

Musical Preferences of Teenagers and Adults: Evidence from a Spanish-Speaking Sample

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Abstract

Music consumption is widely recognized as an important facet of everyday life, and the use of algorithms by online streaming services to suggest songs has aroused a growing scientific interest in how musical preferences are structured. However, existing studies have failed to include Latin genres of music. Therefore, the aim of this study was to develop and validate a measure to assess the musical preferences of Spanish-speaking teenagers and adults. To do this, two independent studies were developed ($N_1 = 312$ Spanish teenagers; $N_2 = 345$ Spanish-speaking adults) using an instrument based on a theoretical structure consisting of 20 musical genres, which reflects the MUSIC model. The results indicated the exclusion of reggaetón for both groups, and confirmed the proposed theory of five dimensions of musical preferences: (a) Intense: emphasis on low sounds and use of electronic instruments; (b) Sophisticated: complex musical structure, dissonant harmonies, and melodies that explore unconventional patterns and diversified rhythms; (c) Contemporary: striking rhythm, emphasis on percussion and electronic instruments, versatility in the prosodic construction of lyrics, and often linked to themes such as inequality and social injustice; (d) Moving: strong connection to dance, especially partner dances, with strong potential for socialization; (e) Unpretentious: music with strong cultural roots specific to the research context. In conclusion, the Scale for Musical Preferences Assessment proved to be an effective instrument for assessing the musical preferences of teenagers and adults, presenting a standard structure for both groups, although there were differences in their perception of musical genres.

Keywords

Teenager, adult, MUSIC model, Spain, Spanish speakers

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Introduction

Music is widely recognized as an important facet of everyday life and can have different roles and functions depending on the social context (Schäfer & Sedlmeier, 2009). Many people listen to music regularly as part of their normal day (Mehl & Pennebaker, 2003), whether on the radio, via CDs, or, more often, online (Ferwerda et al., 2019). In recent years, it has become common for music streaming services to use recommendation systems to suggest songs that fit users' listening profiles, either contributing to the construction of or reinforcing their musical preferences (Bauer & Schedl, 2019). The use of algorithms for studying how people consume music may explain the growing interest in musical preference evidenced in new scientific research.

Musical preference may be understood as an inclination or a predilection for a specific type of music (Hargreaves et al., 2015). Studies show that these choices are influenced by psychological, socioeconomic, educational, religious, and other factors (Bourdieu, 2010; Garrido, 2014; George et al., 2007; Hui, 2009). For instance, studies of musical preference in relation to gender have shown that men are more inclined to prefer genres that are more vigorous (e.g., heavy metal), musically more complex (e.g., jazz), and that strengthen their interpersonal relationships (e.g., rap) (Boer et al., 2012; Dobrota & Ercegovic, 2019), whereas women tend to prefer light music (e.g., pop), music with greater emotional content (e.g., country), and music that is related to dance (e.g., Latin music) (Colley, 2008). However, some studies have sought to consider (socially constructed) gender rather than the sex binary with its biologically based distinction between men and women, which could help to extend our current understanding of musical preference (Greenberg et al., 2020; Werner, 2019). Another variable is age. Previous studies have shown that although preference for some genres (e.g., classical and country) increases with age, the opposite is true for other genres (e.g., reggae and rock) (Bonneville-Roussy et al., 2013).

However, some researchers have tried to verify whether the results presented can offer the possibility of predicting musical preference. Schäfer and Mehlhorn (2017) conducted a meta-analysis in which they analyzed 28 studies that related personality to musical preference. The authors concluded there was not enough evidence to support the hypothesis that the kind of music someone listens to reflects their personality.

Bonneville-Roussy et al. (2013) propose that there is a latent structure underlying musical preference. Studies that investigate the structure of musical preference tend to classify musical genres in terms of dimensions or factors. Among existing theoretical propositions, there are two that recur most often.

The first theoretical proposition (Rentfrow & Gosling, 2003) identifies a four-factor structure with the following dimensions: Reflective and Complex, for musically complex genres that lend themselves to introspection (e.g., jazz); Intense and Rebellious, for intense, energetic genres associated with feelings of social disconformity or rebellion (e.g., heavy metal); Upbeat and Conventional, for genres with simple musical structures that produce positive emotions (e.g., pop); and finally, Energetic and Rhythmic, for lively genres that emphasize rhythm (e.g., electronica). This proposed structure of musical preference has been widely used and supported, wholly or partially, by several studies, although some include different genres in the four dimensions (Clark & Giacomantonio, 2013; Langmeyer et al., 2012; Vella & Mills, 2016; Zweigenhaft, 2008).

