehend other cultures more deeply. The goals are to promote one’s cultural well-being, to resolve internal cultural conflict, and to encourage taking risks and trying new things.

Clients who exhibit any symptoms of acculturative stress, such as fatigue or feelings of helplessness, or clients who want to prevent acculturative stress may benefit from this method. Some clients may be reluctant to share their problems because sharing personal problems may not be a part of their cultural norm, or they may be concerned about sharing their issues because of their legal status. The therapist should explain to all clients that they should share only what they wish to share and that all of the information is completely confidential. Also, music may bring out strong emotional reactions when, for example, singing about a missing family member. Check in with clients throughout the session and after the activity with regard to their emotional state. Individual or group therapy is appropriate at the intensive level, and this method is appropriate for all ages. No specific training is required.

*Preparation.* Create a comforting and welcoming environment. A variety of world music CDs and music books, as well as instruments from around the world such as singing bowls, tubular bells, didgeridoo, drums, tone bar, ocean drum, gongs, rain sticks, shakers, mallets, chime, tone bar, xylophones, metallophones, and blowing instruments such as Indian flutes are required. In addition, a guitar, synthesizer, and piano or electronic piano is helpful for the therapist to provide musical accompaniment. The therapist should have a good understanding of multicultural issues and should be knowledgeable about a variety of world music styles.

*What to observe.* The therapist should be knowledgeable regarding the culture of the clients to help anticipate which client may need more prompts or structure to increase participation. Cultural issues

may come up, and appropriate emotional support should be provided. The therapist should closely observe group dynamics and each client's interactions with other members. Clients' experiences with discrimination may emerge in the session.

*Procedures.* For a warm-up, the therapist may sing a familiar American folk song with the group. The song should contain a chorus line with simple words. Following this, each member of the group shares his own folk music or music that is meaningful to him. The therapist and other group members will accompany his singing on their instruments. This may become a group improvisation utilizing the chord structure of the song played by the therapist. The therapist encourages the clients to try new things, such as a song that is outside of their own culture, and a different way of playing during the improvisation. Also, clients may teach the group a song from their culture, and then everyone sings and plays it together. After the musical experience, clients may either take turns expressing their experiences in one word or engage in a group discussion.

*Adaptations.* Some clients may require more structure, e.g., providing detailed musical and verbal directions. This activity can also be combined with receptive or composition methods: "Familiar songs can be rewritten to become personalized reflections of the patients and/or their families. This technique is cross-cultural and can be used with all ages of [clients]" (Dileo & Magill, 2005, p. 232). Culture-related issues can be expressed through music-making. An example of a referential or song composition theme may be: "I miss you." Clients can also rehearse their songs and present them to family members and friends in a subsequent session.

### Community Jam—Musicking Together

*Overview.* Clients rehearse, perform, improvise, listen, play, and/or sing with others with the intention of enjoying music together. The goals are to release tension, to develop coping skills, and to increase a sense of belonging: Musicking is considered to be a "self-healing practice" (Batt-Rawden, DeNora, & Ruud, 2005, p. 131). In the context of a therapeutic process, clients need different levels of assistance based on their previous experience in instrumental play and their musical skills. In addition, since this is a group setting, the music being played may not be everyone's preferred choice. However, this can become an opportunity to learn to tolerate differences among each other. It is important to encourage the group to be respectful of others' choices while at the same time expressing one's needs. This experience is for all ages and is practiced in group therapy at the augmentative level.

*Preparation.* A semicircle of chairs should be provided, with ample room between chairs. A variety of instruments (piano, guitar, drums, xylophones, ocean drum, rain sticks, shakers, mallets and mats), microphone and recording system, music books, and stand should be set up.

*What to observe.* Prompts and encouragements should be given to clients who are inactive, but it may be that some clients will benefit from listening to others and serving in the role of audience. It is important to create a safe and accepting environment, ensuring that the session will not become another source of stress.

*Procedures.* The group greets each other, and members share how they have been doing since the last session. They then discuss which music method they would like to engage in. This might take the form of an improvisation, singing songs with a specific theme and playing with instruments to accompany the song, or rehearsing precomposed music. If they decide to do an improvisation, they can discuss the theme of the improvisation, e.g., title, and choose an instrument that they want to play to express the theme; alternately, they may do a nonreferential improvisation or a drum circle. If, prior to the session, clients give their consent, the therapist may record the clients singing and playing so that they can listen back to their music. The session ends with a closing song chosen by the group. If the group is cohesive and



develops a strong rapport over time, they might consider inviting friends and family to listen to them perform.

#### CLOSING REMARKS ON METHODOLOGY

The methods described above are in the order of most commonly used in the literature. If it is not specified, the methods are used in either individual or group settings with some modifications. There are benefits to each session format: In individual sessions, the therapist can focus on the client's individual needs and follow his wellness plan. Thus, the client may be more able to open up and progress at a faster pace. In group sessions, clients may experience a feeling of support and a sense of community, which can also be a therapeutic agent to alleviate stress. In any case, the client's preference in the session format is also important to consider. The length and frequency of these sessions depends on the client's individual needs. A small group size, from four to six members, would be preferable. While many of these methods could be used as a complete session, various methods can also be combined in one session. In addition, the particular method used should specifically address the client or clients' goals.

It is therapeutically important for the client to feel in control; therefore, the more choices the client can make during the sessions, the more effective the session will be. However, the music therapist should also assess the client in the beginning of every session. Since stressors are closely related to environmental factors, it is possible that the needs of the client may be different from session to session. The therapist should also be aware whether the client accepts responsibility for his health and whether the client is willing to maintain a certain level of wellness. Thus, choosing a specific method can be done mutually. Also, note that one method is not appropriate for everyone. The therapist should be open to a variety of methods and incorporate them into the sessions to meet the client's interest.

