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The final publication is available at:

<https://doi.org/10.1177/0255761419853634>

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## Beyond music: Emotional skills and its development in young adults in choirs and bands

Journal:	<i>International Journal of Music Education</i>
Manuscript ID	IJME-RS-18-0041.R1
Manuscript Type:	Original Article
Keywords:	Music, Emotional Competences, Choir, Band
Abstract:	<p>Latest studies point out the importance of emotional competencies in young people's education. Music is closely linked to people's personal development and the evidence suggests that there are differences in young people who participate in group music-making activities and young people who do not. In the present study we analysed the socioemotional profile of sample of Spanish adolescent musicians who sang in choirs or played in bands. A total of 660 adolescent musicians and 655 non-musicians participated in the study, which evaluated emotional competencies, life satisfaction, motivation to study and capacity of leadership. At the same time, an ad hoc questionnaire was also administered to the musicians to obtain their academic musical profile. The results of the study show statistically significant differences between musicians and non-musicians in all measured variables, and suggest that, in line with previous research, belonging to a musical ensemble, such as choirs and bands, is related with the development of many skills as well as self-perception. Furthermore, it promotes the development of socioemotional competencies, motivation and leadership.</p>

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## Beyond music: Emotional skills and its development in young adults in choirs and bands

### Abstract

Latest studies point out the importance of emotional competences. Music nonetheless is highly linked to the individual's development and evidence suggests that there are differences in youth among those people who are involved in a musical activity and those who are not. In the present study we aimed to study the socioemotional profile of adolescent musicians of bands and choirs in a Spanish sample. A total of 660 adolescent musicians and 655 non musicians underwent an evaluation carried out with self-reports assessing emotional competences, life satisfaction, motivation to study and capacity of leadership. At the same time, an ad hoc academic-musical profile was also administered to the participants. Results of the study show that there were statistically significant differences between musicians and not musicians in all measured variables. According to our findings, and in line with previous literature, it is noteworthy that belonging to a music group, such as choirs and bands, strengthens many competences as well as the perception that students have of themselves when they practice music. Thus, all these skills are proved to promote the development of socioemotional competences, motivation and leadership.

**Keywords:** Music, emotional competences, choir, band.

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3 During the last decades logic abilities and abstract intelligence in school have been  
4 receiving less attention in favour of a renewed interest in emotional education and  
5 emotional competences (for example, Filella, Pérez, Cabello, & Ros-Morente, 2016;  
6 Mayer, Roberts, & Barsade, 2008). Emotional education arised as an innovative  
7 educational tool that aims at providing an answer to all those educative and social needs  
8 that are rarely addressed in ordinary subjects (Bisquerra, 2006). Emotional education is  
9 viewed as a multifactorial process which is based in the training and acquisition of certain  
10 competences. In fact, numerous studies describe and explain that aspects such as self-  
11 esteem or emotional abilities are crucial when trying to explain the emotional state and the  
12 learning process of the students (Bong, Cho Ahn, & Kim, 2012; Spinrad et al., 2004).

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20 Empirical evidence regarding the benefits of the emotional education programs is very  
21 acknowledged in the scientific field, especially when these interventions are well  
22 implemented and evaluated (for example, Björklund et al., 2014; Pears, Fisher, & Bronz,  
23 2007; Pérez-González, 2008, among others). Longitudinal studies, like the one carried out  
24 by Duncan et al. (2007), have shown that the successful development of socioemotional  
25 skills in schools can predict important mediators of learning such as self-esteem, adaptation  
26 in schools, participation in class, motivation towards learning and satisfactory relationships  
27 with peers and teachers. However, despite all this proof, students seem to have a varied yet  
28 limited knowledge about these emotional states and abilities (Bisquerra & Filella, 2017).

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36 All these skills and competences are particularly relevant during adolescence, a pivotal  
37 period in development, when emotional variables and the task of identity integration come  
38 to the fore (Jones & Deutsch, 2013; Parker, 2017). From a traditional standpoint,  
39 adolescence in the socioemotional field has been envisaged as a joint process with the  
40 development of personal identity and the influence of external factors such as the  
41 establishment of personality and relationships with the peers (Arnett, 2002; Massot, 2003).  
42 All these factors have an important role in the development of the individual and his  
43 transition to adulthood. Additionally, self-esteem and self-perception go hand in hand with  
44 these period of the life-span, which seem to be highly associated with other psychological  
45 factors such as anxiety, general psychological state and, once more, with socioemotional  
46 competences (Filella et al., 2016). All in all, evidence suggests that those different factors  
47 and processes that take place during adolescence and that work in synergy, tend to bring  
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3 subsequent changes that will remain in the following years, and thus, acquiring an  
4 important relevance (Bar-on & Parker, 2000).

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6 Another vital factor during this life stage is music and musicality. Music during  
7 adolescence is undoubtedly a subject that has gained ground by leaps and bounds since the  
8 beginning of the adolescence culture in the twentieth century, proving that musicality  
9 improved and enhanced emotional expressivity and communication (Kokotsaki & Hallam,  
10 2007; Merriam, 1992). Since the 1980s, in the domain of music psychology,  
11 socioemotional variables are also contemplated as central factors when trying to understand  
12 the functions that music entails (North, Hargreaves, & O'Neill, 2000). Some authors, as it  
13 is the case of Juslin and Sloboda (2010), have even claimed that music can be viewed as a  
14 tool to control the valence and arousal of any emotional experience. In fact, it has been  
15 proven that adolescents use music in order to achieve, potentiate or reduce certain  
16 emotional experiences (Miranda & Claes, 2009; Saarikallio & Erkkilä, 2007). This  
17 relationship among emotional competences and music is not exempt of the learning  
18 process, since as many authors have defended, music also constitutes an educative resource  
19 (García, del Olmo, & Gutiérrez-Rivas, 2014; Hallam & Creech, 2010; Schellenberg, 2016).  
20 Students can learn musical elements in centers and schools, but importantly enough, music  
21 itself also constitutes a vehicle to enhance and improve learning. Music is thus used so as to  
22 improve emotional intelligence and other cognitive processes such as creativity, language  
23 or maths, among others (Antonietti & Colombo, 2014; Gouzouasis, Guhn, & Kishor, 2007;  
24 Zatorre, 2005).