The second theoretical proposition (Rentfrow et al., 2011) identifies a five-factor structure called MUSIC with the following dimensions: Mellow, for relaxing, smooth music (e.g., R&B); Unpretentious, for simple, smooth music with a strong vocal presence, played on acoustic instruments (e.g., country); Sophisticated, for music with a more complex structure (e.g.,

classical music); Intense, for energetic and intense music (e.g., rock); and Contemporary, for rhythmic and percussive music (e.g., rap). This model has been supported and validated by many studies, with the inclusion of different musical genres (Bonneville-Roussy et al., 2013; Fricke & Herzberg, 2017; Lorenzo-Quiles et al., 2020; Rentfrow et al., 2012).

Nevertheless, both theories have been criticized for using too few musical genres. In addition, studies including a wider variety of musical genres have found a greater number of musical dimensions (George et al., 2007; North, 2010; Schäfer & Sedlmeier, 2009). Thus, it would seem that there is a relationship between the number of musical genres included and the number of factors identified in the structure of musical preference.

Moreover, studies have shown a high degree of inconsistency in outlining the structure of musical dimensions. The ways in which musical genres can be classified into different dimensions depends on cultural context. For instance, R&B was considered to be Mellow by Rentfrow et al. (2012) but Unpretentious by Bonneville-Roussy and Rust (2018). This lack of precision indicates that different musical genres have different symbolic and sonic functions depending on their cultural context, and shows how vital it is to recognize the relationship between dimension and cultural context in the construction of musical preference. Nonetheless, Rentfrow et al. (2011) highlighted the recurrence of three factors that emerged regardless of the context investigated: one that includes classical music and jazz, another that includes rock and rock-derived genres such as heavy metal, and a third that includes rap and hip-hop.

Furthermore, most studies of musical preference have been developed in anglophone cultures. On the one hand, some studies of musical preference in Latin cultures suggest that rock is the genre most preferred by Colombians and Mexicans (Restrepo Betancur & Ocampo Quiceno, 2020; Terrazas-Bañales et al., 2013). On the other hand, there is evidence that musical preference in Spanish-speaking cultures might be influenced by participants' level and type of music education. Cremades et al. (2010) have observed that Spanish high school students tend to prefer genres such as reggaetón and pop that are broadcast by the mass media. However, studies carried out with students at music conservatories in Spain suggest they prefer classical music-related genres to music for dance such as bachata and reggaetón (Lorenzo-Quiles et al., 2014; Molina & Soares-Quadros, 2019).

Taken together, these results suggest that it is necessary to use valid and standardized instruments for assessing musical preference, with diversified samples reflecting the musical diversity found in Latin cultures. The aim of this study was, therefore, to develop and validate a measure for assessing the musical preferences of Spanish-speaking teenagers and adults.

Method

Participants

Sample 1. The first sample consisted of 312 Spanish teenagers at two schools located in Caniles, a province of Granada in Spain. There were 142 girls and 170 boys, with ages ranging from 12 to 17 ($M = 13.73$, $SD = 1.23$, $Mdn = 14$). First, ethical approval was sought and obtained from the researcher's home institution. The schools gave permission for their students to take part in the research. Because the students were minors, however, their parents and guardians had to give written informed consent in accordance with the Declaration of Helsinki. Only students whose parents and guardians gave consent participated in the research.

Sample 2. The second sample consisted of 345 adults selected from Latin American and Spanish Facebook community groups. There were 210 women and 135 men, all Spanish-speaking

but living in different countries. A total of 264 lived in Spain, five lived in other European countries (two in France, and one each in Italy, the Netherlands, and Germany), 64 in South American countries (49 in Colombia, five in Brazil and Argentina, two in Chile, and one each in Bolivia, Ecuador, and Peru), and 12 in Central America (eight in Mexico, two in Puerto Rico, and one each in Cuba and Guatemala). They were between 18 and 87 years old ($M = 35.97$, $SD = 13.26$, $Mdn = 33$). All gave their written informed consent in accordance with the Declaration of Helsinki.