For opening and closing experiences, breathing or toning exercises are particularly beneficial. In most cases, greeting and/or closing songs are also suggested in every session to provide a sense of continuity and stability. For example, sessions might begin with a greeting song followed by music-assisted breathing exercises and the tension and release body relaxation experience. Vocal toning can help clients feel more grounded and might also be indicated at the beginning of a session. These introductory exercises should lead to a more active music experience such as rhythmic drumming, psychodynamic movement, song singing, or song composition. Imagery and other receptive experiences that are less physically active can be coupled with improvisation or singing experiences. Chanting or singing a closing song or doing a group or even doing some breathing with a short imagery exercise can close the session, along with a closing song. In all sessions, the client's preference for the method of stress reduction must be considered. It may be necessary to modify the procedure, given a client's needs and energy level. The therapist should regularly discuss these methods with the client in order to assess what the client prefers from a choice of possible methods that the therapist feels best meets the client's needs.

#### CARING FOR THE CAREGIVER

The concept of *allostasis* describes how prolonged stress can lead to physiopathology. When an individual is unable to maintain homeostasis due to the intensity of ongoing stressors and has exhausted all the resources that he has, the person experiences an "allostatic overload," which is the cumulative cost to the person's well-being. The stress may "not [be] life-threatening stress; however, if they do not manage their stress levels, the ongoing demand of work competes for coping resources, while reducing the ability to cope psychologically or physiologically with new demands that may be imposed by other stressors encountered in daily life" (Lovallo, 2005, p. 37). Caregivers provide care for their loved ones without being paid and often have an outside job as well. They are not necessarily equipped with medical knowledge or

skills for care. According to the American Psychological Association (APA) Annual Report (2012), caregivers, especially older adults, have been identified as a high-risk group (APA, 2012). Many caregivers reported that they are prone to unhealthy behaviors and less likely to change their lifestyles due to their set life circumstances. It is noteworthy that they are susceptible to chronic illnesses such as depression and obesity. With the increase of this population, health professionals must pay more attention to these individuals and continue to study effective stress management and prevention (Myers, 2010).

We as therapists are *helping* professionals. Taking care of ourselves is an integral part of our job, as the nature of this profession consumes a great deal of our energy and sensitivity (S. Kim, 2011; Scheiby, 2005; Priestley, 1994). "Psycho-hygiene" (Jahn-Langenberg, 2001) is the process in which we care for our psychological and emotional well-being to ensure that we provide optimal care when serving our clients. Our ability to do this depends on how well we cope with our own existing stress. To reduce and prevent stress, it is recommended that therapists utilize the activities described in this chapter.

## RESEARCH EVIDENCE

Music and music therapy methods that reduce stress have been found to be effective in promoting well-being and bringing out positive physiological (Knight & Rickard, 2001; Krout, 2007; Edwards & Burard, 2003) and psychological (Clair, 1996; Hanser & Mandel, 2010) effects. The gate control theory of pain (Melzack & Wall, 1965) illustrates how music can diminish or prevent negative stimuli, such as stress (Schwoebel, Coslett, Bradt, Friedman, & Dileo, 2002). When stimuli travel from the brain to the spinal cord, they cause neural gates in the spinal cord to open. The amount of stress that one experiences correlates to the number of neural gates that are open. Interestingly, when music passes through the neural gates, the amount of stress that is experienced can diminish. Since music also affects the limbic system, which controls emotional behavior, it is possible to delay or alter negative emotional experiences by utilizing music. A variety of methods of assessing stress have been used (physiological, e.g., levels of muscle activities, skin temperature, and heart rate, and psychological measures, e.g., State-Trait Anxiety Inventory) to demonstrate the impact of music on stress. Stress-inducing tasks have also been used to examine the effects of music listening (Hirokawa & Ohira, 2003). In addition, a variety of music interventions, including receptive, re-creative, improvisational, and compositional music therapy methods have been examined in different settings, e.g., educational (Fernandez, 2004), workplace (Bittman, Bruhn, Stevens, Westengard, & Umbach, 2003), and wellness centers (Bittman, Berk, & Felten, 2001; Bittman et al., 2005). Music, often combined with other methods, e.g., progressive muscle relaxation (Hernandez-Ruiz, 2005; Jacobson, 1938), meditation (Rosenzweig, Reibel, Greenson, Brainard, & Hojat, 2003), yoga (West, Otte, Geher, Johnson, & Mohr, 2004) and creative arts media (Grocke & Wigram, 2007), has been explored.

### Receptive Music Therapy

Two meta-analyses (Dileo & Bradt, 2005; Pelletier, 2004) present an overview of the effect of music on reducing stress and offer some recommendations for future study. Pelletier (2004) analyzed 22 studies examining the use of music to decrease arousal due to stress. Results suggested that music alone and music-assisted relaxation techniques are effective in enhancing relaxation when subjects are in an aroused condition due to stress. However, due to many variables in stress and the complexity of our mind and body, we do not know the precise nature of the effects of music on relaxation:

The effects of music on relaxation are still difficult to identify based on the large number of relaxation techniques combined with differing musical selections,

the application of music therapy within various populations, different forms and levels of stress, and variations in measurement procedures. It seems a quantitative review of the research is greatly needed and past due (p. 193).