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41 It should be stressed that in the regions of Valencia and Catalonia (Spain), where the  
42 sample was gathered, there is a long tradition of music bands and choirs, respectively. At  
43 the present moment, the official census of bands in Valencia is compiled from more than  
44 500 bands (Musical Societies Federation from Valencian Community, 2018) and in  
45 Catalonia, although it does not exist an official census, it is estimated that there are more  
46 than 900 choirs (Catalan Choir Movement, 2018). Due to this fact, a big number of children  
47 and adolescents of both regions aged 10 to 18 have the chance to learn music and to play an  
48 instrument or to sing in a young section of one of these musical ensembles. Empirical  
49 research linked these kind of musical group participation to numerous social and personal  
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fulfilment capacities and variables related to emotional skills, for example: psychosocial well-being, teamwork and cooperation, self-esteem and self-motivation improvement, enhanced sense of worthiness, social skills development (Colson, 2012; Kirrane, O'Connor, Dunne & Moriarty, 2017; Kokotsaki & Hallam, 2007; Mellor, 2013).

Therefore, with all the aforementioned functions and benefits that music plays in everyday life of adolescents, one can establish that when acquiring a competence in music, for instance, an emotional competence (e.g. expressing emotions), another competence will also be strengthened (e.g. improvement of social relationships). Hargreaves & North, defended this idea as early as in 1999 (see Figure 1). According to these authors and up until now, it has been proved that music improves competencies that are interrelated and that are in constant mutual feedback.

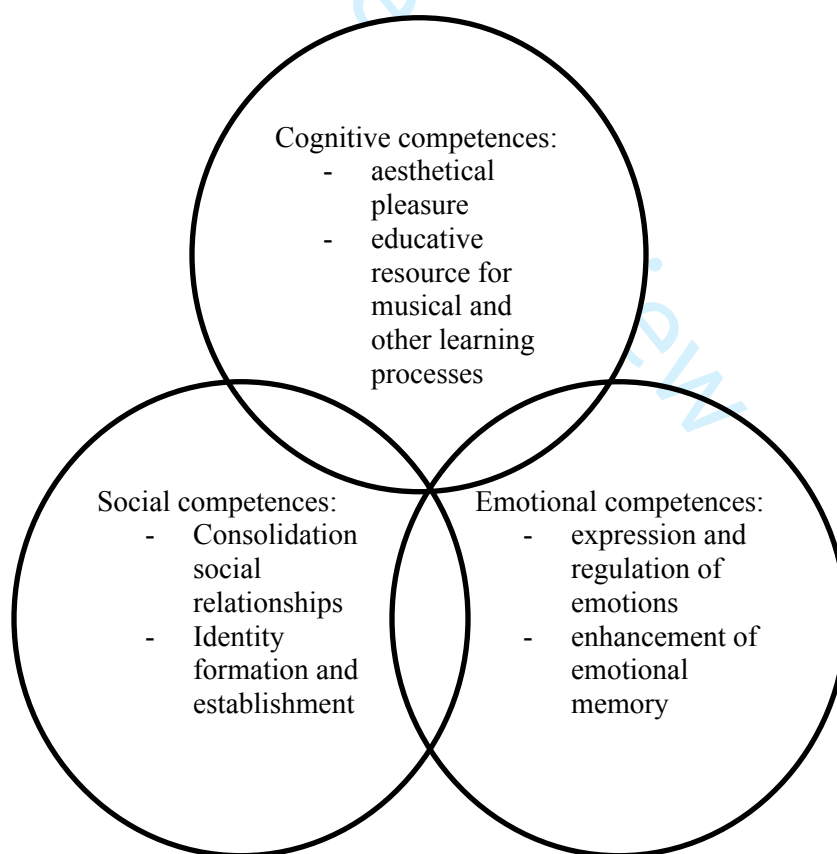


Figure 1. Competencies and functions  
of music during adolescence (*adapted*  
*from Hargreaves & North, 1999*).

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12 It is thus of the highest interest to explore and find if students and adolescents who are  
13 involved in musical activities show differences in socioemotional competencies in regard of  
14 those adolescent who are not involved in such activities. Additionally, if this condition  
15 exists, it will be interesting to find out if there are also differences among differing music  
16 activities.  
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20 Hence, considering this quandary and taking all the aforementioned aspects into account,  
21 we aimed at analysing the socioemotional profile of a sample of adolescent musicians of  
22 both bands and choirs in Spain.  
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## 26 27 **Methods**

### 28 29 **Participants**

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31 The total sample of this study was composed by a subsample of young musicians and  
32 another subsample of young students that were not involved in any musical activity.  
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#### 35 *Musicians subsample*

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37 This subsample included a total of 660 adolescent musicians. 367 (55.6%) of the subjects  
38 were involved in bands, while the other 293 (44.4%) were singing in a choir. From the 660  
39 participants of the total subsample, 237 (35.9% were males), while 423 (64.1%) were  
40 females.  
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#### 43 *Not musicians subsample*

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45 In order to be able to compare and contrast the results obtained by adolescent musicians, a  
46 subsample of adolescent who were not involved in any musical activity was also gathered.  
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48 In this case, the total number of participants in this subsample was 655 participants. 260  
49 (39.7%) were males while 395 (60.3%) were females.  
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## 53 54 **Instruments**

