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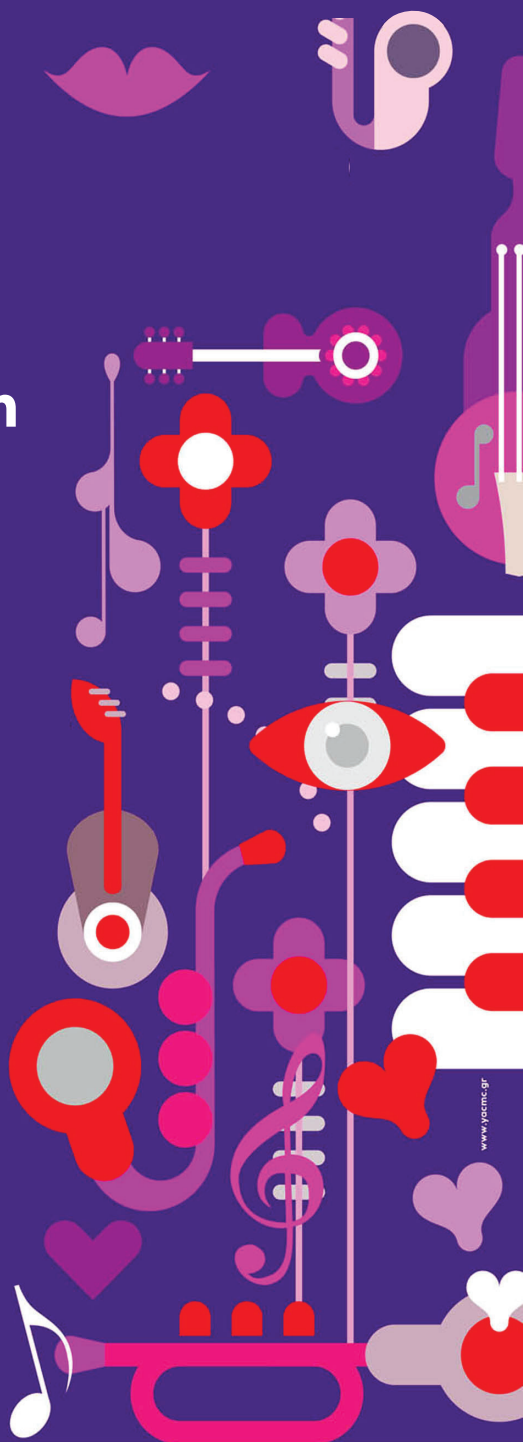
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**Handbook  
of Best Practices:**

**MUSIC in  
Creative Detoxification  
and Rehabilitation**

Edited by  
**Vasileios Stamou  
&  
Lelouda Stamou**

UNIVERSITY OF MACEDONIA



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# Creative music making and its effects on children and youth

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## The notion of creativity

The notion of creativity or creative thinking is susceptible to many and sometimes contradictory definitions, as creative action is one of the most complex issues of human cognition and behavior (Kokkidou, 2015). Creativity has been linked to divergent thinking, innovation originality and the birth of new ideas (Kokkidou, 2015; Tafuri, 2006; Stamou, 2005), imagination, subconscious and free expression (Koutsoupidou, 2009).

For many years, creativity was seen as a talent of a few gifted people. In our days, literature on creativity has generally moved from the older elitistic definition to a more democratic one, which says that all people are capable of creative achievements in a certain domain (NACCCE, 1999). Torrance (1976) observed that young children are at the top of the pyramid of creativity because they have strong imagination. However, although all children are able to create, this capacity remains latent when there is no support, aid or training. With practice, the ability for creativity evolves into skill. Creative thinking, therefore, as a special ability of intellect, is extensible, taught and improved through practice (Stamou, 2005, 2001; Gardner, 1993; Torrance, 1976). The above view is assisted by the fact that worldwide, the cultivation of creativity in children and young people, is a primary concern of the official curricula, resulting to creativity being incorporated into the purposes and objectives of the school (Stamou, 2005, 2001; Sharp, 2004).