Through an examination of 41 studies with nonmedical populations, Dileo and Bradt (2005, 2007) found that self-report measures brought out higher effect sizes than the studies that employed physiological measures. While there have been inconsistent findings regarding whether relaxing music is more effective when chosen by a researcher vs. the client (Labbé, et al., 2007), due to the Iso principle, it seems that whether a specific piece of music creates a sense of calmness and relaxation depends on the client's preference of (Walworth, 2003) and familiarity with music (Tan, Yowler, Super, & Fratianne, 2012) and personal experience (Hoeft & Kern, 2007). However, familiarity with specific music can also adversely affect relaxation, so it is important to ask clients whether the chosen music has any negative associations. Thus, the therapist uses her training with input from the client to help guide the client in the selection of relaxing music (Dileo & Bradt, 2005). Regardless of the familiarity with the music, predictability of the music and a feeling of security are considered to be significant factors when choosing relaxing music (Grocke & Wigram, 2007).

A variety of types of music, such as classical, New Age, jazz, popular, spiritual, and world, have been examined empirically (Pinkerton, 1996; Smith & Joyce, 2004). While some researchers reported that classical music seems to have a greater effect on relaxation than hard rock (Burns et al., 2002) or heavy metal music (Labbé et al., 2007), according to Dileo and Bradt (2007), nonclassical music is more effective in stress reduction. The authors, however, cautioned that these results might be influenced by the fact that many studies did not consider personal preference and music selection. Interestingly, Hoeft and Kern (2007) studied recorded percussion music that had specifically been composed for wellness music to observe the mood, level of relaxation, energy level, and focus of the listener. Their results suggested that recorded percussion music enhances positive moods. They concluded that less referential music seemed to be more effective in relaxation, as the percussion music can "limit cultural or musical preference bias to modes, musical genre, or lyrics" (p. 142).

Some researchers also compared relaxation techniques that used music and no music (sitting in silence). While Burns et al. (2002) explained that sitting quietly may be a better way to engage in relaxation compared to listening to Mozart or hard rock, Labbé et al. (2007) found that listening to classical music after a challenging mental task can better relax individuals. Additionally, listening to classical music or self-selected music significantly reduced arousal and lowered stress as compared to sitting in silence or listening to heavy metal music.

According to Burns et al. (2002), the type of music does not affect one's physiological experience of stress because the feeling of "relaxed" is cognitive, not physiological, in nature. Thus, self-selected music can significantly reduce arousal and lower stress. Similarly, listening to relaxing music may bring out more of a psychological or emotional response than a physiological response. Labbé et al. (2007) examined both physiological and psychological measures of stress. Heart rate and respiration decreased in all conditions, and heart rate had a greater reduction when classical music and self-selected music were played. Respiration rate demonstrated a greater decrease when classical music and heavy metal music were played. Classical music appears to lower systolic blood pressure (Chafin, Roy, Gerin, & Christenfeld, 2004). Knight and Rickard (2001) played participants Pachelbel's "Canon in D" and found that it prevented an increase in anxiety, blood pressure, and heart rate by a cognitive stressor. It did not affect levels of cortisol and ACTH, but increased salivary IgA. The researchers noted that when the same piece is played repeatedly, it creates feeling of stability and familiarity. The researchers concluded that level of stress is related to the individual's feeling of control over a situation.

Elliot, Polman, and McGregor (2011) attempted to define characteristics of relaxing music for anxiety control. In his study, 84 college students were asked to imagine an anxiety-provoking situation

and then listened to a selection of 30 compositions. They were then asked to identify levels of relaxation in each selection and the musical elements that were helpful in relaxation. Their findings suggest that relaxing music is a personal choice. Tempo is considered to be important, but music that is too slow may be perceived as boring. Similarly, Tan et al. (2012) examined the psychophysical properties of relaxation music and how it relates to music familiarity, preference, and degree of perceived relaxation. The authors concluded: “An individual’s conscious experience of music listening must be considered globally by taking into account the intrinsic musical properties, personal preference, and familiarity with the music” (p. 170). The manner in which an individual perceives relaxing music is related to music preference for both music therapists’ and healthy individuals’ familiarity with and degree of relaxation.

Music listening as a relaxation method is often combined with other creative methods, such as breathing, meditation, cognitive restructuring, and movement (Pelletier, 2004). McKinney, Antoni, Kumar, Tims, and McCabe (1997) found music combined with imagery to be effective in reducing stress. Similarly, music-assisted progressive muscle relaxation with abused women has been found to result in improved sleep quality and reduced anxiety (Hernandez-Ruiz, 2005).

The impact of music on stress has been examined in several specific groups. When pregnant women (Chang, Chen, & Huang, 2008; Hanser, Larson, & O’Connell, 1983) and pregnant teenagers (Liebman & MacLaren, 1991) participated in music listening, they were able to decrease perceived anxiety and stress (Liebman & MacLaren, 1991). A study by Jespersen and Vuust (2012) in which 15 refugees residing in Denmark, many from Middle Eastern countries, listened to classical sedative music found a significant improvement of sleep quality and well-being.

### Improvisational Music Therapy

Active music-making involving improvisation with instruments (Kim, 2005) and with voice (Valentine & Evans, 2001) has also been examined empirically. Singing and chanting, for example, can lower heart rates (Rider, Mickey, Weldin, & Hawkinson, 1991). Grape, Sandgren, Hansson, Ericson, and Theorell (2003) examined eight amateur singers with little to no experience and eight professional singers (6 males and 10 females) who had taken at least six months of singing lessons prior to the study, and gave each a 45-minute singing lesson. The authors found that the sympathetic nervous system of the subjects from the professional group was more activated than those of the subjects from the amateur group. Professionals showed more arousal than amateurs because amateurs considered the singing lessons as a means of self-expression. Singing, therefore, enhanced the well-being of the amateurs more than that of the professionals. Females in both groups showed less endocrinological arousal than males. Cortisol and prolactin levels decreased in women and increased in men; thus, the effects of singing were more stress-reducing for women than for men in both groups (professional and amateur).