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3 The instruments used in this study included the following:

4 *Emotional Development Questionnaire* (QDE; López & Pérez, 2014 (GROP)). This self-  
5 informed instrument taps the principal concepts regarding emotional education suggested  
6 by the Research Group in Psychopedagogical Orientation (GROP), (Bisquerra, 2000;  
7 Bisquerra & Pérez, 2007). It comprises five subscales which assess Emotional Awareness,  
8 Emotion Regulation, Emotional Autonomy, Social Competence and Life's Competences. A  
9 score for each subscale and a total one can be extracted. The reliability of the instrument  
10 ranges from 0.88 to 0.91 when extracting the Cronbach Alpha Index, which is considered  
11 satisfactory.  
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20 *Ad hoc protocol* created by the team in order to assess the academic-musical profile of the  
21 participant agents in the study, as well as the multiple variables that can influence the  
22 development of emotional competences, such as the motivation to learn music,  
23 experimented emotions, etc...). This protocol was created due to the lack of existent  
24 instruments assessing these aspects.  
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31 *Satisfaction With Life Scale* (SWLS; Diener, 1985). This instrument is self-informed and  
32 assesses life's satisfaction and cognitive judgement. It has 5 sentences and a Likert scale  
33 with 7 alternatives. Because of its satisfactory psychometric properties and its factorial  
34 structure, it has become one of the most used scales among the scientific community. Its  
35 Cronbach Alpha indicates indexes ranging from 0.80 and 0.89.  
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41 *Academic Motivation Test* (MOT; Sáez, 2008). This test taps the predisposition and  
42 motivation degree of the adolescent students towards their academic training. It has 25  
43 items assessed with a three points scale (true, false or doubtful). This enables researchers to  
44 obtain a total factor score. Depending of the obtained figures the motivation can be  
45 considered high, moderate or low. Psychometric properties were satisfying for the  
46 motivation factor in all studies carried out.  
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53 *Questionnaire of the Capacity of Leadership* (LID; Ávila de Encío, 2012). This  
54 questionnaire was designed within the well renowned test of 16PF of Cattell, in its child-  
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3 youth version (Catell & Catell, 2005; Porter & Cattell, 2002) and it aims to evaluate the  
4 leadership capacity of each individual. The questionnaire has 15 phrases and rated with a  
5 Likert scale of 5 alternatives. The final score is the sum of all the answers given by the  
6 subject and each person can be qualified as: without leadership capacity, with initiative but  
7 without capacity of leadership, and with capacity for leadership.  
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### 14 **Procedure**

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16 The present study followed a non-experimental *ex post facto* methodology, specifically,  
17 descriptive and causal comparative. This design enables researchers to describe the  
18 different variables included in the study, but it also facilitates the comparison among  
19 constructs and data, as it is the case of emotional and musical variables in the present work.  
20 It is also important to note that the present study has involved both qualitative and  
21 quantitative methodologies in order to achieve all goals and to have a more thorough  
22 approach.  
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### 30 **Results**

31 Before the analysis of the results *per se*, the present study explored the musical and  
32 socioemotional profile of the sample of musicians. The first analysis thus, consisted of a  
33 description of the main characteristics of the participant students.  
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36 First of all, it was explored when the students started their musical studies. Results showed  
37 that those students of the experimental sample, initiated their musical studies at age 6.36 in  
38 average (SD = 2.54). Regarding the experience of the subjects in a music group, those  
39 students who were in bands showed an average of 3.90 years of experience (SD=2.24)  
40 while the students who were in other kind of groups, such as choirs, had a higher number of  
41 years of experience in average, rising to a 5.52 (SD = 3.26).  
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47 Regarding the socioemotional dimension, students were asked, in a Likert scale ranging  
48 from 0 to 10, about their opinion and feelings regarding the five socioemotional  
49 competences described by the Research Group in Psychopedagogical Orientation (GROP):  
50 Emotional Awareness, Emotion Regulation, Autonomy, Social Competence, Well-being.  
51 Obtained results are described in Table 1.  
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	$\chi$	SD
Emotional Awareness	7.57	1.64
Emotion Regulation	7.95	1.62
Autonomy	7.77	1.39
Social Competence	7.93	1.37
Well-being	8.66	1.43
<b>Total (n=660)</b>	<b>7.98</b>	<b>1.09</b>

Table 1. Results of the opinion and feelings regarding the five socioemotional competences described by the GROF.

Additionally, these competences were also assessed with the instrument Emotional Development Questionnaire (QDE; López, & Pérez, 2014). Which gave similar results to what was described by the opinion and feelings of the students themselves (see Table 2).

	$\chi$	SD
Emotional Awareness	8.13	0.85
Emotion Regulation	7.08	0.98
Autonomy	6.86	1.08
Social Competence	6.97	1.15
Well-being	7.97	0.87
<b>Total (n=660)</b>	<b>7.37</b>	<b>0.78</b>

Table 2. Results of the QDE for the five socioemotional competences described by the GROF.

According to the results obtained in the QDE, which slightly differed from the opinions and feelings of the students, students have a moderate competential domain, as its average score indicates. When studying results in more detail, we can realise that emotional awareness and well-being are the competences that are more consolidated. Differently, autonomy and social competences are the ones that are less developed or clearly acquired.

When comparing with a variance analysis students involved in music activities and students not involved in any musical activity, several differences appeared when comparing the different instruments scores (see Table 3).

