Full-Length Article

Perceptions on the Functions of Music Among Professionals in the Special Education Field in the United Arab Emirates

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Abstract
The purpose of this study was to investigate how special education teachers and health-related professionals perceive and understand the functions of music in the United Arab Emirates. A total of 70 Special Education teachers, physical therapists, speech therapists, and medical professionals completed questionnaires about their musical training and activities, as well as their beliefs about the role and function of music. The survey results indicated that these professionals perceived music to have specific functions in the social, emotional, communicational, and recreational domains. Further analysis showed positive correlations between certain participants' characteristics, such as duration of music education, and beliefs about specific functions of music. The authors propose that these results provide fundamental information needed to develop and implement music therapy programs in the United Arab Emirates and to promote collaborations among professionals from different fields and cultural backgrounds.

Keywords: ***function of music, special education, United Arab Emirates, perception of music***

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Introduction

Music, at its core, reflects and expresses the ethnic and cultural characteristics of the societies to which people belong [1]. Ethnic and cultural characteristics should therefore be considered when selecting music for specific purposes. Music serves a range of functions, including emotional, physical, recreational, communicational, social, and cultural functions [2, 3]. Webster's early 'Anthropology of Music'(3) listed the 10 principal functions of music as being: 1) emotional expression, 2) aesthetic enjoyment, 3) entrainment, 4) communication, 5) symbolic representation, 6) physical response, 7) enforcing conformity to social norms, 8) validation of social institutions and religious rituals, 9) contribution to the continuity and stability of culture, and 10) contribution to the integration of society.((pp. 219–227)

These categories can further be grouped into individual, interpersonal, social, and cultural functions. Individual functions are related to regulating one's personal state, including one's emotional, cognitive, and physiological state [2]. Music induces physical changes by directly eliciting biological changes such as hormonal and neurological responses, or by promoting motor responses by entraining or reinforcing movements [4, 5, 6]. Music has also been studied as an efficient tool to promote emotional and cognitive regulation [7, 8, 9]. When music is used to affect personal aspects, the value and meaning of music are determined by how that individual subjectively perceives his or her musical experience [10]. On the personal level, music plays a role in expressing emotions, regulating negative emotions, and reflecting the inner mind of listeners [11].

The interpersonal functions of music mediate communication between self and others, and assist in building relationships. In relationships, music serves as a catalyst for the formation of interpersonal relationships between individuals, as a medium of empathy and interaction, and as a means for communication [12]. On the level of one's society and culture, music is a major tool in community formation, communication, ritual, and religious ceremonies; musical activities may also serve specific purposes within the community [10].

Exploiting such functions, the clinical and academic development of music therapy began with seeking a deeper understanding of music, with a goal of learning how to more effectively apply it. This research was first initiated by the United States and a few European countries. Accordingly, music, as a medium of therapy, is understandably grounded in Western classical music and Western musical systems, genres, and elements [13]. Previous studies have suggested that different musical systems convey different culture-specific

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features [14]. Music therapists must therefore consider the cultural traditions and the music of particular cultures when selecting music for use with clients from non-Western cultures.

Within music therapy practice, the client's relationship with music is a crucial point around which the therapy process evolves. This affects not just the music that is chosen, but also the experiences or activities selected. Specific music therapy techniques may either be applicable to multiple cultures, or may only work within specific cultures [15]. In Western countries, music therapy is being offered to clients from various ethnic and cultural backgrounds, and more and more attention is being paid to the need to choose music in light of the client's cultural characteristics [16]. For example, while Arabic music does not employ the harmony that is so central to Western music, it has a unique tonal system and rhythmic characteristics [17].