There have been studies conducted on the effects of drumming on the immune system of healthy adults (Bittman et al., 2001). Drumming may reduce burnout among health care workers and nursing students (Bittman et al., 2003). For example, Bittman et al. (2001) conducted a study at a mind–body wellness center. Sixty-one subjects were randomly assigned into a total of six groups. There were two control groups (resting while reading and listening to drum music) and four group-drumming experimental models using a variety of drumming music. Drumming experiences in group music therapy showed enhanced specific immunologic measures associated with natural killer cell activity and cell-mediated immunity, compared to those of the control groups.

## Re-creative Music Therapy

Tims (Wellness, n.d.) reported in *AMC Music News* that regular group keyboard lessons for elderly people brought a significant increase in immune hormones, increased feelings of control, and increased socialization, while the levels of anxiety, depression, and loneliness were significantly decreased. Tims strongly believed that “abundant health benefits can be achieved by older people learning to play music in a supportive, socially enjoyable setting” (para. 8). Tims’s study is also confirmed by Hanser and Mandel (2010) and Clair (1996). It is evident that participating in a community choir (Kreutz, Bongard, Rohrman, Hodapp, & Grebe, 2004) or any musical ensemble significantly lowered anxiety, stress, and depressive symptoms in the elderly.

Few studies are found on stress in children (Fernandez, 2004; Ierardi & O’Brien, 2007; Pavlicevic, 2001). Mackenzie and Hamlett (2005) created a community music program called “The Music Together Program” and offered it to families with typical children up to age four. The goals for this program were “to strengthen early attachment, to build social supports and increase the resilience of the family unit, and to reduce the potential impact of stress and adversity” (p. 43). They received weekly one-hour music group sessions attended by 140 parents and caregivers, who were surveyed and provided positive feedback on the effects of the program. They concluded that this program was beneficial for building social support and managing stressful situations. Similarly, a music intervention group for middle school–age children was formed in Sweden (Lindblad, Hogmark, & Theorell, 2007). One hour of music education was provided each week throughout the school year. The results showed that the subjects in the music intervention group had lower cortisol levels, although not significantly so.

## Compositional Music Therapy

Studies on treating stress employing compositional music therapy in a nonclinical setting are scarce. However, there are studies that focus on patients and caregivers in hospital settings using song composition methods (O’Callaghan, 2001; O’Callaghan & Grocke, 2009) suggesting that these methods result in lower stress and provided an opportunity for self-expression through songwriting. The findings can be applied to clinical goals related to stress reductions.

## Multiple Music Therapy Methods

Hernandez-Ruiz (2005) examined music listening combined with progressive muscle relaxation to reduce anxiety and improve sleep patterns among 28 abused women residing in shelters. Thirty-minute music therapy sessions for five consecutive days were offered. During the sessions, 20 minutes of relaxing music chosen by the subjects was found to be effective in reducing anxiety and improving sleep quality.

Cevasco, Kennedy, and Generally (2005) conducted a study to compare movement to music, rhythm activities, and competitive games on stress and anger of females with substance abuse. Each intervention was implemented for a total of four sessions, one hour twice a week. Movement intervention addressed locomotor and nonlocomotor hand-eye coordination, body percussion, and stretching. Rhythm activity included African hand drumming, call-and-response, Kodaly experiences, playing resonator bells, participating in Orff rondos, and improvisations. Competitive games included Name That Tune, the aural discrimination of rhythms, playing notated rhythms, and doing lyric analysis. No significant differences among these interventions were found; however, individuals reported decreased levels of depression, stress, anxiety, and anger after the sessions.

As reviewed above, future research on this topic is imperative. Suggestions for further research include the following: an examination of each of the three levels of the stress process—stressors,

moderators, and stress outcomes—and music therapy as an independent treatment so that the effects of music therapy can be clearly understood; recruitment of a variety of ethnic, age, and gender groups; an investigation of a greater variety of music to compare the resulting relaxation effects to better understand the characteristics of stress-relieving music; and an examination of individual differences and sociocultural factors.

#### SUMMARY AND CONCLUSIONS

More and more, we live in a society that induces daily stress due to all the challenges and difficulties in our personal lives. Priestley (1994) suggests a positive way of looking at these aspects of life, pointing out that “times of stress [can be] viewed as opportunities for maturation” (p. 198). Stress can be manageable and can even produce positive outcomes. However, the intensity and duration of a stressful event can adversely affect a person’s well-being when one’s resources have been exhausted. Therefore, stress must be examined within a holistic context—physical, psychological, emotional, cognitive, and spiritual (Lehrer, Woolfolk, & Sime, 2007). The symptoms of stress vary in each individual due to different ages and/or experiences. Accordingly, treatment for stress is a specific and individual matter. *One size does not fit all*. Thus, an individualized wellness program, even in a group setting, is effective in addressing the needs of the individual. A variety of music interventions has been used in wellness programs to increase awareness of stress, to identify stressors, to reduce stress and tension, and to develop successful coping skills. Without sensitivity and proper training of the therapist, the use of music can also bring adverse results. Music therapists should continue to study effective methods.