## Music creativity

Several researchers have attempted to define music creativity or creative thinking in music. Selectively, we cite the definition of Haroutounian (2002), who argues that as long as people are in constant interaction with their environment, music creativity is the creative process of communicating ideas and emotions through sounds. Additionally, Gordon (1988) argues that, during the creative process in music, the person, implicitly or explicitly, organizes known musical structures and materials with novel or unknown ways (Zbainos & Anastasopoulou, 2012).

Improvisation and music composition are the basic forms of music creativity (Stamou, 2001). Improvisation is defined as any spontaneous or explicitly directed music creation in singing or playing a musical instrument, which is not written down with notation or in other ways, and in which the creator doesn't return to make corrections (Papapanagiotou, 2002). Therefore, improvisation is a unique presentation of an idea that cannot be repeated in exactly the same form, because it is not written (Koutsoupidou, 2009; Stamou, 2001). Azzara (1999), describing the creative process of improvisation, argues that improvisation in music is analogous to the improvisation of ideas in language.

On the other hand, composition is defined as any musical creation which is recorded with notation or otherwise, can be repeated with more or less precision, and enables both the creator and other listeners to re-listen and evaluate it (Papapanagiotou, 2002; Stamou, 2001). In the creative actions of music composition some researchers also include songwriting, which, besides the composition of music, additionally contains the creative writing of the lyrics of the song (Hahn, 2015).

In relation to young children's creative thinking in music, the concepts of improvisation and composition are used by many scholars as the creation of music through the use of the body (for the production of natural sounds or movement and dance), the use of voice (for the production of vocal sounds without specific intonation or melodies), or the use of different rhythmic and melodic music instruments (Tafari, 2006; Koutsoupidou, 2005).

Although composition and improvisation are the core activities of music creativity, creative thinking in music of children and young people can be expressed through a variety of other music activities, such as creative

music listening (Kratus, 2017; Kerchner, 2000; Dunn, 1997; Kerchner, 1996) and creative music performance (Strand & Brenner, 2017; Clarke, 2005; Graham, 1998). At the same time, the concept of music creativity includes procedures such as experimentation with voice, music instruments and various sound sources, as well as the exploration of different ways of producing or using a sound, or combinations of sounds (Koutsoupidou & Hargreaves, 2009; Riveire, 2006; Volz, 2005; Stamou, 2005; MacMillan, 1999)

### **Theories and models for the development of music creativity**

Most of the researches on music creativity adopted qualitative approaches and tried to identify, describe and interpret the different manifestations of music creativity in different age periods, through longitudinal studies with children and young people. So, over the last few decades several theories and models on the developmental stages of music creativity in children and young people have been developed and formulated (Koutsoupidou & Hargreaves, 2009; Stamou, 2005; Brophy, 2002; Stamou, 2001; Gordon, 1997; Webster, 1992, 1983; Kratus, 1991, 1989; Reinhardt, 1990; Swanwick & Tillman, 1986; Flohr, 1985). Different educational strategies and teaching approaches were based upon these theories and models aiming at the development of children's and young people's music creativity in the context of their music education (Tafari, 2006; Stamou, 2005; Koutsoupidou, 2005; Brophy, 2002; Papapanagiotou, 2002; Azzara, 1999, 1992). At the same time, attempts were made to evaluate music creativity on the basis of the above theories. Thus, several study methods and assessment tests have been developed and used by scholars, such as the WCTT test (Williams Creative Thinking Test, 1994), Webster's MCTM-II test (Measure of Creative Thinking in Music II, 1987), the MCTM (Measurement of Creative Thinking in Music, 1983), the TTCT test (Torrance Tests of Creative Thinking, 1974), and the TMC test (Vaughan Test of Musical Creativity, 1971).

A common point in all the theories concerning stages of development of music creativity among children and young people, is the finding that at an early stage music creativity is characterized by an effort for self-expression without obedience to specific rules of music structure, character

or style. At this stage, music creation arises naturally and does not depend on any kind of prior education, knowledge or practiced music skills. At later, more advanced stages, music creativity presupposes the involvement of intellectual abilities and strategies (Koutsoupidou & Hargreaves, 2009), while at the same time utilizes acquired music knowledge and practiced music skills. Thus, students music creative products are characterized by more advanced use of musical elements and greater originality. However, it is common knowledge that children's and young people's music creativity improves and evolves with experience, i.e. with the cognitive development of children, the improvement of their technique in performing a music instrument or singing, the evolution of music knowledge and skills, and music rehearsing (Kratz, 1991). In children's developmental spectrum however, some researchers find that children's creative thinking in music shows a significant growth from 2nd to 4th Grades, i.e. between the ages of 7 to 9 years, and a relative decline or freezing at ages 9 to 11 years (Kiehn & Bay, 2007; Kiehn, 2003; Hargreaves, 1986).