Instrument

The process of constructing an instrument, which was called the Scale for Musical Preferences Assessment (SMPA), began with a preliminary survey carried out with 184 high school students from the city of Granada (Spain) in which respondents were asked to list all the musical styles they knew. These were tabulated and counted, and those known to at least 10% of the sample were selected (90th percentile). Twenty-one styles were chosen and organized into five groups based on their musical characteristics and the theoretical structure of the MUSIC model (Rentfrow et al., 2011): (a) Sophisticated (jazz, blues, and classical music); (b) Unpretentious (flamenco, sevillanas, and copla); (c) Intense (rock, heavy metal, alternative, pop rock, hardcore, and electronica); (d) Contemporary (rap, reggae, reggaetón, trap, and hip-hop); and (e) Moving (pop, bachata, merengue, and salsa).

Next, the proposed set of groupings was sent to 10 independent judges who were experts from a range of different music-based professions (four professional musicians, three music teachers, two composers, and one ethnomusicologist) for their assessment. These independent judges worked at different Spanish universities and music conservatories and were recruited based on their knowledge of musical styles. Adopting the criteria suggested by Barbero et al. (2006), the judges recommended excluding the “alternative” genre ($IQR = 3$) from the list of styles in the questionnaire. The final version of the SMPA consisted of 20 items ($IQR \leq 1$), which would be assessed by participants from Sample 1 and Sample 2 using a 5-point Likert-type scale ranging from 1 (I hate it) to 5 (I love it) (see Appendix 1 and Appendix 2).

Procedure

Sample 1. The SMPA questionnaire was administered in person during January 2018. The questionnaire was distributed to respondents and read aloud by the researchers to avoid possible misunderstandings that could influence the answers. The participants were then given 20 min to answer the questionnaire.

Sample 2. An online version of the SMPA questionnaire was administered using a snowball sampling approach in which respondents were asked to forward the form to other people in their social circles. It was available online for four months.

Data Analysis

Confirmatory Factor Analysis (CFA) was used on each sample separately to verify whether the data collected fitted the SMPA theoretical structure, that is, whether musical preference could be grouped into five dimensions. The model parameters were estimated by the Diagonally Weighted Least Squares method to verify how well the model fitted the data, using the fit indexes suggested by Maroco (2014): chi-square/degrees of freedom ratio (χ^2/df) as the absolute fit

index, Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI) as relative indexes, and Root Mean Square Error of Approximation (RMSEA) as the population discrepancy index. The suitability criteria suggested by the same author are $\chi^2/df < 2$, CFI $> .90$, TLI > 0.90 , and RMSEA $< .10$. The modification indexes (MIs) were observed and used as the main parameter to search for a better fit model, provided that the suggested criteria were theoretically coherent.

Additionally, the values of the factorial loads were observed for respecifications of the model. As recommended by Leppink (2019), Cronbach's alpha (α), McDonald's omega (ω), and the greatest lower bound (*glb*) coefficient values were obtained for evaluating the reliability. Nonparametric bootstrap with 1,000 samples was used to obtain 95% confidence intervals for the coefficients. Finally, Multigroup Confirmatory Factor Analysis was used to verify the configural, metric, and scalar invariance of the SMPA for both teenagers and adults. Based on Chen (2007), considerations, values, and discrepancies in the CFI were observed, with free parameters and restriction of factorial loads and intercepts. All analyses were performed using JASP 0.12.2 software (JASP Team, 2019).

Results

Sample 1: Teenagers

The results of the SMPA structure with 20 items (Model 1) showed adjustment rates that were just reasonable (see Table 1). A high MI (MI = 83.06) was observed, suggesting that the item "hip-hop" would fit the Intense dimension better. Because this suggestion did not make theoretical sense, an adjustment to create a new structure, removing this item, was verified (Model 2). Without this item, the fit improved and was then considered good. A third structure (Model 3) tested for this sample considered excluding the reggaetón genre. This model achieved slightly better adjustment rates compared with the two previous models. The reliability values for the dimensions were as follows: Moving ($\alpha = .77$, CI = .72, .81; $\omega = .78$, CI = .72, .80; *glb* = .79, CI = .75, .83); Sophisticated ($\alpha = .82$, CI = .78, .86; $\omega = .82$, CI = .78, .86; *glb* = .82, CI = .78, .86); Contemporary ($\alpha = .63$, CI = .54, .69; $\omega = .63$, CI = .56, .70; *glb* = .67, CI = .59, .74); Intense ($\alpha = .72$, CI = .66, .77; $\omega = .73$, CI = .67, .78; *glb* = .79, CI = .75, .83); and Unpretentious ($\alpha = .80$, CI = .76, .84; $\omega = .80$, .76, .84; *glb* = .80, CI = .76, .84). The covariance of the dimension Sophisticated was .60 with Unpretentious, .52 with Intense, .10 with Contemporary, and .57 with Moving. The covariance of the dimension Unpretentious was .17 with Intense, .17 with Contemporary, and .64 with Moving. The covariance of the dimension Intense was .28 with Contemporary and .18 with Moving. Finally, the covariance of the dimension Contemporary with Moving was .31.

