Music Therapy for Children with Severe Burn Injury

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ABSTRACT: Music therapy for children with severe burns is a developing field of practice and research interest in pediatric music therapy. The following article presents an overview of the nature of severe burn injury and provides a rationale for the use of music therapy in the Burn Unit. The application of song writing techniques to address needs of children receiving care for severe burns in a hospital setting is presented.

When children are admitted to a hospital for treatment following a severe burn injury, a number of immediate concerns need to be addressed including survival, an assessment of the extent and severity of injuries, and evaluation of the surgical skin graft sessions required for treatment of the injury. The psychological needs of the children and their families are also of major concern to the Burn Unit team. Whether accidental or deliberate, the burn injury and consequent treatment cause disruption to the individual and family, placing significant stress on the available resources of children and their families to cope with the event.

The role of music therapy in the Burn Unit team is to provide appropriate means by which experiences of stress and anxiety for the patient and family can be lessened and managed. The music therapist works closely with other team members to address patient's needs.

In addressing psychosocial dimensions of care, the family as the unit of care is the prevailing model (Cooper & Thomas, 1988). The needs of the family, including accommodation of their reactions to the event, require attention from the team. Opportunities to discuss plans for the future, review concerns, and receive appropriate support are indicated as part of treatment for the family as a whole. Some studies suggest that social support is the most significant predictor in determining the outcomes of a burn injury (Cooper & Thomas, 1988).

Burn Injury and Treatment

A burn injury occurs when flames, boiling water, chemicals or electricity make contact with the skin causing damage. Degrees of burn injury are described as superficial, partial thickness or full thickness damage (Robson & Heggers, 1988) (see Table 1). Children whose burns do not heal within 14-17 days usually require surgical skin grafting to heal injury sites.

Treatment for severe burn injury involves a lengthy hospital stay in which skin grafting may be undertaken through a series of surgical procedures. The phases of care during hospitalization can be described as acute, intermediate, and recuperative with attendant difficulties and issues to be addressed at each stage (Cooper & Thomas, 1988) (see Table 2).

Daily baths are administered to keep the injuries clean and to remove dead tissue from the injury site. Bath treatments commence with the administration of pain medication followed by the removal of bandages. The child is then placed in a bath and his/her skin is lightly cleaned with sponges. Dressings and bandages are replaced on removal from the bath and, in many cases, children have splints fitted over their joints to avoid contractures which can result during healing, as the skin tightens when scar tissue forms. During treatments, the presence of parents who have been offered appropriate support and education has been shown to be useful in assisting children to cope (George & Hancock, 1993).

Pain in the patient with severe burn injury is a complex phenomenon and varies significantly from patient to patient. High levels of pain are associated with treatments but ongoing pain, including discomfort from tingling and itching during healing, may continue throughout the admission (Latarjet & Choinere, 1995). At first, the pain may be clearly defined and easy for the patient to describe. As the admission continues, features of the pain descriptions become more vague and may be closer to the “acute chronic pain profile” where the pain experience is pervasive rather than specific (Latarjet & Choinere, 1995, p. 345).

Non-pharmacological techniques have been found to be an adjunct to pain medication during burns treatments (Achterberg & Kenner, 1988). Some researchers suggest, however, that more controlled studies which incorporate effects of stages of treatment while measuring the effects of the treatment are needed (Latarjet & Choinere, 1995). One music therapy study with burn patients found music assisted relaxation to be effective in reducing anxiety prior to skin graft surgery (Robb, Nichols, Rutan, Bishop & Parker, 1995). Music listening has also been reported to be helpful to patients receiving debridement treatments (Barker, 1991). Music therapists should always consider patients' pain and comfort levels when offering services while taking account of any changes in the patient's pain status during the period of hospitalization. Music therapy programs may need to be adapted in response to pain behavior changes of patients.

Facilitation of Expression of Feelings to Assist Coping

Successful adjustment to hospitalization requires the child to manage difficult feelings associated with separation from family members, unfamiliarity with the environment and staff,
Table 1
Degree of Burn Injury Damage to Skin Tissue