	Source	Sum of squares	Degrees of freedom	Variance (estimate square)	F	Sig.
QDE	Between	4.29	1	4.29025	9.35	0.01
	Within	3.66	8	0.458745		
LID	Between	10036.22	1	10036.22	93.07	<0.001
	Within	141573.23	1313	107.82		
Diener	Between	8314.53	1	8314.53	393.474	<0.001
	Within	27745.09	1313	21.13		
MOT	Between	14925.37	1	14925.37	247.70	<0.001
	Within	79114.32	1313	60.25		

Table 3. Results of the ANOVA analysis for the scores obtained by the groups of musicians and not musicians for the tests Satisfaction with Life Scale (SWLS), Emotional Development Questionnaire (QDE), Academic Motivation Test (MOT), and Questionnaire of the Capacity of Leadership (LID).

As Table 3 shows, musicians displayed a higher and statistically significant score in emotional competences. Also, students involved in musical activities showed a higher ability and capacity to be (or become) leaders, being the difference among groups highly statistically significant. A similar pattern could be observed in the scores of life satisfaction, which showed that students involved in musical activities were significantly happier with their lives. Finally, the motivation for the academic studies of the musicians also appeared to be much higher and statistically significant than the one of the students who were not practising any musical activity. Interestingly enough, working with a team, the culture of effort and the learning motivation are factors highly involved in the musical area.

## Discussion

The main aim of the present study was to explore the socioemotional profile of students involved in musical activities and to compare it with those students who were not in touch with any musical task.

In all cases, results showed that there were statistically significant differences between musicians and not musicians in all measured variables. In all the analysis carried out for the socioemotional competences described by the GROPE (Emotional Awareness, Emotion Regulation, Autonomy, Social Competences, Well-being), musicians showed an important socioemotional development and set of skills. Emotional Awareness was the competence that showed higher scores. This fact is consistent with previous findings, indicating the logical order of first learning how to become aware of what we are feeling and only later being able to manage and regulate the emotions (Filella et al., 2016). The lowest scores were obtained in the competence of Autonomy. Again, these results are consistent with the fact that adolescence constitutes a moment in the life's development highly associated with emotions related to anxiety, which in turn, makes it more difficult to the person to properly regulate and ensure a proper autonomy until a certain degree of personality development has been reached (Byrne, 2000; Filella et al., 2016; Massot, 2003). All in all, however, all scales showed higher scores in the group of musicians than in the group of no musicians, which is highly consistent with what it was hypothesized.

Regarding to the results obtained in the comparison for leading skills among students involved in musical activities and students not involved, results showed that musicians showed a 55% more capacity to become leaders than those individuals who were not musicians. This can be explained by the fact that in the different music groups, such as choirs and bands, there are certain abilities that are strengthened, as is the case of effort, optimism, self-confidence, self-management, and the perception that students have of themselves when they practice music, among others (for example, Gouzouasis & Henderson, 2012; or Kokotsaki & Hallam, 2007). All these skills are proved to favour the development of socioemotional competences and leadership (for example, Tenenbaum, Lidor, Lavyan, Morrow, Tonnel, et al., 2004). This same deed accounts for the academic motivation, which in the present work was much higher and statistically significant for musicians, who showed a wide predisposition to academic activities.

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3 Finally, musicians also seemed to display a higher satisfaction with life than those students  
4 that were not involved in musical aspects. These differences, once again, became  
5 statistically highly significant, which suggests that the collective practice of music during  
6 adolescence may include an effective and satisfying leisure activity (especially benefiting  
7 from the contribution of arts to well-being), which contributes to a positive valuation of the  
8 activity itself and life (Calderón-Garrido, Martín-Piñol, Gustems-Carnicer & Portela-  
9 Fontán, 2018; Croom, 2015).

15 Despite the blatantly apparent results, it is important to state that the present work has some  
16 limitations. In first place, the plurality and heterogeneity of the musical population of the  
17 two studied communities is very wide, and it has not been fully reflected in the study. This  
18 study thus, has focused in a representation of the most emblematic music groups in the  
19 territory, choirs and bands. However, future studies should tackle the heterogeneity of  
20 music profiles of the population. Secondly, although a complex multifactorial process  
21 underlies the development of emotional competences, we selected the most representative  
22 ones according to previous studies and empirical results. Investigations in the future should  
23 study the interactions and multifactorial effects of different variables in order to establish  
24 in more depth those variables and relationships that account for the explanation of the  
25 emotional competences development during adolescence.

34 Nonetheless, in the light of the outcome, it can be stated that those adolescents involved in  
35 collective music activities display, not only musical activities, but also a higher  
36 development of socioemotional competences. This conclusion indicates that music can  
37 become an important resource to help improving emotional and social skills in moments of  
38 the life span that originally have a different approach and aspects than other moments in  
39 life. Music, then, may be an important and productive tool to enhance a better emotional  
40 understanding, well-being, and health among young students.

## 49 **Acknowledgments**

51  
52 The present work is the partial result of a doctoral thesis and it has been funded by  
53 A.R.C.E. grants promoted by the University of Barcelona (2015 and 2016).

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For Peer Review

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**Beyond music: Emotional skills and its development in young adults in  
choirs and bands**

For Peer Review

## Beyond music: Emotional skills and its development in young adults in choirs and bands

### Abstract

Latest studies point out the importance of emotional competencies in young people's education. Music is closely linked to people's personal development and the evidence suggests that there are differences in young people who participate in group music-making activities and young people who do not. In the present study we analysed the socioemotional profile of sample of Spanish adolescent musicians who sang in choirs or played in bands. A total of 660 adolescent musicians and 655 non-musicians participated in the study, which evaluated emotional competencies, life satisfaction, motivation to study and capacity of leadership. At the same time, an ad hoc questionnaire was also administered to the musicians to obtain their academic musical profile. The results of the study show statistically significant differences between musicians and non-musicians in all measured variables, and suggest that, in line with previous research, belonging to a musical ensemble, such as choirs and bands, is related with the development of many skills as well as self-perception. Furthermore, it promotes the development of socioemotional competencies, motivation and leadership.