Sample 2: Adults

The results obtained for the 20-item structure (Model 1) for the sample of adults showed a worse fit than expected (see Table 2). The reggaetón item presented the three highest reliability values of the MI, suggesting it could fit into the Intense (MI = 148.63), Moving (MI = 82.71), and Sophisticated (MI = 63.62) dimensions. As in the first study, a second structure without this item was tested (Model 2). An improved fit was verified after the exclusion, and this reached reliability values considered good, without showing high modification rates. A third model was tested without hip-hop (Model 3), but the fit was considered worse.

Table 1. Factor Loadings for Items and Fit Indexes of the SMPA Models for Teenagers.

| Factor | Item | Model | | |
|---------------|---------------------|------------------|------------------|------------------|
| | | Model 1 | Model 2 | Model 3 |
| Intense | electronica | .34 | .35 | .33 |
| | pop rock | .70 | .70 | .67 |
| | hardcore | .34 | .34 | .35 |
| | heavy metal | .72 | .71 | .73 |
| | rock | .75 | .75 | .76 |
| Contemporary | hip-hop | .19 | | .60 |
| | rap | .36 | .29 | .58 |
| | reggae | .51 | .44 | .63 |
| | trap | .50 | .49 | .29 |
| | reggaetón | .78 | .88 | |
| Moving | bachata | .70 | .70 | .68 |
| | merengue | .80 | .80 | .82 |
| | salsa | .81 | .81 | .82 |
| | pop | .44 | .44 | .43 |
| Unpretentious | copla | .83 | .83 | .85 |
| | flamenco | .66 | .66 | .64 |
| | sevillanas | .78 | .78 | .79 |
| Sophisticated | blues | .80 | .80 | .80 |
| | classic | .74 | .74 | .74 |
| | jazz | .79 | .79 | .79 |
| Fit indexes | X ² (df) | 461.78(160) | 311.89(142) | 280.11(142) |
| | X ² /df | 2.89 | 2.20 | 1.97 |
| | CFI | .911 | .948 | .955 |
| | TLI | 0.894 | .937 | .946 |
| | RMSEA [90%CI] | .078[.070, .086] | .062[.053, .071] | .056[.046, .066] |

Note. SMPA = Scale for Musical Preferences Assessment; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation.

Each dimension of Model 2 presented the following precision values: Moving ($\alpha = .75$, CI = .71, .79; $\omega = .82$, CI = .79, .85; $g_{lb} = .86$, CI = .83, .88); Sophisticated ($\alpha = .84$, CI = .81, .87; $\omega = .84$, CI = .81, .87; $g_{lb} = .84$, CI = .81, .87); Contemporary ($\alpha = .76$, CI = .71, .79; $\omega = .78$, CI = .74, .81; $g_{lb} = .82$, CI = .78, .85); Intense ($\alpha = .64$, CI = .58, .70; $\omega = .67$, CI = .61, .72; $g_{lb} = .76$, CI = .71, .80), and Unpretentious ($\alpha = .76$, CI = .70, .80; $\omega = .76$, .70, .80; $g_{lb} = .76$, CI = .70, .80). The covariance values of the dimension Sophisticated were .41 with Unpretentious, .50 with Intense, .35 with Contemporary, and .33 with Moving. The covariance values for Unpretentious were .17 with Intense, .43 with Contemporary, and .58 with Moving. The covariance values for Intense were .51 with Afro and .05 with Moving. Finally, the covariance for Contemporary with Moving was .46.