<table>
<thead>
<tr>
<th>Degree of Injury</th>
<th>Skin Damage</th>
<th>Symptoms</th>
<th>Healing Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>First degree burn</td>
<td>Superficial</td>
<td>Soreness and redness</td>
<td>A few days</td>
</tr>
<tr>
<td>Second degree burn</td>
<td>Superficial partial thickness</td>
<td>Blistering</td>
<td>Without infection—14-17 days</td>
</tr>
<tr>
<td>Second degree burn</td>
<td>Deep partial thickness</td>
<td>Many areas of only marginally viable tissue</td>
<td>3-4 weeks (but sometimes these wounds become deeper)</td>
</tr>
<tr>
<td>Third degree burn</td>
<td>Full thickness</td>
<td>Loss of tissue</td>
<td>Months</td>
</tr>
<tr>
<td>Fourth degree burn</td>
<td>Total destruction of skin with damage to other tissues (e.g. fat, fascia, muscle, bone)</td>
<td>Skin grafts and sometimes “flaps” are used to cover the wound site.</td>
<td>Months</td>
</tr>
</tbody>
</table>

disruption to routine, and loss of a sense of control over experiences and events around them (Siegel & Hudson, 1992). Successful adjustment is achieved when the child demonstrates skills in communication, play, and perception consistent with skill levels prior to the injury, and when the child demonstrates verbalizations, interactions and other social skills as appropriate to chronological age and temperament.

Facilitation of children's expression of feelings assists them in coping with stressful experiences and events. Barton and Zeannah (1990) wrote, “Providing the child with an opportunity to express distress, ambivalence, and intense affective reactions both directly and in play frequently contributes to mastering the event and improving the perspective on the self” (p. 214). Music therapy in pediatric hospitals is used to help children to regain a sense of mastery and control through the use of music to facilitate expression of feelings about hospitalization and treatment.

**Music Therapy for Children Hospitalized for Severe Burns**

Music therapy for children hospitalized with severe burns aims to maximize the children's resources for coping during what is considered to be a stressful and potentially traumatic experience. Music is an ideal medium for use in this setting as it is “comforting, nonthreatening and not associated with medical procedures” (Froehlich, 1984, p. 5). Music therapy offers opportunities for children to vent feelings, increases opportunities for appropriate communication, and promotes adjustment to hospitalization.

Music provides structure, order and choice for hospitalized children who may, by virtue of the treatment context and its requirements, have little control in their lives. Children can engage in music therapy processes, including song writing, to express a range of feelings relating to hospitalization, treatment, illness or injury, life at home and school, as well as to communicate their feelings toward significant others. Music is appropriate for use with children as it is a medium with which they are usually familiar and one with which they have established positive connections.

For children with severe burns requiring daily baths, music therapy can be used to support, comfort, and relax children prior to, during, and following treatments (Edwards, 1994). Improvisation, song writing, song singing, and music listening provide opportunities for fun, play, choice, and self-expression at other times.

**Song Writing**

Song writing is a technique used by music therapists to provide opportunities for clients in therapy to identify and communicate internal and external experiences, and to communicate dimensions of feelings and experiences for which words alone may not be adequate, effective, or appropriate (Amir, 1990; O'Callaghan, 1990; Robb, 1996; Slivka & Magill, 1986). In Bruscia's (1991) topography of therapeutic applications of music used in music therapy, song writing is described as the most common technique within compositional techniques. Compositional techniques are defined by Bruscia as being helpful to clients who need, among other things, to "identify and develop themes, document inner thoughts and feelings, or have tangible evidence of personal achievements" (p.8). Each of these areas of need is essential to children's successful mastery of the tasks associated with hospitalization and treatment.

**Song Writing with Children Hospitalized for Severe Burns**

For children with severe burn injury, providing an opportunity to be distracted from the experiences and context of the hospital, or the chance to express feelings relating to hospitalization can be supportive and appropriate (Robb, 1996). Songs can be written by children in individual music therapy
sessions or by children in a group program to achieve these purposes (Bishop, Christenberry, Robb & Rudenberg, 1996).

Songs can also be powerful and effective metaphors or vehicles to represent many aspects of human experience. As Bruscia (1988) wrote, “Songs are our connection to life. They connect us to our inner world, they bring us closer to others, they keep us company when we are alone” (p. 1). For children who may have limited access to verbal expression as a means to communicate experiences and feelings, song writing in music therapy provides an avenue for symbolic representation of the experiences of hospitalization (Dun, 1993). Bruscia (1991) suggests that benefits of song writing for hospitalized children are that “songs can be a means of expressing and understanding their fears, and then leaving them there—on the paper!” (p. 8).

Song writing provides opportunities for children to share significant feelings, experiences, and events with others. In describing music therapy work in conjunction with social work to address needs in children of cancer patients, Slivka and Magill (1986) wrote “... the sharing of feelings through music, when children or parents compose meaningful songs to one another about special stories, memories, wishes, or needs, results in alleviating guilt by providing opportunities to ask for forgiveness and, in turn, to forgive” (p. 33).