**Keywords:** Music, emotional competencies, choir, band.

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4 During recent decades research in education has focused less on competencies related to  
5 logic abilities and abstract intelligence and more on a renewed interest in emotional  
6 education and emotional competences (for example, Filella, Pérez, Cabello, & Ros-  
7 Morente, 2016; Mayer, Roberts, & Barsade, 2008). Emotional education has become an  
8 innovative educational tool that provides answers to all those educational and social needs  
9 that are rarely addressed in ordinary subjects (Bisquerra, 2006). Emotional education is  
10 viewed as a multifactorial process which is based on the teaching and acquisition of certain  
11 competences. In fact, numerous studies observe that self-esteem or emotional skills are  
12 crucial of any explanation of students' emotional state and learning process (Bong, Cho  
13 Ahn, & Kim, 2012; Spinrad et al., 2004).

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21 Empirical evidence of the benefits of emotional education programmes has been widely  
22 accepted in the literature, especially when these interventions are well implemented and  
23 evaluated (Björklund et al., 2014; Pears, Fisher, & Bronz, 2007; Pérez-González, 2008,  
24 among others). Longitudinal studies, like the one carried out by Duncan et al. (2007), have  
25 shown that the successful development of socioemotional skills in schools can predict  
26 important mediators of learning, such as self-esteem, adaptation in schools, participation in  
27 class, motivation towards learning, and satisfactory relationships with peers and teachers.  
28 However, despite all this proof, young people's own perception of these skills remains  
29 varied yet limited (Bisquerra & Filella, 2017).

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37 Having socioemotional skills and competencies is particularly important during  
38 adolescence, a pivotal period in life when emotional variables and the developmental task  
39 of identity formation come to the fore (Jones & Deutsch, 2013; Parker, 2017). From a  
40 traditional socio-economical standpoint adolescence has been envisaged as a dual process  
41 of forming one's personal identity and establishment one's personality, which is influenced  
42 by external factors such as relationships with peers (Arnett, 2002; Massot, 2003). These  
43 factors play an important role in the development of the individuals and their transition to  
44 adulthood. Additionally, self-esteem and self-perception are closely inter-related in the  
45 transition, which involves other psychological factors such as anxiety, general  
46 psychological state and, once more, socioemotional competences (Filella et al., 2016). All  
47 in all, the evidence suggests that the processes which take place during adolescence and  
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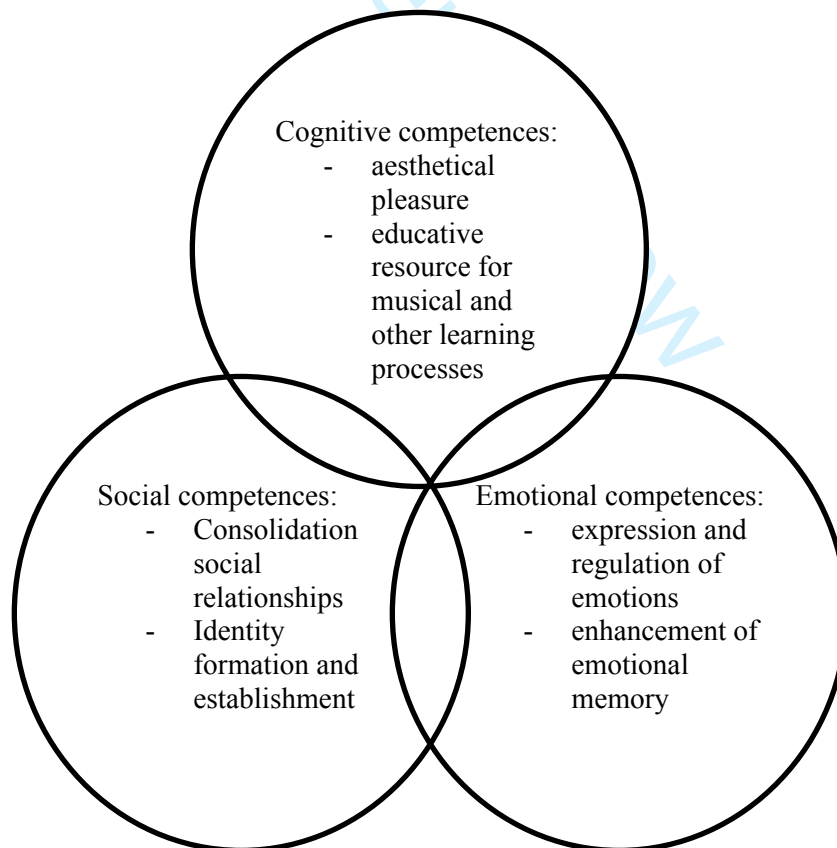
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3 that work in synergy lead to personal changes that are important because they will remain a  
4 permanent part of adult life (Bar-on, 2006).

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6 It is commonly accepted that music and musicality can play a vital role during this stage of  
7 life. The study of exposure to music during adolescence has gained considerable ground  
8 since the emergence of youth culture in the twentieth century. From the moment in which  
9 this culture became an object of study, it has been repeatedly proven that musicality can  
10 greatly improve and enhance emotional expressivity and communication (Kokotsaki &  
11 Hallam, 2007; Merriam, 1992). Since the 1980s, in the domain of music psychology,  
12 socioemotional variables have been considered key to understanding the functions of music  
13 (North, Hargreaves, & O'Neill, 2000). Authors like Juslin and Sloboda (2010), have even  
14 claimed that music can be used as a tool to control the valence and arousal of any emotional  
15 experience. In fact, it has been proven that adolescents use music to achieve certain  
16 emotional experiences, or to enhance or minimise their effect (Miranda & Claes, 2009;  
17 Saarikallio & Erkkilä, 2007). The link between emotional competences and music is also  
18 part of the learning process, since, as many authors have argued, music constitutes an  
19 educational resource (García, del Olmo, & Gutiérrez-Rivas, 2014; Hallam & Creech, 2010;  
20 Schellenberg, 2016). Students can learn music as a school subject, but equally importantly,  
21 music itself also constitutes a vehicle to enhance learning. This is seen in how music can be  
22 used to improve emotional intelligence and other cognitive processes such as creativity,  
23 language or mathematics, among others (Antonietti & Colombo, 2014; Gouzouasis, Guhn,  
24 & Kishor, 2007; Zatorre, 2005).