As Bruscia (1998) noted, “health encompasses and depends upon the entire ecological system, from body, mind, and spirit and their interactions within the individual to the broader contexts of the individual’s relationships with society, culture, and environment” (p. 78). The willingness of the individual to engage in experiences to reduce stress plays an important part in the wellness model. In addition, collaborative work with the individual, music therapist, family members, and community will help the members maintain an optimal state of well-being.

#### REFERENCES

- American Psychological Association (APA). (2012, January 11). The 2011 Stress in America. Retrieved from <http://www.apa.org/news/press/releases/stress/2011/final-2011.pdf>
- Batt-Rawden, K. B., DeNora, T., & Ruud, E. (2005). Music listening and empowerment in health promotion: A study of the role and significance of music in everyday life of the long-term ill. *Nordic Journal of Music Therapy, 14*(2), 120–136.
- Belgrave, M., Darrow, A-A., Walworth, D., & Wlodarczyk, N. (2011). *Music therapy and geriatric populations: A handbook for practicing music therapists and healthcare professionals*. Silver Spring, MD: American Music Therapy Association, Inc.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review, 21*, 491–511.
- Bittman, B., Berk, L., & Felten, D. (2001). Composite effects of group drumming music therapy on modulation of neuroendocrine-immune parameters in normal subjects. *Alternative Therapy & Health Medicine, 7*(1), 38–47.
- Bittman, B., Berk, L., Shannon, M., Sharaf, M., Westengard, J., Guegler, K. J., & Ruff, D. W. (2005). Recreational music-making modulates the human stress response: A preliminary individualized gene expression strategy. *International Medical Journal for Experimental and Clinical Research, 11*(2), 31–40.

- Bittman, B., Bruhn, K. T., Stevens, C., Westengard, J., & Umbach, P. O. (2003). Recreational music-making: A cost-effective group interdisciplinary strategy for reducing burnout and improving mood states in long-term care workers. *Advances in Mind-Body Medicine*, 19(3–4), 4–15.
- Bonny, H. L., & Savary, L. M. (1990). *Music and your mind: Listening with a new consciousness*. Gilsum, NH: Barcelona Publishers.
- Bruscia, K. E. (1987). *Improvisational models of music therapy*. Springfield, IL: Charles Thomas Publisher.
- Bruscia, K. E. (1998). *Defining music therapy* (2nd ed.). Gilsum, NH: Barcelona Publishers.
- Burns, J. L., Labbé, E., Arke, B., Capeless, K., Cooksey, B., Steadman, A., & Gonzales, C. (2002). The effect of different types of music on perceived and physiological measures of stress. *Journal of Music Therapy*, 39(2), 101–116.
- Bush, C. A. (1995). *Healing imagery and music*. Portland, OR: Rudra Press.
- Campbell, D. (1992). *Music and miracles*. Wheaton, IL: The Theosophical Publishing House.
- Cannon, W. B. (1929). *Bodily changes in pain, hunger, fear, and rage* (2nd ed.). New York: Appleton.
- Cevasco, A. M., Kennedy, R., & Generally, N. R. (2005). Comparison of movement-to music, rhythm activities, and competitive games on depression, stress, anxiety, and anger of females in substance abuse rehabilitation. *Journal of Music Therapy*, 2(1), 64–80.
- Chafin, S., Roy, M., Gerin, W., & Christenfeld, N. (2004). Music can facilitate blood pressure recovery from stress. *British Journal Health Psychology*, 9(3), 393–403.
- Chang, M. Y., Chen, C. H., & Huang, K. F. (2008). Effects of music therapy on psychological health of women during pregnancy. *Journal of Clinical Nursing*, 17, 2580–2587.
- Clair, A. A. (1996). *Therapeutic uses of music with older adults*. Baltimore: Health Professions Press, Inc.
- Clark, M. M., Warren, B. A., Hagen, P. T., Johnson, B. D., Jenkins, S. M., Werneburg, B. L., & Olsen, K. D. (2011). Stress level, health behaviors, and quality of life in employees joining a wellness center. *American Journal of Health Promotion*, 26(1), 21–25.
- Cuellar, I. (2000). Acculturation and mental health: Ecological transactional relations of adjustment. In I. Cuellar & F. Paniagua (Eds.), *Handbook of multicultural mental health* (pp. 45–62). San Diego, CA: Academic Press.
- Davis, M., Eshelman, E. R., & McKay, M. (1995). *The relaxation and stress reduction workbook* (4th ed.). Oakland, CA: New Harbinger Publications, Inc.
- Deckro, G. R., Ballinger, K. M., Hoyt, M., & Wilcher, M. (2002). The evaluation of a mind/body intervention to reduce psychological distress and perceived stress in college students. *Journal of American College Health*, 50(6), 281–287.
- Dileo, C., & Bradt, J. (1999). Entrainment, resonance, and pain-related suffering. In C. Dileo (Ed.), *Music therapy and medicine: Theoretical and clinical applications* (pp. 139–148). Silver Spring, MD: The American Music Therapy Association, Inc.
- Dileo, C., & Bradt, J. (2005). *Medical music therapy: A meta-analysis & agenda for future research*. Cherry Hill, NJ: Jeffrey Books.
- Dileo, C., & Bradt, J. (2007). Music therapy: Applications to stress management. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime (Eds.), *Principles and practice of stress management* (3rd ed.) (pp. 519–544). New York: The Guilford Press.
- Dileo, C., & Magill, L. (2005). Song writing with oncology and hospice adult patients from a multicultural perspective. In F. Baker & T. Wigram (Eds.), *Songwriting. Methods, techniques, and clinical applications for music therapy clinicians, educators and students* (pp. 226–245). Philadelphia, PA: Jessica Kingsley.
- Dunn, H. L. (1977). *High level wellness*. Thorofare, NJ: Charles B. Slack.
- Edlin, G., & Golanty, E. (2010). *Health and wellness: A holistic approach*. Boston: Jones & Bartlett.