A big part of research studies on creativity deal with the factors that influence and determine its emergence and development. In that way, many researchers on music creativity tried to highlight the relationship between the various factors both in the development of creative thinking, as well as in the quality of the created product. Such factors were found to be a person's intelligence, his personality, his motivations, previous knowledge and experiences, as well as environmental factors related to the historical, geographical, cultural, social, educational and family context in which individuals grow and develop (Koutsoupidou, 2009; Tafuri, 2006). However, the core content of this paper will deal with the effects of the educational context on the creativity of children and young people.

Several researchers have associated the level at which children and young people develop their creative potential with the opportunities for creative expression provided to them in the context of their education in music (Koutsoupidou & Hargreaves, 2009). The role of teacher can be crucial in developing the creativity of children and young people as well as a positive attitude towards creative activities (Koutsoupidou, 2009). Consequently, ensuring an appropriate learning environment is a prerequisite for developing children's and young people's creativity. This could include adequate classrooms and materials, appropriate teaching methods used or didactic styles, but more than anything else a creative and flexible

teacher personality (Zbainos & Anastasopoulou, 2012; Koutsoupidou, 2008, 2005).

The notion of creative teacher is used by many researchers to stand for the teacher who strengthens and promotes the creativity of his students. This effort is continuous, day-to-day and flexible in modifications according to existing conditions (Craft, 1997). The creative teacher encourages his students to create, invent, discover, imagine and anticipate (Sternberg & Grigorenko, 2004; Sternberg, 2003). Additionally, teachers who aim at developing the creativity of their students are the first to recognize their students' creative skills, the factors that influence them, and the ways through which they can intervene to improve these abilities (Jeffrey & Craft, 2004).

Therefore, the creative teacher recognizes, understands and supports students' creativity, and teaches them accordingly. Acceptance of students' creative characteristics leads to the adoption of appropriate and creative teaching approaches, and the formation of school classrooms where mistakes, doubts, curiosity, free expression of ideas and unexpected answers from students are all acceptable (Cropley, 2001). Teaching that supports the development of imagination and creativity requires teachers who place themselves outside the center and promote learning through activities which are chosen by the students themselves (Burnard, 2006).

## **The impact of participation in creative music activities**

As already mentioned above, the value of music creativity has been manifested through a multitude of studies and has been widely recognized. Participation in creative music activities has significant benefits associated with growth in several areas such as cognition, music cognition, emotions and the psychosocial field (Landau & Limb, 2017).

**Cognitive development.** In relation to the general cognitive benefits of music creativity, Barnes (2001) found that creative learning experiences force the brain to operate on many levels, as they activate brain centers that are responsible for thinking, memory, imagination, emotion, visual and auditory processing of stimuli, movement and for the transfer of knowledge. In this way the maximum of understanding and learning is achieved. Emile Dalcroze, many decades before, was instinctively arguing that the role of improvisation is to develop speed in decision-making and



music performance, concentration without any effort, direct drawing of ideas and projects, and bringing into direct contact the soul that feels, the brain that imagines and coordinates, and the fingers, the hands and the breath that perform. (Chyu, 2004)

Referring to more general cognitive benefits of music creativity, other researchers argue that engagement in creative music activities can have positive effects on human cognition (Gruhn, 2005), and help improve math skills (Fox & Gardiner, 1997). Moreover, while each creative activity always has as a starting point a subject matter, music creativity is treated by several researchers as a problem-solving (Burnard & Younker, 2004), decision-making (Paynter, 2000) and risk-taking (Higgins & Mantie, 2013; MacMillan, 1999) process, in order to arrive at the creation of the final product. In this sense, music creativity can contribute to developing a person's decision-making, risk-taking, and problem-solving skills (Koutsoupidou & Hargreaves, 2009; Barnes, 2001). Finally, music creativity is claimed to enhance the individual's ability for divergent thinking (Menard, 2013; MacMillan, 1999).

