# *Cultural Differences in Music Chosen for Pain Relief*

**Marion Good, Ph.D., R.N.**
*Case Western Reserve University*
**Bradford Lee Picot**
*University of North Carolina–Chapel Hill*
**Safaa Gaber Salem, M.S.N.**
*Case Western Reserve University*
**Chi-Chun Chin, Ph.D.**
*Kaohsiung Medical University*
**Sandra Fulton Picot, Ph.D., R.N., F.A.A.N.**
*University of Maryland, Baltimore*
**Deforia Lane, Ph.D., M.T.-B.C.**
*University Hospitals of Cleveland*

*Nurses use music therapeutically but often assume that all patients will equally appreciate the same type of music. Cultural differences in music preferences are compared across five pain studies. Music preferences for pain relief are described as the most frequently chosen type of music for each culture. Findings indicate that in four studies, musical choices were related to cultural background (*p = *.002 to .049). Although the majority in each group chose among the other types of music, Caucasians most frequently chose orchestra music, African Americans chose jazz, and Taiwanese chose harp music. For culturally congruent care, nurses should become aware of cultural differences in music preference and provide culturally specific selections among other music expected to have a therapeutic effect.*

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**The United States is the most culturally** diverse country in the world and includes as many as 100 racial, ethnic, and cultural groups (Hopkins & Kennedy, 1992) that are expected to represent 50% of the American population in the year 2050 (Nickens, 1997). This cultural diversity produces differences in appearance, language, worldview, attitudes, values, beliefs, and preferences. Differences can cause intrapersonal and interpersonal conflicts that hamper nursing care.

Music has been used therapeutically in nursing practice, however, nurses sometimes believe that their own favorite music is universally liked and therapeutic for everyone. This belief of assumed similarity presumes that others hold beliefs and values similar to ours. Individual nurses may not be aware of their assumptions, and the music they provide may not be appreciated or tolerated by patients of other ethnic groups (Campinha-Bacote & Allbright, 1992). Nursing care that is congruent with a person's beliefs and lifeways will prevent cultural impositions, cultural negligence, and cultural conflicts (Leininger, 1995). Thus, when nurses sensitively offer culturally specific music to patients, they increase the likelihood of acceptance and benefits from the deeper and broader effects of music (Campinha-Bacote & Allbright, 1992).

The purpose of this article is to descriptively review findings from five pain studies to demonstrate cultural differences in preference for music. The research question was, "Across five pain studies, are there cultural differences in types of therapeutic music chosen?" The results will contribute to nurses' sensitivity to cultural variations in patient preferences when choosing music for therapeutic purposes. Three of the studies have been published to report the effect of music on postoperative pain (Good, 1995; Good & Chin, 1998; Good et al., 1999) and the other two are from unpublished pain studies.

Meyer (1956) stated that when people listen to music, they bring their culturally based beliefs in the affective power of music. An interaction between music and an individual's mental set can have beneficial physiological effects. Ethnomusicologists view this interaction in terms of sound, conception, and behavior (Nettl, 1993). A culturally based music perspective may come from experiences with family,

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language, religion, and country of origin. Although mainstream American music is often accepted, other cultural traditions can also play an important role in preference for music (Darrow & Mulloy, 1998).

Listening to music can help individuals to preserve self-esteem, reduce pain and anxiety, maintain muscle and body movement, prevent social isolation, learn new skills, cope with life's continual changes, and have fun (Chlan, 1998; Guzzetta, 1997; Snyder & Chlan, 1999). These effects may be related to culturally specific music. During the Second World War, Seymour (cited in Rorke, 1996) advocated playing a "Hungarian dance to a Hungarian, and a Czech song to a Czech" (p. 197) during musical activities for recovering wounded soldiers. More recently, gospel and spiritual music resulted in feelings of relaxation, safety, peace, and spirituality in African American psychiatric patients (Campinha-Bacote, 1993), and changed depression to hope in a critically ill woman (Allen & Good, in press). This growing realization that preference for music varies greatly among cultures (Moreno, 1992; Pope, 1995) is supported by results of two surveys indicating that music therapists advocate multicultural education for their students (Darrow & Mulloy, 1998; Toppozada, 1995).