The value of using songs with children in hospital has been well articulated in the literature:

For children in hospital, songs may be selected by the therapist to give reassurance, to deal with separation anxiety and isolation by offering comforting images of home and family, to stimulate expression of feelings, and to instill hope for recovery. Alternatively, children may create their own songs. The songwriting process can enhance a child's expression of feelings. (Hadley, 1996, p. 20).

The use of music as a conduit for the expression of a range of difficult and intense feelings and experiences is also practiced in music therapy work with children receiving burn care.

Applications and Contraindications

Bruscia (1988) suggests there are contraindications to be considered in the use of song in music therapy. The music therapist must take care that the lyrics do not have harmful effects. The therapist also needs to behave ethically and responsibly with regard to ensuring that any material which emerges through the use of song is able to be dealt with by both the client and the therapist.

In the children’s hospital setting there are many considerations to be observed. In particular, the children’s current state regarding pain and anxiety must be known, and their developmental functioning and music preferences need to be assessed. The following protocol is recommended in using song writing with children receiving treatment for burns:

1. The child should be comfortable (see Table 3 for assessment procedure adapted from Carter, 1994).
2. The child should be offered the chance to write a song, and if he or she refuses, this should be respected.
3. Options should be offered for melody (e.g. ascending or descending) and accompaniment (e.g. plucked or strummed accompaniment on guitar).
4. Suggestions for lyrics can be made by the therapist, but interventions which direct lyric choices should be avoided.
5. The future of the song at the conclusion of the session should be decided by the child. Does the child want the song written out and pinned on the wall? Will the child call staff in to hear the song? Does the child want to sing for a caregiver or family member? Will the song be recorded onto tape? Any of these options may be appropriate and the child’s wishes should be respected.

In the case of pain or discomfort being present at any of these stages, music therapy for relaxation and music therapy focusing or distraction techniques are better indicated than song writing.

When a child’s song expresses strong feelings or issues which may be of concern or interest to the team, the sharing of the song with others and the reason for doing so should be explained to the child. In the case of the child declining to have the song given to other staff for this purpose, the general parameters of the song and its importance can be related to team members without the song being reproduced. It is important, however, to explain to the child why reporting is requested.

Song Writing Techniques

The purpose of this section is to identify and categorize compositional song techniques useful in this setting. The songs can be accompanied by guitar or keyboard. In some infection
control units, however, items taken into the isolation area must be covered in plastic making the guitar unsuitable. A keyboard can be played even when it is wrapped in a plastic envelope.

Three specific song composition techniques will be discussed:

1. **Improvise Song**

Amir (1990) describes improvised song as a phenomenon "that consists of both verbal and musical components. It is produced in the moment . . . with the guidance of the music therapist . . ." (p. 63). For a hospitalized child, improvised song can be a form of familiar play. The therapist can act as a catalyst and guide, introducing musical and story themes and ideas, or simply supporting the development of a spontaneous song through improvised accompaniment. At times, a listening or "audience" role may be appropriate as the child's story unfolds.

Improvise song is characterized by spontaneous development of a song around a musical or non-musical idea. In a children's hospital context, this song follows a story or idea presented by the child. When working with a child one might, for example, sing about a toy the child has brought to the hospital and encourage the telling of a story about what happens to the toy. A castanet animal (frog or duck) can be offered for use in an improvised song.

The song moves forward by the therapist asking "and then what happened?" or offering the child a story idea at the end of a verse of phrase. In many cases, this therapist sings the lyric line provided by the child two or three times before singing a question (e.g. "And what did they do there?" or "What did they do next?"). It is important that the therapist ask open-ended rather than closed or leading questions (e.g. "Is there anything special about the duck?".) Such questions can confuse the child, giving them the impression that there is a correct answer which they must provide in order to please the therapist.

**Case Example 1.**

A five-year-old girl receiving treatment for burns to her chest and shoulder introduced the therapist to a toy sitting on her bed (a toy "Troll"). This doll was incorporated into an improvised song about a visit to a pond where many characters were encountered. Sometimes the girl made the doll frightening, eating other animals, but at other times in the song the doll was a friend to all the other animals, playing with them.

**Case Example 2.**

Similarly, a four-year-old girl with a scald injury composed a long story/drama for which the therapist provided accompaniment with guitar and singing. The child used two dolls to enact a story similar to the Snow White fairy tale. The child began to tell the story and the therapist either responded with an improvised song about what was taking place when requested by the child, or asked "Is there a song for this part?" when the child paused in her story telling and looked at the therapist.

Spontaneous, improvised music can delight and engage children and encourage story telling and imaginative play.