**Musical development.** The contribution of music creativity in the musical development of children and young people, is one of the core issues of the studies carried out by music educators and expert researchers in the field of music education. Riveire (2006) claims that improvisation is a valuable teaching tool, because its use in the classroom contributes to the strengthening of music learning. This is accomplished in many ways. Initially, the release from reading music score results in a shift of attention and interest to the aural skills of students and to the aural ideas that develop, which contributes to their further development. In addition, during music improvisation, especially in young children, multiple brain centers are activated at the same time, and thus a deep understanding of a music concept or skill is achieved through kinesthetic experimentation with the body, the voice, music instruments or other sound sources. The way that music material is treated through improvisation forces the brain to process information differently, using a larger cerebral cortex, thus strengthening the ability of student to learn (Riveire, 2006).

In the same direction, many researchers claim that music improvisation and composition are important educational tools, through which students can achieve but also determine the in-depth understanding of music theory, musical concepts and structural elements of music (Gru-

enhagen & Whitcomb, 2014; Gagne, 2014; Hopkins, 2013; Miller, 2012; Stringham, 2010; Chyu, 2004; Azzara, 1999, 1993, 1992). Azzara (1999) underlines the need to incorporate music improvisation into all music classes, general, instrumental, and vocal, and at all levels of music education. He argues that when students develop music improvisation skills and are able to modify the written music or the music that are listening to, this means that they have achieved a deep understanding of the basic elements of music structure, such as the melodic and rhythmic structure, harmony, form and music style in which the music belongs.

According to other researchers, music improvisation and composition contribute to the development of musical skills and to the improvement of students' achievements in music. More specifically, through research carried out at all levels of music education in instrumental and vocal music classes, it was found that the incorporation of music improvisation into the weekly music curriculum contributes to the enhancement of listening concentration and listening skills of students, especially in the recognition of rhythmic and melodic motifs (Gagne, 2014; Wilson, 1970 as stated by Stringham, 2010; Chyu, 2004; Azzara, 1993, 1992). This occurs because, in the context of music improvisation, students need to listen carefully to what they are playing or singing at each moment, but also to everything that is performed by the other musicians (in the case of group improvisation), in order to form and perform the continuation of their music creation at the same time. Also, engaging students in music improvisation activities contributes to the development of their skills in *prima vista* in music (Wilson, 1970 as stated by Gagne, 2014; Montano, 1983 as stated by Gagne, 2014; Chyu, 2004). This is due to the fact that, through music improvisation, students develop the ability to recognize patterns and the basic structural elements of the music they perform, but also to play without interruptions, to think in advance, to concentrate, to listen carefully, to count the meter, not to interrupt the performance to correct mistakes, and not to hesitate (Chyu, 2004; Azzara, 1993, 1992). In addition, students are able to perform music from the score with higher tonal, rhythmic and expressive precision, which is a natural consequence of the development of their listening skills (Azzara, 1993).

However, beyond the development of musical skills, the enhancement of music performance and the achievement of a deeper understanding of music, engaging in music creative activities contributes to the cultivation

and development of student creative thinking in music (Passanisi et al., 2015; Coracli & Batibay, 2012; Koutsoupidou & Hargreaves, 2009; Fung, 1997). This is because during the creative process, students explore new ideas and experiment with new sounds and sound combinations, which stimulate their imagination and encourage their creativity (Chyu, 2004).

Finally, according to Gruenhagen and Whitcomb (2014), music improvisation and composition are creative processes that empower and shape musicians with independent way of thinking. The above statement is in accordance with Pratt (1995), who argues that music creativity contributes to students' general understanding and appreciation of music (Pratt, 1995). Through music creativity, students develop not only their personal creative capacities and skills, but also "their ability to appreciate and evaluate the compositions of other people" (Koutsoupidou & Hargreaves, 2009, p. 11).