In Asia, two investigators used culturally specific music to test the effects on pain (Hwang, Chang, Lee, Ko, & Chu, 1996; Tang et al., 1993), whereas others included more general selections (Good & Chin, 1998; Locsin, 1981). In Taiwan, Hwang offered heart surgery patients classical, religious, flute, Japanese music, or Taiwanese and Mandarin songs. In both the East and West, choice of music has been offered in studies of its effect on pain, but cultural differences in preference for music have not been reported (Beck, 1991; Chlan, 1998; Good, 1995, 1996; Good et al., 1999; Heiser, Chiles, Fudge, & Gray, 1997; Heitz, Symreng, & Scamman, 1992; Koch, Kain, Ayoub, & Rosenbaum, 1998; Zimmerman, Nieveen, Barnason, & Schmaderer, 1996). To increase nurses' awareness of cultural issues when using music, this review of five studies was undertaken to show cultural differences in music choices.

## THE FIVE STUDIES

The design and findings of each of the five studies is briefly described. Convenience sampling was used in each, and all except the Taiwan study took place in the Midwestern United States. After

approval of the protocol by human subjects committees, all participants provided informed consent before participation. In four studies, participants listened to 30-second excerpts of each type of music, and chose the one they thought would be most relaxing or distracting for pain after surgery. In Study 3, however, the music choices were only named, and participants were asked to choose their favorite music or the type that was least irritating to them.

Each researcher used SPSS to calculate frequencies and percentages to describe the number of participants selecting each type of music. Chi-square and *t* tests were used to examine the results in each study and the level of significance was set at .05. Table 1 shows the sample size and the most and least frequently chosen music in each study, whereas Table 2 shows the most frequently chosen music by cultural group.

**Study 1—Pilot**

A set of four music tapes designed to reduce postoperative pain was developed by Good (1992) from compact discs. Selections were individually chosen for their sedative qualities. The music was without lyrics, had a sustained melodic quality at a rate of 60 to 80 beats per minute, and had a general absence of strong rhythms or percussion (Gaston, 1951). Variation in volume and pitch was controlled so that the tape could be heard comfortably with earphones (Good, 1992, 1995). Each tape was created with a different instrumentation and a different type of music: The synthesizer tape included new age music, the piano tape included popular music in the United States from the 1940s to 1980s, the orchestra tape consisted of classical music, and the harp tape included both popular and new age music. The four tapes were piloted in Study 1 and a fifth tape of slow jazz was added to appeal to a greater variety of patients. These five tapes were used in Studies 2, 3, 4, and 5. A sixth type, gospel music, was added for Study 3.

After listening to the tapes, a music therapy consultant (D. Lane, personal communication, 1991) challenged the investigator to support whether the original four tapes would be acceptable for people in all cultural groups expected to participate in the study. In reply, the investigator pilot tested the tapes with 24 persons of different cultural backgrounds to see if there were cultural differences in the amount of positive response. Positive response was indicated by five qualities of music thought to be therapeutic for pain: calming, soothing, pleasing,

**TABLE 1**
**Number of Participants Who Chose Each Type of Music**

| | *Study 1* n = *24* | | *Study 2* n = *42* | | *Study 3* n = *40* | | *Study 4* n = *16* | | *Study 5* n = *250* | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Type of Music* | n | % | n | % | n | % | n | % | n | % |
| Synthesizer | 6 | 25 | 6 | 14 | 7 | 18 | 4 | 25 | 33 | 13 |
| Harp | 2[b] | 8 | 2[b] | 5 | 4[b] | 10 | 5[a] | 31 | 24[b] | 10 |
| Piano | 6 | 25 | 4 | 10 | 5 | 13 | 3[b] | 19 | 60 | 24 |
| Orchestra | 10[a] | 42 | 13 | 31 | 5 | 13 | 4 | 25 | 72[a] | 29 |
| Jazz | x | x | 17[a] | 40 | 11[a] | 28 | 0 | 0 | 60 | 24 |
| Gospel | x | x | x | x | 8 | 20 | x | x | x | x |

NOTE: x = music type not available in this study.
a. Type of music most frequently chosen in each study.
b. Type of music least frequently chosen in each study.

likeable, and not irritating. The sample (50% males and 50% females) was 67% ($n = 16$) Caucasian American, 21% ($n = 5$) African American, and 13% ($n = 3$) were Caucasians raised outside the United States (in New Zealand, France, and Morocco). The mean age was 45 years ± 15.