Although music is not included in the curriculum of most public schools in the United Arab Emirates (UAE), musicians who engage in private study have contributed to the spread of Arabic music [18]. The main features of Arabic music include vocal melodies, with various instruments serving as musical embellishment [19]; performers also commonly improvise [20]. Arabic music does not use the Western pitch system, instead predominantly dividing notes into 1/4 pitch intervals (referred to as *micro-tonality*). Given this different tuning, piano or keyboard instruments are not generally used to accompany Arabic music, as these disparate tunings would not harmonize. At the same time, many contemporary Arab musicians are trying to Westernize their music through using more Western musical notation and instruments—although continuing the tradition of Arabic folk music and singing. Gradually, Arabic popular music has begun to use traditional Middle-Eastern melodies and Western-style harmonic accompaniments, with the use of instrumentation such as guitars, drums, and electronic musical instruments speaking to this opening to and integrating of other cultures.

Along these lines, based on a collaboration between OOOO University in UAE and OOO University in OOO, a routine music therapy workshop program was established in 2014 to assist special educators and related specialists to utilize the therapeutic benefits of music as a part of their practice.[21]. Moreover, music therapy has been recently implemented in the UAE rehabilitation institutions [21]. However, the specific uses and characteristics of music in Arabic culture are not yet well known, indicating a need to study and understand how Arabs perceive and experience the universal characteristics of music in the diverse personal, relational, and social aspects discussed in the previous section. Furthermore, in order to understand the cultural applications of music in Arabic culture, one must explore the unique characteristics of Arabic music. For example, Arabic music tends to discourage indecent lyrics or gestures due to the influence of Islamic religious culture; at the same time, the literature suggests that Arabs express their artistic and creative desires by utilizing music in daily life [22].

As discussed in the preceding section, Arabic music has very distinctive features that distinguish it from Western norms in musical notation, pitch, harmony, and musical features. Since music therapy began to develop from within Western culture and generally uses elements of Western music, the actual use and perception of music among Arabic people must be clearly understand for practitioners to utilize music for therapeutic purposes in Arab countries.

This study worked with a sample of Special Education specialists in the UAE to better understand the current use of music in their daily lives, as well as their perceptions around the functions of music. The research questions of this study are as follows:

1. What do Special Education specialists in the UAE perceive the function of music to be in general everyday life?

2. What do Special Education specialists in the UAE perceive the function of music to be within their professional field, specifically?

Method

Participants

The participants were 88 special education teachers, physical therapists, occupational therapists, speech language pathologists, and medical doctors in [Removed for blind review], United Arab Emirates. Participants were recruited from the Medical College of [Removed for blind review] University and [Removed for blind review] City of Humanitarian Services, which is the biggest education and training facility in the UAE. As participants' primary language was Arabic, the questionnaire was written in English, with Arabic translations. Of these 88 participants, 70 successfully completed the questionnaires and were included in the final analysis.

Questionnaires

To investigate participants' current use of music, researchers developed a questionnaire comprising three parts: (a) participant demographics, (2) how participants currently used music, and (3) what participants perceived to be the functions of music. Because one's gender, age, major, level of educational attainment, and areas of professional specialization may influence how one uses music, the first part of the questionnaire assessed gender, educational attainment, educational major, profession, level of music education, and years of experience in one's current job. The second section, on the current use of music, asked questions regarding the types of musical activity that participants had in their daily lives, how much time they spent engaging in creating or listening to music, and location of using music. Finally, the section on the perceived function of music asked participants to rate how personally helpful music was in emotional, recreational, communicational, social, and spiritual areas. These subcategories were considered highly important because music is utilized in many different cultures for purposes other than recreation (Table 1).

Table 1: *Construction of Questionnaires and Rationale*

Category	*Items*	*Rationale*
Demographic information of participants	• Gender, Age, educational attainment, Major(s) • Professional setting • Years of professional experience	• One's socioeconomic and environmental background may influence the use and perception of music • General characteristics may be useful in defining factors that influence one's musical experience and perception [2, 3].
Use of music and musical background	• Music education and musical preferences • Daily duration of engaging with music • Location in which music is used	• One's level of prior music education and musical preferences may influence the extent to which one incorporates music into one's daily life • Typical musical activities of a layperson are listening, singing, and playing musical instruments • Information about the place and circumstances associated with the use of music may be helpful in developing and implementing future music programs [23].
Perception of the role of music	• Emotion • Recreation • Communication • Group Cohesion • Spiritual health	• People utilize music for a variety of non-musical purposes in the personal, social, recreational and spiritual domains [11, 12].