To amplify the above position of Gruenhagen and Whitcomb (2014), MacMillan (1999) argues that, at an advanced level of music creation, music improvisation can help musicians find their personal musical style and form a personal idiom of music expression. According to MacMillan, this musical expressive idiom does not constitute the creation of existing musical styles and genres, but bears a special, distinctive, musical stamp. This is also the case of important composers and musicians of the past who through personal music creation formed their new and innovative musical styles, which influenced later musicians. According to MacMillan, a prerequisite for the musicians for forming their particular and personal „voice“ in music, is to acquire independence in their musical thinking compared to existing musical styles, to have the ability and the need or the desire to take risks during music improvisation, but also to work closely with other musicians on stage, something that can lead to the discovery of new ideas and forms of musical expression.

MacMillan (1999) has come to these conclusions through a three-year research study with university music students who had chosen to specialize in music improvisation. Students participated in music improvisation workshops for three years, while at the end of each year they had to present an improvisational performance in live concert. Students' improvisations at the end of each year highlighted the development of independence in their musical thinking compared to existing conventional musical styles, while at the same time incorporating elements from their

cultural background, reflecting their personal and particular expressive “voice” in music.

**Emotional development.** The benefits of creative activities in music are considered very important for the emotional and personal development of children and young people. According to a number of research studies, the involvement in music creativity through music composition or improvisation facilitates self expression and encourages self actualization of individuals (Landau & Limb, 2017; Passanisi et al., 2015; Higgins & Mantie, 2013; Koutsoupidou, 2008; MacDonald et al., 2006; Chyu, 2004; Barnes, 2001; Brophy, 2001).

Research in music neuroscience has shown that during music improvisation, brain centres responsible for the production of inner thoughts and expressions in music are activated. These inner thoughts may represent person’s unique thinking in music (Landau & Limb, 2017). According to Barnes (2001), music creativity can activate children’s a type of thinking in music that makes sense for themselves and in which their personal emotions are involved. Furthermore, Koutsoupidou (2008) argues that music creativity contributes to shaping children’s personal expressive style in music. This is because children come in contact not only with what others, composers or teachers, convey to them, but also with their inner self, as they have to look inside and develop something of their own in order to achieve a music performance derived from their own personal expression.

In the same spirit, Chyu (2004) states that music improvisation provides individuals with the ability of self-expression and self-actualization, while at the same time it generates satisfaction and enhances self-confidence. Music improvisation creates satisfaction, because persons are free to express their personal ideas in order to please themselves. Also, a person’s ability to make appropriate musical decisions during the creative process of music improvisation, and to keep his mind calm and concentrated while it works quickly in combination with intense feelings, generates satisfaction and feelings of enthusiasm. Music improvisation enhances self-confidence because persons recognize themselves as composers, and realize that their own personal musical ideas are important. Finally, it has been found (Chyu, 2004) that the acquisition of skills in music improvisation enhances self-confidence during music performance and reduces anxiety that comes from memory lapses.

A particular form of music composition which encourages self-expression and the externalization of thoughts and emotions, particularly in adolescents and young people, is the composition of music songs (songwriting) (Hahn, 2015; Nichols, 2013; Baker & Krout, 2012). A study conducted to investigate how undergraduate students experienced songwriting in their attended courses, has produced interesting results about the benefits of this process (Hahn, 2015). The benefits concern not only the musical development of the participants who were trained in composing the music form of songs. A key element of this creative approach to music was that participants decided on the content of the lyrics based on their personal experiences and lives. In this way, the process of songwriting and presentation of the songs to their peers helped them get in touch with their personal problems, gain self-awareness, overcome fears, anxieties, insecurities, and strengthen self-confidence and self-esteem, thus reaching a higher level of personal development. Similar benefits are also reported by other researchers (Nichols, 2013; Baker & Krout, 2012).