2. **Song Composition**

In song composition a song is written which can be reproduced. The lyrics are written down by the therapist or, if possible, the child. Brief notes can be written down by the therapist, while interacting with the child, to record harmonic and melodic elements of the composition. During the process of writing the song, decisions are made by the child as to the melodic, harmonic, and lyric material which is to be included. Song lyrics are usually provided by the child, but family members can be encouraged to contribute a line or verse. The therapist can provide prompts such as the opening words to a line. Allowing the child the freedom to make choices of words or lines for inclusion in the song usually invites positive results. If the goal is to encourage expression of feelings, it is crucial that the child's contributions be facilitated and encouraged, not directed.

The melody can be composed by the therapist, the therapist and child, or the child alone. Options such as whether the song is to be in a major or minor key, and whether melodic elements are ascending or descending can be given by the therapist, if appropriate. A similar song writing procedure is described by O'Callaghan (1990) in therapeutic song writing with patients and their families in a palliative care setting.

**Case Example 3.**

A nine-year-old boy, in isolation following severe burns, wrote a song with his mother (see Fig. 1). The musical ideas were developed by the therapist in response to the child's choice between two melodic ideas, ascending and descending, from which he chose the latter saying, "That's exactly right!" Writing this song provided the boy with an opportunity to express his feelings in his own words. The use of the word "weary" for example was his own description of how he was feeling. A verse written by his mother expressed feelings of sadness at being in the hospital with her child and identified the support she received from her husband through phone contact and looking forward to his visits.

**Case Example 4.**

A ten-year-old boy with severe burns wrote a song (see Fig. 2) about the hospital. The song writing process began early in his first session when the therapist asked him whether he would like to write a song and what he would like it to be about. He said he wanted to write a song but "didn't know what it would be about," so the therapist suggested that he might like to write about the hospital, home, school,
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or something to do with his friends. He chose the theme “hospital” and, with the therapist providing most of the melodic material, wrote the following song (see Fig. 2). Questions from the therapist which facilitated the process are included in brackets. This song provided the opportunity to express feelings about his life in the hospital (his mobility was severely restricted as a consequence of his injury) including feelings of being bored and tired. He expressed this in a dynamic, fun, and somewhat mocking song.

3. Song Augmentation

When using the song augmentation technique, the tune of a song which is familiar to the child is sung using different words. These words can be changed by the therapist, the child, or through consultation between therapist and child. Words which are related to the child's situation can be included or the child's name, if appropriate, and if the child does not object.

Case Example 5.

In a session with a five-year-old girl, this therapist was singing “Baa, Baa, Black Sheep” when the child asked if the therapist could “make it about a bird”. The therapist then began to sing “Tweet, tweet, bird, bird, have you any seed? Yes sir, (her name), how much do you need?” The music therapist can be creative and flexible in adapting song lyrics in response to the child's requests.

This technique has been reported by other pediatric practitioners, notably Perez (1989) and Slivka and Magill (1986). Perez described a six year old boy in a hospital who vented feelings through the therapist's parody of the song “Are you sleeping, Brother John?”, a parody prompted by non-verbal cues of the child.

This technique has also been found to be appropriate when working with young children in music education settings (Bridges, 1994). The familiar tune can engage children's attention while information, an appropriate feeling, or a playful idea can be conveyed through the change of lyrics.

In another context, words to a familiar song were changed to provide support for a child undergoing a difficult treatment. When assisting a twelve-year-old boy during a burn treatment procedure, the words to the song “I get by with a little help from my friends” were changed to “We're all here to help Ivan, we're his friends” (Edwards, 1995).

While the word substitutions described above were undertaken by the therapist, Slivka and Magill (1986) have given the children the opportunity to change song lyrics. They wrote, “By allowing children to substitute words to existing songs, it is possible to identify themes which are important to them” (p. 33). Lyric substitution can be used by children to communicate their experience of events around them.

Conclusion

For children hospitalized with severe burn injury, writing songs, improvising songs, or singing parodies of songs they know assist self-expression, psychosocial support, and increased mastery of a potentially difficult experience. Songs can be meaningful and powerful vehicles for the expression of feelings. Children must be offered choice and control over their level of participation in song writing and their wishes must be respected by the therapist. When the involvement of family members is indicated, music therapy can be used to support interactions between family members and encourage expression of feelings by caregivers.

Music therapy practice with children who have severe burns is a developing area of research and clinical interest in pediatric music therapy. The development of further protocols and rationales for interventions is recommended. More research studies are needed to evaluate the effectiveness of music therapy in addressing pain, psychosocial needs, and physical rehabilitation goals with children who have severe burn injury.

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