To learn how participants actually engaged with music, multiple choice questions were designed to ask about the role of music in their everyday lives, assessing time spent on specific musical activities such as listening, singing, and playing musical instruments, as well as the contexts in which participants engaged in each musical activity. In addition, open-ended questions were included about participants' musical preferences, and the reasons for these preferences. Personal perceptions on the functions of music were assessed on a 5-point Likert-type scale. Items assessing the emotional functions of music included its roles in reducing negative emotions and stress, as well as in promoting relaxation and emotional refreshment. Questions about leisure addressed the aesthetic experience of music and the utilization of one's leisure time. Regarding communication, items examined participants' perceptions on how music helps in communication both between individuals and generations. To explore the role of music in social aspects, questions examined participants' perception of music in relation to group cohesiveness and relationships. Finally, to learn about the role of music in spirituality, items asked participants for their perceptions on the influence of music on individuals' spiritual health.

A panel of two professional music therapists, each with over 10 years of experience, reviewed the questionnaire for its internal validity, and deleted or modified items deemed unnecessary or ambiguous.

Procedure

This survey was conducted from February 9 to 11, 2016 at [Removed for blind review]. Questionnaires were distributed at the workshop site to participants, who were physical therapists, occupational therapists, speech language pathologists, and medical doctors. The participants gave a written consent to participate in the survey, and researchers ensured anonymity by not collecting any personally identifiable information about participants.

Data analysis

Descriptive statistical analysis and Spearman correlation analysis were performed using SPSS 20 for the specific time and circumstances of music activities, and descriptive analysis was performed to examine the function of music using Likert scale scores. Correlation analysis was then performed to determine whether there were any relationships between participants' music education backgrounds and musical behaviors.

Results

Demographics

A total of 70 completed questionnaires were included for analysis. Participants worked in Special Education settings (34.3%), social welfare facilities (28.6%), general schools (7.1%), hospitals (5.7%), and other settings (24.3%). The demographic information of participants is presented in Table 2.

Table 2: *Demographic information*

		n	%
Gender	Female	52	74.3
	Male	18	25.7
Age	20-29	34	48.6
	30-39	23	32.9
	40-49	11	15.7
	50-59	1	1.4
	Over 59	1	1.4
Educational Attainment	Bachelors	46	65.7
	Masters	2	2.9
	Doctorate	2	2.9
	College students	13	18.6
	Other	7	10
Major(s)*	Special Education	22	31.4
	Medicine	13	18.6
	General Education	10	14.3
	Social Work	7	10
	Therapy or Counseling	5	7.1
	Music	4	5.7
	Psychology	4	5.7
	Other	5	7.1
Professional Setting	Special Education in School Setting	24	34.3
	Social Welfare Facility	20	28.6
	General Education in School Setting	5	7.1
	Hospital or medical facility	4	5.7
	Unemployed - students	13	18.6
	Other	4	5.7
Years of professional experience	0-2 years	21	30
	3-4 years	5	7.1
	5-6 years	8	11.4
	7-8 years	8	11.4
	9-10 years	10	14.3
	More than 10 years	18	25.7

2. Use of music in everyday life

Music education and musical preferences

Regarding duration of music education, although most of the participants (68.6%) had received less than one year of music education, 14.3% (the second-largest group) had received more than 6 years of music education. 91.4% of participants reported liking music and 85.7% used music in their everyday life (Table 3).