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26 There is a long tradition around the world of making music in bands and in choirs, for  
27 adults, children and adolescents, and various studies describe the effects of been part of  
28 such ensembles (Cooper, 2017; Gouzouasis & Henderson, 2012; Miksza, 2010). The  
29 Spanish regions of Valencia and Catalonia have long traditions of music-making, the  
30 former in bands and the latter in choirs. At the present moment, there are more than 500  
31 bands in Valencia (official census of the Federation of Musical Societies Federation from  
32 of the Community of Valencia, 2018) and over 900 choirs in Catalonia, figures from the  
33 Catalan choir confederation the "Moviment Coral Català", 2018). Because of this, in both  
34 regions a large number of young people between the ages of 10 to 18 have the opportunity  
35 to learn music and either play an instrument or sing in the young person's section of one of  
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these musical ensembles. Empirical research has linked these kind of musical group participation to numerous skills aiding social and personal fulfilment and variables related to emotional skills like psychosocial well-being (Mellor, 2013), an enhanced sense of worthiness (Colson, 2012), teamwork and cooperation skills, self-confidence and social skills development (Kokotsaki & Hallam, 2007).

The functions and benefits of music in adolescents' everyday life are so clear that we can argue that when young people acquire certain skills in music –especially emotional skills-, this helps them strengthen competencies in other areas of life. For instance, when through making music they acquire greater ability in expressing their emotions, at the same time they reinforce their ability in social relationships. Hargreaves and North defended this idea as early as in 1999 (see Figure 1), and the literature to date suggests that music improves competencies that are interrelated and that constantly benefit from one another.



**Figure 1. Competences and functions of music during adolescence (adapted from Hargreaves & North, 1999).**

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8 In addition, we should remember that mean socioemotional aspects (such as leadership,  
9 motivation, satisfaction with life or emotional competences) are present in each of the three  
10 main domains in which the functions of music are important: the cognitive, emotional and  
11 social domains (Hargreaves & North, 1999). In this sense, choirs and bands provide an  
12 ideal context for developing individual and group skills.  
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19 Researchers need to establish whether adolescents who make music acquire socioemotional  
20 competencies in a different measure to adolescents who are not involved in such activities.,  
21 And, if differences do exist, we should also establish whether the nature and degree of  
22 acquisition varies from one kind of musical activity to another. In this study, to address  
23 these questions, we analysed the socioemotional profile of a sample of Spanish adolescent  
24 musicians and non-musicians.  
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## 30 **Methods**

### 31 **Participants**

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33 This study sampled two kinds of adolescent: musicians, meaning adolescents who played in  
34 bands or orchestras, or sang in choirs (the musicians sample); and non-musicians, meaning  
35 adolescents who were not involved in any kind of musical activity (the non-musicians or  
36 control sample) The subjects came from the Spanish regions of Valencia (musicians who  
37 played in bands or orchestras and non-musicians) and Catalonia (musicians who sang in  
38 choirs and non-musicians).  
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#### 47 *Musicians sample*

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49 This sample comprised a total of 660 adolescent musicians, of which 367 (55.6%) played in  
50 bands, and the other 293 (44.4%) sang in choirs. Of the 660, 237 (35.9%) were males while  
51 423 (64.1%) were females. All were members of young person's ensembles, specifically 10  
52 youth bands in Valencia and 10 choirs in Catalonia. The selection process for these  
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3 adolescents was guided by an analysis of the census of existing groupings in the two  
4 regions, taking into account aspects such as geographical location and density of the  
5 population, number of members and years of existence. Although the sample was intended  
6 to be non-probabilistic, we endeavoured to make it representative by selecting individuals  
7 from the most traditionally visible types of musical ensembles (namely, choirs and bands or  
8 orchestras) so that our results might better reflect the reality of music making in the regions  
9 chosen.

### 17 *Non-musicians or control sample*

18 The non-musicians or control sample was used in order to compare and contrast the results  
19 obtained in the musicians sample and it comprised a total of 655 participants. 260 (39.7%)  
20 were males while 395 (60.3%) were females. To ensure that both samples were similar, the  
21 non-musicians were taken from the same educational centres as the musicians, with the  
22 help of the teachers and school directors.

### 29 **Instruments**

30 The instruments used in this study included the following:

31 *Emotional Development Questionnaire* (QDE; López & Pérez, 2014). This 48 items self-  
32 report instrument taps the principal concepts regarding emotional education suggested by  
33 the GROPE (Research Group on Counselling in Psychopedagogy, hereafter GROPE),  
34 (Bisquerra, 2000; Bisquerra & Pérez, 2007). It comprises five subscales which assess  
35 emotional awareness, emotion regulation, emotional autonomy, social competence and  
36 life's competences. These competences are framed in the research carried out by GROPE. A  
37 score for each subscale and a total score can be extracted. Cronbach's alpha gave this  
38 instrument reliability values between 0.88 and 0.91, which is considered satisfactory.