Participants were recruited by telephone and were tested in their homes. They listened, with earphones, to a 30-second excerpt of each of the original four types of music. They were instructed to turn off the tape recorder at the end of each excerpt, and rate the music according to the degree it was calming, soothing, pleasing, likeable, or irritating to them. Responses to each indicator were recorded on a 5-point Likert-type scale, which ranged from 1 = *not at all* to 5 = *a great deal*. In addition, there was one open-ended question that asked respondents to choose the type of music that would be most relaxing if they were having surgery. After reverse scoring for the irritation item, the 5-point scales for five items were summed for the four types of music. The total score reflected a positive response to music that could range from 20 = *not at all positive* to 100 points = *very positive*. Actual scores ranged from 46 to 96 points.

Caucasian Americans had significantly higher mean total scores indicating a higher positive response to music score ($M = 77 \pm 15$) than the combined group of African Americans and Caucasians raised outside the United States ($M = 67 \pm 8$, $t(22) = 2.14$, $p = .044$). To balance the groups, these last two were combined because they had different cultural experiences and preferences than the Caucasian Americans.

**TABLE 2**
**Music Most Frequently Chosen by Percentage of Cultural Groups**

| | *Study 1* | *Study 2* | *Study 3* | *Study 4* | *Study 5* |
|---|---|---|---|---|---|
| *Cultural Group* | n = *24* | n = *42* | n = *40* | n = *16* | n = *250* |
| Caucasian American | Orchestra 60% | Orchestra / Jazz 32% | Orchestra 28% | NA | Orchestra 31% |
| African American | Piano 50% | Jazz 100% | Jazz 41% | NA | Jazz 49% |
| Asian | NA | NA | NA | Harp 31% | NA |

NOTE: The music most frequently chosen by each cultural group in a study is expressed as the percentage of the cultural group who chose that type of music. Less than 100% indicates that preferences were not universal in a cultural group; NA = not applicable because this culture was not present in this study.

Next, we examined the type of music most frequently chosen for each cultural group (see Table 2), and found that not all participants in a given cultural group chose the same music: 63% of the 16 Caucasian Americans chose orchestra music; 50% of the 5 African Americans chose popular piano music, and 60% of Caucasians raised outside the United States also chose piano. There was a significant association between choice of music and the Caucasian Americans versus the African Americans and Caucasians raised outside the United States ($\chi^2 = 12.71$, $p = .013$).

These four tapes developed by a Caucasian American produced a higher total response in persons who were also Caucasian American than those who were not. The African Americans and the Caucasians raised outside the United States were significantly less positive about the music. Thus, there were culturally based differences in preferences that favored Caucasians.

A music tape was needed for postoperative pain that would appeal to more diverse musical interests. A professional musician suggested slow modern jazz to appeal to a wide variety of tastes, and so the fifth tape was made. In addition, several selections were added to the other tapes to increase their cross-cultural appeal. The five tapes were then tested for their effect on pain following abdominal surgery in the study that follows.

**Study 2—Dissertation**

Methods of this randomized controlled trial (RCT) were described in Good (1995). There were 42 participants (26% males and 74% females) who received music, including 34 (81%) Caucasians, 6 (14%) African Americans, and 2 (5%) Hispanics. The mean age was 46 years ± 13. Participants listened preoperatively to an introductory tape of each of the five types of music; the original four, plus the jazz tape. They then were asked to choose one for pain after surgery.

Choice of music between the African Americans and Caucasians was significantly associated with culture, ($\chi^2 = 9.55$, $p = .049$). The most frequent choices among the Caucasian Americans (32%) were tied for orchestra (32%) and jazz (32%), whereas among African Americans it was jazz (100%). Of the two Hispanic participants, one chose orchestra and the other chose jazz (Table 2). Comparing Studies 1 and 2, it is interesting to note that the most frequently chosen music by African Americans changed when jazz was added. In Study 1, when there was no jazz choice, they chose piano, but in Study 2 when it was offered, 100% chose jazz and none chose piano. Caucasians, too, responded more diversely when jazz was included.