Analysis of the 19-item model simultaneously for adults and teenagers showed evidence of configural invariance (CFI = .944), but the metric invariance was low (CFI = .929, $\Delta = .015$) and there was no scalar invariance (CFI = .835, $\Delta = .094$). These results suggest that although the same structure fits both teenagers and adults, the relevance of each musical style to each

Table 2. Factor Loadings for Items and Fit Indexes of the SMPA Models for Adults.

| Factor | Item | Model | | |
|---------------|---------------------|------------------|----------------|------------------|
| | | Model 1 | Model 2 | Model 3 |
| Intense | electronica | .35 | .35 | .32 |
| | pop rock | .36 | .36 | .39 |
| | hardcore | .60 | .56 | .54 |
| | heavy metal | .67 | .67 | .67 |
| | rock | .64 | .65 | .68 |
| Contemporary | hip-hop | .73 | .73 | |
| | rap | .68 | .68 | .55 |
| | reggae | .72 | .73 | .78 |
| | trap | .51 | .48 | .50 |
| | reggaetón | .21 | | .23 |
| Moving | bachata | .67 | .66 | .68 |
| | merengue | .90 | .91 | .90 |
| | salsa | .89 | .90 | .88 |
| | pop | .18 | .18 | .19 |
| Unpretentious | copla | .74 | .75 | .75 |
| | flamenco | .65 | .65 | .65 |
| | sevillanas | .74 | .73 | .73 |
| Sophisticated | blues | .88 | .88 | .89 |
| | classic | .69 | .69 | .70 |
| | jazz | .83 | .83 | .82 |
| Fit indexes | X ² (df) | 693.89(160) | 371.42 (142) | 626.56 (142) |
| | X ² /df | 4.34 | 2.62 | 4.41 |
| | CFI | .861 | .935 | .858 |
| | TLI | .835 | .921 | .829 |
| | RMSEA [90%CI] | .098[.091, .106] | .069[.60, .77] | .100[.092, .108] |

Note. SMPA = Scale for Musical Preferences Assessment; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation.

dimension is only estimated. Based on this evidence, it is not possible to compare the musical preferences of teenagers and adults because they do not perceive musical genres in the same way. This means that possible divergences of values may result from the variation of this instrument and not necessarily from a real difference in musical preference.

Discussion

This study aimed to devise a new instrument for measuring the musical preferences of Spanish-speaking teenagers and adults (the SMPA) and provide evidence of its validity. The instrument was developed using the MUSIC model's 5-factor structure as its basis, the choice of which was supported by studies carried out in several different countries (Fricke & Herzberg, 2017; Nave et al., 2018; Schäfer & Mehlhorn, 2017). The evaluation by independent judges showed adequate theoretical coherence between the musical features of each element and the suggested model.

Taking into consideration the MUSIC model proposed by Rentfrow et al. (2011), it should be noted that the results of this research support the findings of previous studies in that they show the existence of at least three principal musical dimensions: genres such as jazz and classical music, rock-related genres, and genres akin to rap and hip-hop (Colley, 2008; Delsing et al., 2008; Schäfer & Sedlmeier, 2009).

Thus, CFA revealed that the Sophisticated dimension grouped classical music, jazz, and blues, as in previous studies (Clark & Giacomantonio, 2013; Langmeyer et al., 2012). In general, these styles present complex musical structures, dissonant harmonies, melodies that explore nonconventional patterns, and diversified rhythms. Bourdieu (2010) suggests that “highbrow” people often prefer these genres, whereas other authors point out that this preference seems to be influenced by other variables such as gender, education level, and familiarity (North & Hargreaves, 2008; Schäfer & Sedlmeier, 2009). On the other hand, several studies have produced evidence that teenagers avoid listening to this type of music. This could be because they have lower levels of “open-earedness” than adults, that is, how curious they are about wanting to explore a wide range of musical genres (Louven, 2016).

Intense was the musical dimension in which the largest number of styles was grouped. In previous studies, this dimension consisted of rock-related genres such as heavy metal (Bonneville-Roussy & Rust, 2018; Rentfrow et al., 2012). It was surprising that electronica was grouped with Intense, because other studies have shown it to be more frequently associated with Contemporary genres such as rap and hip-hop (Langmeyer et al., 2012). This grouping was perhaps motivated by the participants’ understanding of electronica as sharing striking characteristics with the other Intense styles, characteristics such as an emphasis on low sounds, especially in the rhythmic aspect of the music. The core instrumentation of Intense genres is often electronic, focusing on guitar, bass, and synthesizers. From a psychological perspective, Intense music tends to provoke strong emotional reactions in the listener, even leading to the creation of close affective bonds (Delsing et al., 2008; Hällsten et al., 2019). Finally, Intense styles are recognized as energizing the listener or putting them in an ecstatic state (Schäfer & Sedlmeier, 2009).