39 *Ad hoc protocol (survey)*. This was created by the team in order to assess the academic-  
40 musical profile of the musician sample, as well as the multiple variables that can influence  
41 the development of emotional competences (such as the subject's motivation to learn  
42 music, or the feelings experienced during learning. The protocol was created to address the  
43 lack of instruments assessing these aspects and consisted of a survey developed and  
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3 validated with expert evaluation. Based on this evaluation, a second draft was administered  
4 as a pilot test to 5 members of youth bands or orchestras and 5 members of choirs, in order  
5 to correct minor errors and validate the reliability of all the questions. Cronbach's alpha  
6 gave this survey a reliability coefficient of 0.81. The final survey consisted of a total of 19  
7 questions structured around three major dimensions: the personal dimension (age, gender  
8 and studies), the academic-musical dimension (music studies, experience, place of learning,  
9 etc.) and the socioemotional dimension (relationship with colleagues and director, feelings  
10 experienced, nervousness, etc.).  
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19 *Satisfaction With Life Scale* (SWLS; Diener, 1985). This self-informed five-item scale  
20 measures global cognitive judgements of one's life's satisfaction using a 7-point Likert  
21 scale that ranges from 7 *agree* to 1 *strongly disagree*. Because of its satisfactory  
22 psychometric properties and factorial structure, it has become one of the most widely used  
23 scales among the scientific community with Cronbach's Alpha showing values ranging  
24 from 0.80 and 0.89 (Diener & González, 2011; Vazquez, Duque, & Hervás, 2013).  
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31 *Academic Motivation Test* (MOT; Sáez, 2008). This 25-item test evaluates adolescent's  
32 degree of predisposition and motivation towards their academic training using a three-point  
33 scale (*true, false* or *doubtful*). This enables researchers to obtain a total factor score.  
34 Motivation can be considered *high, moderate* or *low*. Psychometric properties were  
35 satisfying for the motivation factor in all of the studies carried out. The MOT showed a  
36 remarkably satisfactory internal consistency ( $\alpha > 0.70$ ), with test-retest correlations over two  
37 months that indicated a good test-retest reliability (0.81).  
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45 *Questionnaire of the Capacity of Leadership* (LID; Ávila de Encío, 2012). This 15-item  
46 questionnaire was modelled after younger age versions of Cattell's renowned 16PF  
47 Questionnaire and it evaluated each participant's leadership capacity using a 5-point Likert  
48 scale (Catell & Catell, 2005; Porter & Cattell, 2002). The questionnaire has 15 phrases and  
49 rated with a Likert scale of 5 alternatives. The final score is the sum of all the answers  
50 given by the subject and each person can be qualified as: without leadership capacity, with  
51 initiative but without capacity of leadership, and with capacity for leadership. The LID  
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3 showed satisfactory internal consistency ( $\alpha > 0.70$ ), with test-retest correlations indicating a  
4 good test-retest reliability (0.83).  
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8 Before the results were analysed, the musicians' musical and socioemotional profile was  
9 assessed.  
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### 12 **Procedure**

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14 The present study followed a non-experimental ex post facto methodology which was  
15 descriptive and causal-comparative. This design enables researchers not only to describe  
16 the variables included in a study, but also to compare the constructs and data, which in the  
17 case of our study was important for the emotional and musical variables.  
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21 The musician questionnaires were answered during a rehearsal, in paper format. In the non-  
22 musician (control) group, we applied the Google Docs protocol of questionnaires in 10  
23 centers of secondary education located in the same towns where the musicians studied.  
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26 SPSS (Statistical Package for the Social Sciences, version 24.0) was used for the statistical  
27 analysis of the data, specifically for percentages, averages and standard deviation. It was  
28 also used for an analysis of variance (ANOVA) to contrast the musicians and non-  
29 musicians data and know if there were statistically significant differences between the two  
30 groups. Before running the statistical analysis, the Levene test was performed to establish  
31 the homogeneity of variances.  
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### 37 **Results**

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39 As mentioned above, before the analysis of the results *per se*, the present study explored the  
40 musical and socioemotional profile of the participants in the musicians sample. Our first  
41 finding was that the average age at which they had initiated their musical studies was 6.36  
42 (SD = 2.54). The musicians who played in bands or orchestras had an average of 3.90 years  
43 of experience (SD=2.24) while for the musicians who sang in choirs that figure rose to 5.52  
44 years (SD = 3.26).  
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51 Regarding the socioemotional dimension, a 10-point Likert scale was used to ask the  
52 participants about their opinions and feelings regarding the five socioemotional  
53 competences described by the Research Group in Psychopedagogical Orientation (GROP):  
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Emotional Awareness, Emotion Regulation, Autonomy, Social Competence, Well-being. The results about the opinions of the students are described in Table 1.

**Table 1. Results of the musicians' opinions and feelings about the five socioemotional competences described by GROP**

	$\chi$	SD
Emotional Awareness	7.57	1.64
Emotion Regulation	7.95	1.62
Autonomy	7.77	1.39
Social Competence	7.93	1.37
Well-being	8.66	1.43
<b>Total (n=660)</b>	7.98	1.09

Additionally, these competences were assessed with the Emotional Development Questionnaire (QDE; López, & Pérez, 2014) which gave similar results to those described in the opinions and feelings of the participants themselves (see Table 2).

**Table 2. Results of the Emotional Development Questionnaire on the five socioemotional competences between musicians and non-musicians, described by GROP**

	Musicians		Non-musicians	
	$\chi$	SD	$\chi$	SD
Emotional Awareness	8.13	0.85	5.27	0.86
Emotion Regulation	7.08	0.98	5.21	1.02
Autonomy	6.86	1.08	5.69	1.05
Social Competence	6.97	1.15	5.91	1.06
Well-being	7.97	0.87	6.52	0.83
<b>Total (n=660+655)</b>	7.37	0.78	6.05	0.70

The average score obtained in the QDE, which slightly differed from the results obtained when asking participants about their opinions and feelings, showed that the participants' level of skills acquisition was moderate. Further study revealed that emotional awareness and well-being were the competencies the participants had consolidated most while the acquisition of autonomy and social competencies was less apparent.