- Edwards, D., & Burnard, P. (2003). A systematic review of stress and stress management interventions for mental health nurses. *Journal of Advanced Nursing*, 42(2), 169–200.
- Elliot, D., Polman, R., & McGregor, R. (2011). Relaxing music for anxiety control. *Journal of Music Therapy*, 48(3), 264–288.
- Fernandez, E. (2004). Effective interventions to promote child and family wellness: A study of outcomes of intervention through children's family centers. *Child and Family Social Work*, 9, 91–104.
- Fink, G. (Ed.). (2000). *The encyclophedia of stress* (Vols. 1–3). New York: Academic Press.
- Ghetti, C. M., Hama, M., & Woolrich, J. (2003). Music therapy in wellness. In A-A. Darrow (Ed.), *Introduction to approaches in music therapy* (pp. 127–142). Silver Spring, MD: American Music Therapy Association, Inc.
- Grape, C., Sandgren, M., Hansson, L-O., Ericson, M., & Theorell, T. (2003). Does singing promote well-being?: An empirical study of professional and amateur singers during a singing lesson. *Integrative Physiological & Behavioral Science*, 38(1), 65–74.
- Gregorek, A., & Gregorek, J. (2009). *The happy body: The simple science of nutrition, exercise, and relaxation*. Woodside, CA: Jurania Press.
- Grocke, D. (2009). Music therapy research and the mental health well-being continuum. *Australian Journal of Music Therapy*, 20, 6–15.
- Grocke, D., & Wigram, T. (2007). *Receptive methods in music therapy. Techniques and clinical applications for music therapy clinicians, educators and students*. Philadelphia, PA: Jessica Kingsley.
- Hall, N. C., Chipperfield, J. G., Perry, R. P., Ruthig, J. C., & Goetz, T. (2006). Primary and secondary control in academic development: Gender-specific implications for stress and health in college students. *Anxiety, Stress, and Coping*, 19(2), 189–210.
- Hanser, S. B., Larson, S. C., & O'Connell, A. S. (1983). The effect of music on relaxation of expectant mothers during labor. *Journal of Music Therapy*, 20(2), 50–58.
- Hanser, S. B., & Mandel, S. E. (2010). *Manage your stress and pain through music*. Boston: Berklee Press.
- Hernandez-Ruiz, E. (2005). Effect of music therapy on the anxiety levels and sleep patterns of abused women in shelters. *Journal of Music Therapy*, 42(2), 140–158.
- Hirokawa, E., & Ohira, H. (2003). The effects of music listening after a stressful task on immune functions, neuroendocrine responses, and emotional states in college students. *Journal of Music Therapy*, 40(3), 189–211.
- Hoelt, L., & Kern, P. (2007). The effects of listening to recorded percussion music on well-being: A pilot study. *Canadian Journal of Music Therapy*, 13(2), 132–147.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213–218.
- Ierardi, F., & O'Brien, M. K. (2007). Safe expressions: A community-based creative arts therapy program for at-risk youth. In V. A. Camilleri (Ed.), *Healing the inner city child. Creative arts therapies with at-risk youth* (pp. 254–267). Philadelphia, PA: Jessica Kingsley.
- Jacobson, E. (1938). *Progressive relaxation* (2nd ed.). Chicago: University of Chicago Press.
- Jahn-Langenberg, M. (2001). Psychodynamic perspectives in professional supervision. In M. Forinash (Ed.), *Music therapy supervision* (pp. 271–280). Gilsum, NH: Barcelona Publishers.
- Jespersen, K. V., & Vuust, P. (2012). The effect of relaxation music listening on sleep quality in traumatized refugees: A pilot study. *Journal of Music Therapy*, 49(2), 205–229.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114–158). New York: Guilford Press.