Table 3: *Music education and preference for music*

Category	Answer	*n*	%
Music Education	Less than 1 year	48	68.6
	1-2 years	6	8.6
	3-4 years	2	2.9
	5-6 years	1	1.4
	More than 6 years	10	14.3
	No response	3	4.3
Like music?	Yes	64	91.4
	No	5	7.1
	No response	1	1.4
Use music?	Yes	60	85.7
	No	5	7.1
	No response	5	7.1

2) Use of music and musical background

To examine the amount of time spent engaging with music in specific ways, survey items included questions about specific musical activities. 35.7% of participants listened to music for less than an hour a day, while 20% of them listened for more than four hours a day, indicating that most of the participants listened to music in their daily lives, although there was tremendous range in how much time this was. 52.9% of the participants spent less than an hour a day singing, and 54.3% spent less than an hour a day playing musical instruments. In sum, most participants use music in various forms in their daily lives (Table 4).

Table 4: *Daily time spent engaging with music*

	Hours	*n*	%
Time spent listening to music	Less than 1 hour	25	35.7
	2-3 hours	18	25.7
	3-4 hours	6	8.6
	More than 4 hours	14	20.0
	No response	7	10
Time spent singing	Less than 1 hour	37	52.9
	2-3 hours	6	8.6
	3-4 hours	1	1.4
	More than 4 hours	3	4.3
	No response	23	32.9
Time spent playing an instrument	Less than 1 hour	38	54.3
	2-3 hours	3	4.3
	3-4 hours	1	1.4
	More than 4 hours	2	2.9
	No response	26	37.1

Perception of the role of music

The participants evaluated the personal function of music for them on a 5-point Likert-type scale ranging from 1 = never to 5 = always, with higher scores indicating a more pervasive and important role of music. The results showed that, overall, participants felt that music played a role across the emotional, recreational, communicational, social, and spiritual domains, with the spiritual function of music scoring the highest (M = 4.54). High scores (indicating agreement about the important role of music) were also reported for the emotional functions of reducing negative emotions (M = 4.03), relieving stress (M = 4.03), emotional refreshment (M = 4.14), and relaxation (M =4.24). In the area of recreation, participants perceived music as enhancing enjoyment with others (M = 4.16) and helping people spend their leisure time well (M = 3.90). Regarding its social functions, participants perceived music to help in communication others (M=3.57) and in communicating between different generations (M = 3.74). For the function of group cohesion, participants perceived music as helping to build group cohesion (M = 4.03) and relationships with others (M = 3.87). The analysis of the function of music is presented in Table 6.

Table 6: *Perceptions of the functions of music*

Category		M	SD
Emotion	Music reduces my negative feelings	4.03	1.03
	Music alleviates my stress	4.03	.99
	Music changes my moods	4.14	.95
	Music helps with relaxation	4.24	.95
Recreation	Music enhances enjoyment with others	4.16	1.11
	Music helps in spending leisure time	3.90	1.07
Communication	Music facilitates communication with friends or others	3.57	1.01
	Music facilitates communication between younger or older generations	3.74	1.18
Group Cohesion	Music helps build group cohesion	4.03	1.04
	Music helps build relationships with others	3.87	1.11
Spiritual health	Music helps spiritual health	4.54	.67

The results of the correlation analysis between participants' demographic data and the perceived role of music indicated that there was a significant relationship between the duration of music education; musical activities, including listening, singing, and playing instruments; and how important participants perceived music to be in all areas. Although there was a weak correlation (p <.05), the more music education participants had, the more effective they perceived music in being in reducing negative emotions and stress and creating a pleasing aesthetic experience, as well as in supporting and promoting leisure, communication with others, and spiritual health. Furthermore, the more they listened to music, the more helpful they found music to be in reducing negative emotions and in supporting leisure and spiritual health. The participants who spent longer time on more time singing also perceived music to be more effective in reducing negative emotions and stress, and in supporting communication between different generations. Lastly, there was a significant positive relationship between the number of hours that participants spent playing an instrument and how helpful they thought music was in promoting stress relief and communication with others (Table 7).