**Study 3—Community Study**

An African American investigator used the same five tapes in a crossover design to test the effect of music on experimentally produced ischemic pain from an inflated blood pressure cuff (Picot, 1994). The convenience sample consisted of 40 community-dwelling adults (12 males and 28 females) with a mean age of 51 ± 18 years who all received music. The sample was 55% ($n = 22$) African American and 45% ($n = 18$) Caucasian. The investigator was familiar with the comfort that many African Americans receive from gospel music and therefore added gospel as a sixth tape. Gospel music is neither slow nor sedative, but it reminds people of God's presence (Campinha-Bacote, 1993), and research has shown that stimulating music can be effective for pain (Good et al., 1999; Whipple & Glynn, 1992). Gospel singing is familiar, uplifting, and comforting to African Americans and an increasing number of people from other cultural groups (Petrie, 1998).

One third ($n = 14$, 35%) of the participants, all African American, were interviewed at a church where they were members of a

contemporary gospel choir, 11 (28%) Caucasians were met at another church, and the remaining 7 (18%) Caucasians and 8 (20%) African Americans at a public library. Participants were told that the six choices were synthesizer, harp, piano, orchestra, jazz, and gospel, but unlike the other studies, participants did not listen to the selections first.

The most frequent choice among the 22 African Americans was jazz ($n$ = 9, 41% of African Americans) (see Table 2). In contrast, among the 18 Caucasians, the most frequent choice was orchestra music ($n$ = 5, 28%). A significant association was found between culture and choice of gospel music, ($\chi^2$ = 4.59, p = .03). Specifically, 7 (33%) African Americans and only 1 (6%) Caucasian chose gospel music. Again, when jazz was offered, only 10% of the African Americans chose piano. Despite the cultural preferences for gospel music in this study, it was decided not to use gospel music in the postoperative pain studies. For research control, it was necessary that the types have a similar soothing effect.

**Study 4—Taiwan**

The tapes were taken to Taiwan by a doctoral student who tested them in an RCT of 38 participants for their effect on postoperative pain. Methods of the trial were described in Good and Chin (1998). The convenience sample was entirely female and Asian, consisting of 82% Taiwanese and 18% Mainland Chinese and Hakka, an ancient Chinese Han culture. The mean age was 41 years ± 7. The 16 participants in the music group chose music after listening to the five excerpts before surgery.

The most frequently chosen type of music by Asians in the Taiwan sample was harp ($n$ = 5, 31%), and the least frequently chosen was popular piano music ($n$ = 3, 19%). None chose jazz (Table 2). Thus, jazz, the most frequently chosen music in Study 2 in the United States, was not chosen at all in this Taiwanese sample. Postoperative patients were asked at the end of the study if there was other music that would have been relaxing or distracting to them for pain after surgery. Several suggested Buddhist hymns, popular music heard in Taiwan, and music with lyrics.

### Study 5—National Institute of Nursing Research Grant

The tapes were then used in an RCT of the effects of relaxation and music on postoperative pain. There were 18% males and 82% females who underwent major abdominal surgery in five Midwestern hospitals. Methods of the trial were described in Good et al. (1999). The participants who received music ($n = 250$) had a mean age of 45 years ± 12, and chose from the five excerpts preoperatively. They included 209 (84%) Caucasians, 39 (16%) African Americans, and 2 (1%) Asians (born in the Philippines). All of the African Americans, their parents, and their grandparents were born in the United States, as were all of the Caucasians, but only 88% of their parents and 44% of their grandparents were born here. Nearly all Caucasians' backgrounds were from 10 Western European (70%) or 12 Eastern European countries (23%); the rest were from South America, the Middle East, and Canada.

The most frequently chosen music among Caucasians was orchestra music, but only 31% chose it. Among African Americans, 49% chose jazz (see Table 2). Only 3% chose piano, their first choice in Study 1 in which jazz was not offered. A significant association was found between the Caucasian and African American cultural groups in choice of music ($\chi^2 = 16.94$, $p = .002$).