In a variance analysis of the two samples, several differences appeared when the scores produced by the different instruments were compared (see Table 3).

**Table 3. Results of the ANOVA analysis for the scores obtained by the groups of musicians and non-musicians for the tests Satisfaction with Life Scale (SWLS), Academic Motivation Test (MOT), and Questionnaire of the Capacity of Leadership (LID).**

	Musicians M (SD)	Non-Musicians M (SD)	F	<i>p</i>	$\eta^2$
SWLS	42.1 (9.2)	35.2 (11.0)	435.492	0.001	0.299
MOT	29.8 (3.3)	23.7 (4.9)	188.975	0.001	0.156
LID	36.2 (6.4)	29.2 (8.6)	101.234	0.001	0.090

As Table 3 shows, the musicians displayed a higher and statistically significant score in emotional competences than the non-musicians. They also showed a greater ability as leaders (or the potential to become leaders). Statistically, this was a highly significant difference between groups, as percentages of the Table 4 show.

**Table 4. Results of the Questionnaire on Leadership Capacity (LID) obtained by the groups of musicians and non-musicians.**

	Musicians %	Non-musicians %
High capacities	55.0	26.3
Moderate capacities	43.2	61.5
Low capacities	1.8	26.3
<b>Total (n=660)</b>	<b>7.37</b>	<b>0.78</b>

A similar pattern could be observed in the life satisfaction scores, where the musicians were notably happier with their lives. Finally, academic motivation also appeared to be much higher and statistically significant for the musicians than the non-musicians. Interestingly enough, working with a team, the culture of effort and the learning motivation are very important factors in music practice.

## Discussion

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3 The main aims of this study were to explore the socioemotional profile of adolescents who  
4 were involved in musical activities and compare this with the profile of adolescents who  
5 were not.  
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8 In all cases, the results showed that, in the variables measured, statistically significant  
9 differences exist between musicians and non-musicians. In the analysis conducted to  
10 measure the socioemotional competences described by GROUPE (Emotional Awareness,  
11 Emotion Regulation, Autonomy, Social Competences, Well-being), the musicians showed  
12 an important level of socioemotional development and set of skills. The musicians scored  
13 highest in Emotional Awareness (see table 2). This is consistent with previous findings,  
14 indicating that the logical order of learning for young people is, first learning how to  
15 become aware of what they feel and, only later, becoming able to manage and regulate  
16 feelings (Filella et al., 2016). On the other hand, the musicians scored lowest in autonomy.  
17 Again, this result is consistent with the fact that, in comparison to other stages of life,  
18 adolescence is strongly associated with feelings related to anxiety, which in turn makes it  
19 more difficult for young people to properly regulate and ensure a proper level of autonomy  
20 until a certain degree of personality development has been reached (Byrne, 2000; Filella et  
21 al., 2016; Massot, 2003). In general, however, in all of the tests the musicians showed  
22 higher scores than the non-musicians, which is highly consistent with our hypothesis.  
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25 Regarding the comparison between musicians and non-musicians in terms of leadership  
26 skills, 55% of the musicians showed a high level of leadership capacity compared to only  
27 26,3 % of the non-musicians (see Table 4). This can be explained by the fact that  
28 participating in group music-making activities, in ensembles such as choirs and bands,  
29 strengthens abilities in areas like effort, optimism, self-confidence, self-management, and  
30 self-perception (for example, Gouzouasis & Henderson, 2012; or Kokotsaki & Hallam,  
31 2007). These skills are known to favour the development of socioemotional competences  
32 and leadership (for example, Tenenbaum, Lidor, Lavyan, Morrow, Tonnel, et al., 2004).  
33 This same fact accounts for level of academic motivation, which in the present study was  
34 significantly higher in the musicians, who were clearly predisposed to academic activities.  
35 Finally, the musicians expressed greater satisfaction with life than the non-musicians did.  
36 Once again, statistically these differences became highly significant, indicating that the  
37 shared practice of music during adolescence may constitute an effective and satisfying  
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3 leisure activity (as well as a contribution from the arts to well-being). Furthermore, it helps  
4 the individual make a positive evaluation of the activity itself and their level of satisfaction  
5 with life (Calderón-Garrido, Martín-Piñol, Gustems-Carnicer & Portela-Fontán, 2018;  
6 Croom, 2015).  
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10 On the other hand, although the study produced interesting results there were also certain  
11 limitations. In first place, we were unable to fully address the considerable the plurality and  
12 heterogeneity of the community of adolescent musicians in the two geographical regions in  
13 question. Instead, our research focused on the musical ensembles for young people that  
14 were most typical of these regions: namely, bands or orchestras, and choirs. Future studies  
15 should therefore address the heterogeneity of music profiles in this population. Secondly,  
16 although the process underlying the development of emotional competencies is complex  
17 and multifactorial, our study chose to select only the most representative aspects, in line  
18 with previous studies and empirical results. Future investigations should study the  
19 interactions and multifactorial effects of different variables in order to more fully stablish  
20 those variables and relationships that account for the development of emotional  
21 competencies development during adolescence.  
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30 In conclusion, our findings clearly indicate that adolescents who participate in group music-  
31 making activities display a higher level of development of socioemotional competences.  
32 This suggests that music can become an important resource to help individuals acquire and  
33 strengthen their emotional and social skills in moments of the life span that originally have  
34 a different approach and aspects than other moments in life. In short, music may have  
35 valuable uses as a tool that can be effectively used to enhance young people's emotional  
36 understanding, well-being, and general health.  
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#### 44 **Acknowledgments**

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47 The present work is the partial result of a doctoral thesis and was funded by ARCE grants  
48 promoted by the University of Barcelona (2015 and 2016).  
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