The importance of creativity during adolescence is the subject of an article by Barbot & Lubart (2012). Although they do not focus on music creativity, their article is revealing the important role that creativity plays in adolescence. According to the researchers, adolescence is characterized by major changes and shifts at many levels, neuroanatomical and biological, emotional and psychological. At the same time, adolescents experience changes also in their social environment, such as the new school environment of secondary education and the consequent new group of peers. All these changes put pressure on adolescents and result to their experiencing internal conflicts and conflicts with their environment. As a result, negative feelings may be created, such as anxiety, tension, pressure, feeling of rejection and anger. At the same time, in this period, adolescents feel very strongly the need to structure a different identity from the one that they had as children. Based on these characteristics of adolescence, researchers argue that creativity can play a decisive role in the adolescence period on many levels. Initially, it can help teenagers experiencing difficulties and conflicts associated with the developmental processes of puberty in a positive way, rather than resorting to aggressive, violent or self-defeating behaviors. Also, through creativity, teenagers can come in contact with their inner self, thoughts and feelings, conquering some sort of self-awareness in progress. In addition, through creative explorations, teenagers can find

interesting activities that will give them pleasure and satisfaction, and will thus contribute to enhance self-esteem and to improve their self-image. In this context, creativity can help teenagers identify areas of interest and effectiveness which will be important in their adulthood. Finally, through creative explorations, adolescents will be able to progressively structure those personality traits that will determine their unique identity as adults.

### **The value of participation in creative music activities in groups**

Researchers have particularly highlighted the value of group music creativity for the development of children and young people. The process of group music creativity in a particular setting usually involves two stages. The first is the stage of preparation, where students-team members discuss on a given topic, exchange ideas, assume or adopt specific roles within the group, experiment with the sounds, organize their ideas and suggestions, co-decide on the final form of their work, and rehearse their ideas. The second stage is that of presenting their work in front of an audience, formal or informal, of any type.

Within these two phases, researchers have highlighted the benefits of the group music creative process. It is supported that group creative activities have the ability to cover many different learning styles and target at different developmental levels, thus giving each member a chance to engage in the creative process according to his/her own cognitive and musical level of development (Sawyer, 2006; as stated by Koutsoupidou, 2008). In addition, children's and youngsters' interactions during the creative process, as well as their collaboration during the performance of their presentation, are key determinants of the quality and the level of their musical creations, but also of their general music and creative development (St. John, 2006). In this context, it is argued that the combination of different musical skills, knowledge and ideas of each group member, and the discussion of possible solutions to the common theme, provide the ability to create music of a higher-levels than the one that would be created by each member alone. This is because, while working in groups, members are facilitated to develop means of expression that would not appear if they were working only individually. In that way, they use various musical parameters such as pitch, dynamics and tempo, more accurately than they

would if they had to do alone or in theoretical context or as part of a non-creative activity. According to these views (Koutsoupidou, 2008; Wiggins, 1999), the child becomes more creative when he/she learns from his or her peers, because experiences gained from the exchange of ideas, can promote the exploration of higher levels of musical complexity by each individual member of the group.

An important benefit of group music creativity is that it helps members of the group acquire co-operative skills in music, thus preparing them for integration into small musical ensembles. At the same time, group music creativity contributes to the development of the capacity for quick thinking and reaction, as well as for coordination with the rest of the team. This is achieved mainly during the final presentation of the music performance, where the team is called upon to execute its «action plan» (Koutsoupidou, 2008).

Researchers found similar benefits for group music improvisation in older ages. According to MacMillan (1999), musicians work better in creative groups, exchanging ideas and accepting or providing support. The close relationship of the musicians in the group process of improvisation, and the creative musical dialogue that develops among them, lead to the birth and development of new musical ideas, and to the further development of the group member themselves. This means that the team creative process of improvisation leads musicians to levels of music development that they would not reach on their own.

Sawyer (2006) underlines the constant interaction of musicians in the context of group improvisation and describes the dialogue of musicians as a continuous exchange and birth of musical ideas, which often leads musicians to high aesthetic levels of musical performance. Sawyer also refers to the group flow, a situation in which the concentration and communication of musicians reaches very high levels, leading them to high-level musical performances and creating feelings of euphoria and fullness. Group flow experience can inspire musicians to play things that they could not play if they were playing by themselves, or who would not come to think without the inspiration of the team. Musicians describing their experience of participating in groups of music improvisation, often refer to the group flow experience, as a basic factor pushing their personal musical interpretation at very high levels.

Creative music collaboration within a group context has advantages in

boosting confidence, especially of children and youngsters, a view supported by researchers and music educators (Passanisi et al., 2015; Koutsoupidou, 2008; Barnes, 2001; Wiggins, 1999; Torrance, 1988). Children are more willing to express themselves creatively when an activity is carried out in groups rather than individually. This means that they have more confidence in the group creation and performance of music. Indeed, it has been found that the higher the number of children in the group, the more their confidence during the performance.