When asked what other music they would have liked to hear for pain after surgery, the responses varied greatly with no predominant type. Suggestions included soft country, blues, folk, or religious music. When asked if music from their cultural background would be helpful for pain after surgery, various cultures were reflected in suggestions from Caucasians: polkas, Irish folk, Italian, Native American, Christian, and spiritual music. African Americans suggested soft jazz, gospel, blues, and Christian or religious music.

## Discussion

Because of differences noted in Study 1, we examined data from these five pain studies to evaluate whether cultural background was associated with music selected for pain. The results indicated that there are significant cultural differences in preference for music for therapeutic purposes. Orchestra music was the most frequently chosen tape in samples in which Caucasian Americans predominated;

yet less than one third of them chose it (Table 2). Other types of music such as popular piano music and jazz were also important to Caucasians. Jazz was most frequently chosen in the predominantly African American sample (Study 3). This music started in the United States in the African American populations of urban centers such as New Orleans, St. Louis, and Chicago. Jazz later attained mainstream popularity in the United States (Baker, 1989). Gospel was the second most frequently chosen by African Americans in Study 3. In addition, when jazz was not a choice for African Americans in Study 1, half chose piano; when jazz was added, fewer chose piano.

Harp music was least frequently chosen in the United States, but was the most frequently chosen in Taiwan. None of the Taiwanese surgical patients chose jazz. The Chinese people have a long history of using plucked string instruments similar to the lute and the zither in religious and artistic events (Kagan, 1998). Although these instruments differ from Western stringed instruments, the sounds of the harp may have been familiar and soothing to them. Piano music is also familiar to Taiwanese people, but popular songs are usually played on the violin, guitar, or electronic organ. According to the fourth author (Chin), the clear, loud, and intermittent tones of the piano are not particularly soothing to most Taiwanese, and jazz is an American type of music that is lesser known in Taiwan where Chinese traditional music may prevail.

Offering culturally congruent music such as Buddhist hymns to Taiwanese participants would probably result in different choices. Music is important in many cultures for religious and therapeutic purposes (Campbell, 1998). Because of the inspiring and comforting qualities of most spiritual music, it may have therapeutic value when used with people who choose it. In contrast, most of the music on the five tapes had originally been created for entertainment, rather than worship, but was chosen for its soothing qualities. The tapes had no lyrics, as recommended by Western science, but to these Taiwanese patients, lyrics were important.

It is a limitation of this review that the studies were not parallel, and that most samples were small, largely female, and differed in cultural composition. However, several patterns can be described across studies. The larger sample in Study 5 confirmed the most frequent choices by Caucasians in Studies 2 and 3 and by African Americans in Study 3 (see Table 2). Furthermore, after the addition of more culturally acceptable jazz, fewer African Americans chose popular music in three studies. Notable by comparison was the choice of harp, but not

jazz, in Taiwan. In most studies, choice of music varied within cultures (see Table 2).

## Conclusions

*Recommendations for research*. More descriptive research is needed on musical preferences in various populations. Studies of the feelings that music evokes would enrich understanding of cultural preferences. It would be most helpful if the results of practitioner surveys were compiled and published. Nurse investigators of the therapeutic effects of music should include culturally relevant selections for the people they study and use adequate sample sizes. Purposive sampling would ensure an equal number of participants from each culture.

*Recommendations for nursing practice*. The following suggestions for nurses using music are organized according to the concepts of a model of the process of cultural competency. It proposes that cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire are all needed in the process of improving one's cultural competency (Campinha-Bacote, 1999). Paramount is cultural desire, a sincere wish to explore cultural differences.

To increase awareness of cultural influences in their own lives, nurses can list their own calming and stimulating musical preferences and relate them to their cultural background. As they note the variety in their own preferences, nurses are strongly advised not to stereotype the most frequent choice reported here as the only choice for any cultural group. Patients may even be offended, thinking the nurse does not consider them likely to have broader tastes. Certainly, not all Caucasians prefer classical music, not all African Americans prefer jazz, and not all Taiwanese prefer harp music. In each case, the majority preferred other types. The intent is to encourage cultural sensitivity so nurses include culturally congruent music choices.