Table 7: *Correlation analysis between music education, time spent engaging with music, and perceived function of music*

Correlation Coefficient	Reduce Negative Emotions	Stress Relief	Enjoyment with others	Spending Leisure Time	Communication with others	Bonding between generations	Spiritual health
Music education (n = 67)	.251*	.266*	.316**	.362**	.300*	0.179	.259*
Time Listening (n=63)	.278*	0.161	0.095	.513**	0.235	-0.026	.476**
Time Singing (n = 47)	.297*	.339*	0.223	0.167	0.155	.290*	.330*
Time Playing Instrument (n=44)	0.195	.299*	0.104	0.273	.341*	0.271	0.293

* Significant at the 0.05 level (2-tailed).

** Significant at the 0.01 level (2-tailed).

Discussion and Conclusion

The purpose of this study was to investigate perceptions regarding the role of music among special education teachers and related professionals in the United Arab Emirates. Among the most interesting findings were that professionals in the therapy field tended to listen to music at home, while driving in the car, or at work; they also tended to incorporate music into religious services or events by listening, singing, and playing musical instruments. The majority of participants, to varying degrees, engaged in musical activities from less than one hour up to four hours for a day. Participants perceived music as having universal functions relating to personal, relational, and social aspects, agreeing that music is useful in the personal aspect for emotional refreshment, stress relief, relaxation, amusement, and leisure, and in the relational aspect for interacting with other people and facilitating communication between different generations. From a social angle, they saw music as helpful in both the formation of communities and in promoting spiritual health. These results show that the participants with Arabic background use and perceive the functions of music in ways consistent with previous findings for other cultures [2]. These results indicate that, despite strong cultural differences and a lack of music education in the public school setting, music serves as an efficient medium for personal, relational, social, and spiritual changes for the participants.

This study found a positive relationship between the duration of participants' musical education, how many hours per day they engaged with music, and how important they perceived the functions of music to be. This would indicate that more music education enhances awareness regarding the universal characteristics and functions of music. Participants demonstrated high awareness of personal and relational aspects, including the function of music in emotional refreshment, stress relief, amusement, making good use of one's leisure time, and communication with other people. This finding indicates that participants understood and utilized the universal characteristics of music more effectively when they had more formal musical education. Moreover, there was a positive relationship between the average number of daily hours spent listening to music and scores for emotional refreshment, use of leisure time, or spiritual health. In other words, those participants who listened to more music perceived music as having more inherent meaning and value, and saw music as being more important in emotional expression and regulation [24].

Those participants who reported singing more per day rated music as more helpful in promoting stress relief, bonding between different generations, and spiritual health. This finding is in line with previous studies finding that singing allows people to directly express themselves regarding concerns and emotions in their lives [25], and that singing promotes the understanding of different perspectives between generations [26]. There was also a positive relationship between the number of hours spent playing musical instruments and how highly music was rated in helping with stress relief or communication with others. Participants who worked as Special Education teachers and related professionals generally reported playing music at work a lot: The more they played music, the better they understood the function of music in promoting communication with other people. In sum, these results suggest that those who invest more time in music education or activities may better utilize music for their own benefit, using music purposefully for specific reasons.

One striking finding was that the highest score in the applications of music was for the importance of music in promoting spiritual health. This may reflect or be related to the highly religious culture of many Arab countries. Even though spirituality has a complex relationship to the Arabic religious community—with many religious leaders seeking to restrict the spread or consumption of music on the grounds that it interferes with the practice of a religious lifestyle or violates religious doctrines [27]—the results of the present study show that, at least for the participants surveyed here, music is seen as helping rather than hindering spiritual health.

Based on these results, further research on the specific types of music used would provide more detailed information regarding the appropriate styles and characteristics of music for specific purposes. Such research would provide valuable information regarding the role of music in both therapeutic and daily contexts in the UAE.

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