- Kenny, D. T. (2005). A systematic review of treatments for music performance anxiety. *Anxiety, Stress, and Coping, 18*(30), 183–208.
- Kim, S. (2011). Predictors of acculturative stress among international music therapy students in the U.S. *Music Therapy Perspectives, 13*(2), 126–132.
- Kim, Y. (2005). Combined treatment of improvisation and desensitization to alleviate music performance anxiety in female college pianists. *Medical Problems of Performing Arts, 20*, 17–24.
- Knight, W., & Rickard, N. (2001). Relaxing music prevents stress-induced increases in subjective anxiety, systolic blood pressure, and heart rate in healthy males and females. *Journal of Music Therapy, 38*(4), 254–272.
- Kreutz, G., Bongard, S., Rohrmann, S., Hodapp, V., & Grebe, D. (2004). Effects of choir singing or listening on secretary immunoglobulin A, cortisol, and emotional state. *Journal of Behavioral Medicine, 27*(6), 623–635.
- Krout, R. E. (2007). Music listening to facilitate relaxation and promote wellness: Integrated aspects of our neurophysiological responses to music. *The Arts in Psychotherapy, 34*(2), 134–141.
- Labbé, E., Schmidt, N., Babin, J., & Pharr, M. (2007). Coping with stress: The effectiveness of different types of music. *Applied Psychophysio Biofeedback, 32*, 163–168.
- Lara, M., Gamboa, C., Kahramanian, M. I., Morales, L. S., & Bautista, D. E. H. (2005). Acculturation and Latino health in the United States: A review of the literature and its sociopolitical context. *Health Annual Rev. Public Health, 26*, 367–397.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lazarus, R. S., & Folkman, S. (1986). Cognitive theories of stress and the issue of circularity. In M. H. Appley & R. Trumbull (Eds.), *Dynamics of Stress. Physiological, Psychological, and Social Perspectives* (pp. 63–80). New York: Plenum.
- Lehrer, P. M., Woolfolk, R. L., & Sime, W. E. (2007). *Principles and practice of stress management* (3rd ed.). New York: The Guilford Press.
- Liebman, S. S., & MacLaren A. (1991). The effects of music and relaxation on third trimester anxiety in adolescent pregnancy. *Journal of Music Therapy, 28*(2), 89–100.
- Lindblad, F., Hogmark, A., & Theorell, T. (2007). Music intervention for 5th and 6th graders—Effects on development and cortisol secretion. *Stress and Health, 23*(1) 9–14.
- Lovallo, W. R. (2005). *Stress & health: Biological and psychological interactions*. Thousand Oaks, CA: Sage Publications.
- Mackenzie, J., & Hamlett, K. (2005). The music together program: Addressing the needs of “well” families with young children. *Australian Journal of Music Therapy, 16*, 43–59.
- Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences, 37*(7), 1401–1415.
- McCabe, S., Bostwick, W., Hughes, T., West, B., & Boyd, C. (2010). The relationship between discrimination and substance use disorders among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health, 100*(10), 1946–1952.
- McClenahan, C. A., Giles, M. L., & Mallett, J. (2007). The importance of context specificity in work stress research: A test of the demand-control-support model in academics. *Work & Stress, 21*(1), 85–95.
- McEwen, B. S., & Stellar, E. (1993). Stress and the individual: Mechanisms leading to disease. *Arch Intern Med, 153*(18), 2093–2101.

- McGrady, A. (2007). Psychophysiological mechanisms of stress: A foundation for the stress management therapies. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime (Eds.), *Principles and practice of stress management* (3rd ed., pp. 16–37). New York: The Guilford Press.
- McKinney, C. H., Antoni, M. H., Kumar, M., Tims, F. C., & McCabe, P. M. (1997). Effects of Guided Imagery and Music (GIM) therapy on mood and cortisol in healthy adults. *Health Psychology, 16*(4), 390–400. DOI: 10.1037/0278-6133.16.4.390.
- Melzack, R., & Wall, P. (1965). Pain mechanisms: A new theory. *Science, 150*(3699) 971–979.
- Merritt, S. (1996). *Mind, music & imagery*. Santa Rosa, CA: Aslan Publishing.
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology Bulletin, 129*(5) 674–697.
- Misra, R., & Castilo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management, 11*(2), 132–148. DOI: 10.1037/1072-5245.11.2.132.
- Montello, L. (2008). *The perils of perfectionism*. Retrieved from [http://www.performancewellness.org/docs/pw\\_perils.pdf](http://www.performancewellness.org/docs/pw_perils.pdf)
- Mroczek, D. K., & Almeida, D. M. (2004). The effect of daily stress, personality, and age on daily negative affect. *Journal of Personality & Social Psychology, 72*(2), 355–378.
- Myers, J. E. (2010). Coping with caregiving stress: A wellness-oriented, strengths-based approach for family counselors. *The Family Journal: Counseling and Therapy for Couples and Families, 11*(2) 153–161.
- Nadeem, E., Lange, J. M., & Miranda, J. (2009). Perceived need for care among low income immigrant and U.S.-born Black and Latina women with depression. *Journal of Women's Health, 18*(3), 369–375.
- National Institute of Health. (2011, November 11). Retrieved from <http://www.nih.gov/>
- O'Callaghan, C. C. (2001). Bringing music to life: A study of music therapy and palliative care experiences in a cancer hospital. *Journal of Palliative Care, 17*(3), 155–160.
- O'Callaghan, C. C., & Grocke, D. (2009). Lyric analysis research in music therapy: Rationales, methods and representations. *The Arts in Psychotherapy, 36*(5), 320–328.
- Pavlicevic, M. (2001). A child in time and health: Guiding images in music therapy. *British Journal of Music Therapy, 15*(1), 14–21.
- Pedersen, I. N. (2002). Psychodynamic movement—A basic training methodology for music therapists. In J. Th. Eschen (Ed.), *Analytical Music Therapy* (pp. 190–215). Philadelphia, PA: Jessica Kingsley.
- Pelletier, C. L. (2004). The effect of music on decreasing arousal due to stress: A meta-analysis. *Journal of Music therapy, 41*(3), 192–214.
- Pinkerton, J. (1996). *The sound of healing*. New York: Alliance Publishing.
- Poyrazli, S., Kavanaugh, P. R., Baker, A., & Al-Timimi, N. (2004) Social support and demographic correlates of acculturative stress in international students. *Journal of College Counseling, 7*, 73–82.
- Priestley, M. (1975). *Music therapy in action*. London: Constable.
- Priestley, M. (1994). *Essays on analytical music therapy*. Gilsum, NH: Barcelona Publishers.
- Reuner, B. (2008). *Integrative medicine settings: Music-centered wellness*. San Diego, CA: MusicWorx.
- Rider, M., Mickey, C., Weldin, C., & Hawkinson, R. (1991). The effects of toning, listening, and singing on psychophysiological responses. In C. D. Maranto (Ed.), *Applications of music in medicine* (pp. 73–84). Silver Spring, MD: The National Association for Music Therapy.
- Robbins, C., & Robbins, C. (Eds.). (1998). *Healing heritage: Paul Nordoff exploring the tonal language of music*. Gilsum, NH: Barcelona Publishers.