In addition to soft music for pain, nurses can also consider music with increased volume and tempo; such favorites may very well distract patients from pain. For example, recognizing the potential of spiritual and uplifting gospel music, nurses can encourage its use for patients who like it. Other music with an upbeat tempo such as rock and roll, salsa, marches, rap, folk, big band, and polkas are used for elevating moods and exercising, but should not be overlooked for

pain if the patient prefers them. Evaluating the responses and providing alternatives will help ensure effectiveness. Additionally, some patients might not like music at all. Relaxation techniques or guided imagery can be offered instead, or patients may be distracted by a telephone call to a family member or a basketball game on television.

To increase cultural knowledge, nurses can read about musical preferences of various groups in an encyclopedia or at a public library and listen to music in record stores, on the Internet, and among friends, acquaintances, and patients. A music therapist is an excellent resource. Learning about the cultures is interesting and will facilitate understanding.

To start a music library, nurses can select music that is suggested by patients in the major cultural groups that they serve, gradually adding tapes for other cultures. Table 1 shows that the Midwestern U. S. populations preferred soothing classical, jazz, and popular piano music. Nurses can determine preferences by asking patients and recording the answers. Alternately, after patients listen to several excerpts of taped music, a simple questionnaire published by Stevens (1990) could be used. When culturally preferred music is not available, the nurse can ask patients to bring their own music, note the titles, and obtain the titles for the music library.

Skillful assessment of musical preferences is the first step in a cultural encounter. To help patients explore their interests, it is important to assess preferences in a variety of ways: asking about the role music plays in their life? How they respond to music? The times when they listen to it? And, if there are types of music, instruments, artists or songs that are appealing? Asking in several ways engages patients in reawakening musical interests and deciding what might be helpful during their illness. Often, people like music they grew up with and enjoyed as young adults.

African Americans, for example, may appreciate hearing the familiarity of an African American voice, rhythmic jazz, or a spiritual group. A lovely relaxation and music tape is available with an African American voice giving the initial relaxation instructions followed by soft keyboard flute music. The tape was designed to be culturally specific to African Americans (Campinha-Bacote, Campinha-Bacote, & Allbright, 1992). Nurses who offer a tape like this, but also other choices, show sensitivity and caring about cultural and individual preferences. Similarly, a Korean or Hispanic singing voice may appeal to people from other backgrounds. Arabian music has different

musical forms and sounds than does Western or Asian music (Howard, 1998). In Egypt, for example, music is played on a pear-shaped lute called an *'ud*, a tambourine, and an end-blown flute. This music may soothe patients from the Middle East and provide a familiar connection with their homeland.

If the nurse and patient are from different countries, sharing music can develop communication and rapport. A music therapist tells international patients that she wants to learn all she can about their native music while they are in the hospital. Often the family will bring in music or obtain it from a music store or library. If nurses listen to this music along with the patient, even for just a minute, and comment about what they hear, a cultural encounter begins. The nurse can acknowledge the country and then hum or repeat a word or phrase, ask what it means, and in return, share music from his or her own background.

The findings only begin to describe cultural differences in choosing music during health care. Considering the many cultures in the world such as African, Appalachian, Australian, Caribbean, Hispanic, Russian, and Vietnamese, there is much that is unknown about the kinds of music preferred during illness. It is clear, however, from these studies that nurses can no longer assume that their own favorite music will be equally liked or loved by all of their patients. To provide music that is likely to be accepted by patients, nurses should assess individual preferences and offer several options including some from the patient's cultural background.

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*Marion Good, Ph.D., R.N., is an associate professor of nursing at the Frances Payne Bolton School of Nursing at the Case Western Reserve University.*
*Bradford Lee Picot is a student at the University of North Carolina–Chapel Hill.*

*Safaa Gaber Salem, M.S.N., is a Ph.D. student at the Frances Payne Bolton School of Nursing, Case Western Reserve University.*

*Chi-Chun Chin, Ph.D., is an associate professor at the School of Nursing, Kaohsiung Medical University.*

*Sandra Fulton Picot, Ph.D., R.N., F.A.A.N., is an associate professor and Sonya Ziporkin Gershowitz Endowed Chair in Gerentology at the University of Maryland, Baltimore School of Nursing.*

*Deforia Lane, Ph.D., M.T.-B.C., is director of music therapy at the Ireland Cancer Center/Rainbow Babies & Children's Hospital.*