In the context of group music creations children and youngsters feel more secure in performing and being exposed. Such environment minimizes the fear of mistakes, criticism and rejection. Problem solving procedures as well as the final exposure to an audience cease to be the responsibility of the individual. At the same time, in a group context facilitated positively, children's self-confidence may be stimulated through direct and positive feedback from friends and peers in the group. According to a study by MacDonald et al. (2002), when creative performance happens in groups of children who are friends, a higher quality of music creation is achieved. Children who are tied by friendship feel more free to express and exchange their ideas, contributing to better team coordination both during the preparation and the final performance. The confidence that collective effort creates to the group members results to personal satisfaction, development of internal motivation and positive attitude toward music and music creativity.

It is supported that implementation of music creative activities through cooperative learning processes contribute to the socialization of children and the development of social skills (Koutsoupidou, 2008). In group creativity, communication is enhanced and promoted in all its forms, whether through sounds, bodily expression or language, both during the preparation phase and during the performance of the musical creation (Passanisi et al., 2015; Koutsoupidou, 2008).

Engagement in group music improvisation helps strengthen communication and trust between musicians, as well as the development of a higher sense of connection and empathy towards other musicians (Hart & Di Blasi, 2015; Monk, 2013; Sawyer, 2006). Sawyer (2006) quotes musicians' own experiences who state that in the context of group music improvisation, musicians develop close relations with the other group members, which quickly leads to developing empathy towards them and



understanding what their co-performers think and feel at every moment of the improvisation process.

The development of empathy, i.e. a person's ability to feel, understand and respond to others' feelings, has also been reported to a study conducted with children aged 8 to 11 years old (Rabinowitch et al., 2013). This study showed that systematic and long-term participation in group music creative activities can contribute to the development of children's capacity for empathy, even outside of the music educational framework. It is evident that group creativity can contribute to the development of improved interpersonal relations, which is considered to be fundamental for the healthy development of children and young people (Passanisi et al., 2015).

## Epilogue

It is evident from the research findings presented in the context of this paper, that music creativity is an important factor positively influencing cognitive, emotional, musical and social skills. In several contexts where prevention of at-risk behaviors or social exclusion is the main goal, as well as in contexts of therapy, rehabilitation and social reinsertion, the traits that music and music creativity actions can offer are of significant value (Stamou et al, 2017; Stamou et al., 2016; Stamou, 2015; Milliken, 2007; Ruiz, 2004). Creative music activity seems to be particularly effective when taking place in appropriate group contexts and when fitting with members' perceptions of cultural and gender relevance (De Roeper & Savelsberg, 2009). Creative music activities organized on a regular basis in group contexts, can fulfill children's, teenagers' and young people's need to feel accepted by peers and develop a sense of belonging, which is crucial to the development of their personal and social identity. People who have been stigmatized by drug use, now have a 'voice' in the music group, and gradually free up to express themselves, and feel the joy of music. They feel valued when creating music with others and when preparing and performing music for an audience. The applause for their creative effort is of great significance for their thoughts and feelings of, self-value, acceptance by peers, family and others, and feelings of social inclusion.

In several contexts where at-risk youth is dealt with, as well as in detoxification and rehabilitation centers, music creativity facilitated in groups

of improvisatory music can play a great role in developing members' self-esteem, social skills, feelings of belonging and social inclusion. Several studies have also shown the effectiveness of music interventions in the detoxification and rehabilitations processes of drug-addicted individuals (Stamou et al, 2017; Stamou at al, 2016; Edwards, 2016; Baker et al., 2012; Silverman, 2012, 2011, 2009; Soshensky, 2007; Cevasco et al., 2005). Albornoz (2011) has particularly explored the effects of group improvisational music therapy on depression in adults with substance abuse, with very promising results. Since, programs of creative music activity on a regular basis seem to be extremely promising, their capability to offer effective supplementary strategies for personal and social change for people who are under the detoxification process, should be further explored in research, clinical and real-life situations. The adoption of policy measures taking such effects into consideration is crucial, however, if long-term personal and social change is to take place.

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