- Rosenzweig, S., Reibel, D. K., Greenson, J. M., Brainard, G., & Hojat, M. (2003). Mindfulness-based stress reduction lowers psychological distress in medical students. *Teach and Learning in Medicine, 15*(2), 88–92.
- Roskam, K., & Reuer, B. (1999). A music therapy wellness model for illness prevention. In C. Dileo (Ed.), *Music therapy and medicine: Theoretical and clinical applications* (pp. 139–148). Silver Spring, MD: The American Music Therapy Association, Inc.
- Scartelli, J. P. (1989). *Music and self-management methods: A physiological model*. St. Louis, MO: MMB Music, Inc.
- Scheiby, B. B. (2005). “Dying alive”—A transpersonal analytical music therapy approach for adult clients with chronic progressive neurological diseases. In C. Dileo & J. V. Loewy (Eds.), *Music therapy at the end of life* (pp. 171–187). Cherry Hill, NJ: Jeffrey Books.
- Scheve, A. M. (2004). Music therapy, wellness, and stress reduction. *Advanced Experimental Medical Biology, 546*, 253–263.
- Schwoebel, J., Coslett, H. B., Bradt, J., Friedman, R., & Dileo, C. (2002). Pain and the body schema: Effects of pain severity on mental representations of movement. *Neurology, 775–777*.
- Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.
- Shin, J. Y., D’Antonio, E., Son, H., Kim, S., & Park, Y. (2011). Bullying and discrimination experiences among Korean-American adolescents. *Journal of Adolescence, 34*(5), 873–888.
- Shoemark, H. (1987). The value of music therapy in society. *The Australian Music Therapy Association Bulletin, 10*(3), 2–6.
- Smith, J. C., & Joyce, C. A. (2004). Mozart versus new age music: Relaxation states, stress, and ABC relaxation theory. *Journal of Music Therapy, 41*(3), 215–224.
- Spector, R. E. (2012). *Cultural diversity in health and illness* (8th ed.). Upper Saddle River, NJ: Prentice Hall.
- Spielberger, C. D., Gorsuch, R. L., Luchene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press, Inc.
- Sterling, P., & Eyer, J. (1988). Allostasis: A new paradigm to explain arousal pathology. In J. Fisher & J. Reason (Eds.), *Handbook of life stress, cognition and health* (pp. 629–649). New York: Wiley.
- Strauss, S. (1984). *Inner rhythm. An exciting new approach to stress-free living*. San Francisco: Chase Publications.
- Sutton, J. P. (Ed.). (2002). *Music, music therapy, and trauma: International perspectives*. Philadelphia, PA: Jessica Kingsley.
- Tan, X., Yowler, C. J., Super, D. M., & Fratianne, R. B. (2012). The interplay of preference, familiarity, and psychophysical properties in defining relaxation music. *Journal of Music Therapy, 49*(2), 230–233.
- Uhlig, S. (2006). *Authentic voices, authentic singing: A multicultural approach to vocal music therapy*. Gilsum, NH: Barcelona Publishers.
- Valentine, E., & Evans, C. (2001). The effects of solo singing, choral singing, and swimming on mood and physiological indices. *British Journal of Medical Psychology, 74*, 115–120.
- VanWeelden, K., & Whipple, J. (2004). Effect of field experiences on music therapy students’ perceptions of choral music for geriatric wellness programs. *Journal of Music Therapy, 41*(4), 340–352.
- Walker, R. L., Wingate, L., Obasi, E. M., & Joiner, T. E. (2008). An empirical investigation of acculturative stress and ethnic identity as moderators for depression and suicidal ideation in African-American and European American college students. *Cultural Diversity and Ethnic Minority Psychology, 14*, 75–82.
- Walworth, D. D. (2003). The effect of preferred music genre selection versus preferred song selection on experimentally induced anxiety levels. *Journal of Music Therapy, 40*(1), 2–14.

- Ward, C., Leong, C. H., & Low, M. (2004). Personality and sojourner adjustment: An exploration of the Big Five and the cultural fit proposition. *Journal of Cross-cultural Psychology, 35*, 137–151.
- Wei, M., Heppner, P. P., Mallen, M. J., Ku, T-Y., Liao, K. Y-H., & Wu, T-F. (2007). Acculturative stress, perfectionism, years in the United States, and depression among Chinese international students. *Journal of Counseling Psychology, 54*, 385–394.
- Wellness. (n.d.). Scientific study indicates that music making makes the elderly healthier. Retrieved from <http://www.charlotteschools.com/PDF/Keyboard%20Lessons%20Makes%20the%20Elderly%20Healthier.pdf>
- West, J., Otte, C., Geher, K., Johnson, J., & Mohr, D. C. (2004). Effects of hatha yoga and African dance on perceived stress, affect, and salivary cortisol. *Annals of Behavioral Medicine, 28*(2), 114–118.
- Wigram, T. (2004). *Improvisation: Methods and techniques for music therapy clinicians, educators, and students*. Philadelphia, PA: Jessica Kingsley.
- Wilton, L., & Constantine, M. G. (2003). Length of residence, cultural adjustment difficulties, and psychological distress symptoms in Asian and Latin American international college students. *Journal of College Counseling, 6*, 177–186.
- Woolfolk, R. L., Lehrer, P. M., & Allen, L. A. (2007). Conceptual issues underlying stress management. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime. (Eds.), *Principles and practice of stress management* (3rd ed., pp. 3–15). New York: The Guilford Press.