The Contemporary dimension grouped together musical genres characterized by their rhythm, their emphasis on percussive and electronic instruments, their versatility with regard to prosodic construction of lyrics, and that had themes such as inequality and social injustice (e.g., rap and reggae) (Rentfrow & Gosling, 2003). These results mirror those found by Colley (2008) and Schäfer and Sedlmeier (2009). Structural change in the SMPA occurred in the Contemporary dimension because reggaetón was excluded. Reggaetón is a relatively recent musical genre, emerging from a Puerto Rican fusion of Jamaican reggae (dancehall and dembow) and American hip-hop (Marshall, 2010). Despite its origin, reggaetón differs from other Contemporary styles in that its lyrics usually address themes such as romantic relationships, with an emphasis on the sexual aspect (Álvarez-González, 2010), whereas other Contemporary genres highlight social themes. Reggaetón showed a strong connection to both the Intense (because of its rhythm and use of electronic sounds) and Moving (because it relates to a type of partner dance known as perreo) dimensions. For adults, it also showed a strong inverse relationship with the genres of the Sophisticated dimension (due to its level of musical complexity), although its exclusion in the model for teenagers was also beneficial for the quality of the fit.

There is, however, a lack of consistency in previous studies with regard to the Mellow and Unpretentious dimensions, the variation depending largely on the type and number of musical styles included in studies. First, the study by Dobrota and Ergegovac (2019) found an anomalous dimension formed by genres specific to the research context that do not frequently appear in studies of musical preference; this is primarily due to the lack of research in Latin contexts.

Flamenco, copla, and sevillanas represent aspects of traditional culture in Andalusia, a southern region of Spain. Flamenco, the most well-known genre of this dimension, can be defined as a tradition that involves singing, dancing, and playing instruments (especially guitar), with a range of variations, or palos, such as rumba, bulería, and tango (Katz, 2001). Since 2010, flamenco has appeared on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity. Copla refers to Spanish songs structured in rhymed verses consisting of four lines of eight, six, or five syllables whose most recurrent themes are love, everyday events, or funny incidents (Gradante, 2001). It initially emerged as a poetic and theatrical form but quickly became a musical vehicle for affirming national identity in the 18th century (Abengózar, 2007). In the 20th century, this musical form merged with flamenco, creating what is known as the copla flamenca (Barrera, 2020). Sevillanas, on the other hand, are dances and music with origins in Spanish folk music, frequently broadcast on Spanish national radio and television (Martín, 2020). Together, these genres represent and convey the feelings of the Andalusian people and are important symbols of resistance and cultural heritage (Malefy, 1998).

It may be reasonable to group flamenco, copla, and sevillanas with Rentfrow et al.'s (2011) Unpretentious dimension because their characteristics certainly fit the authors' description: music more rooted in culture that has a strong vocal presence and is performed using acoustic instruments. Some studies, however, found different genres in Unpretentious, including pop and religious music (Bonneville-Roussy & Rust, 2018; Bonneville-Roussy et al., 2017). Therefore, further studies are needed to provide more evidence to confirm this grouping.

Second, this study verified the existence of a further dimension that integrates pop with other genres, promoting positive feelings in listeners. This dimension bears resemblance to the Upbeat and Conventional dimensions proposed in some studies (Gouveia et al., 2008; Langmeyer et al., 2012; Rentfrow & Gosling, 2003; Vella & Mills, 2016; Zweigenhaft, 2008). It differs from the Mellow dimension proposed by Rentfrow et al. (2011), because the bachata, pop, merengue, and salsa genres do not obviously fit the authors' definition of Mellow, that is, smooth and relaxing genres, perceived as slow, quiet, and not distorted. Rather, they relate strongly to dance, particularly the partner dances often seen in Latin nightclubs. Therefore, the Mellow dimension was renamed Moving. Moving genres are known for their potential for socialization (Selfhout et al., 2009), because they tend to be consumed collectively or in environments that promote close social interaction. The combination of the potential for socialization and lyrics that emphasize positive emotions may be responsible for positive changes in the moods of listeners (McFerran et al., 2015; Rea et al., 2012).

The absence of scalar invariance in the SMPA confirmed the hypothesis that teenagers and adults perceive musical genres differently. According to Bonneville-Roussy et al. (2013), the Sophisticated dimension is appreciated more by adults than teenagers. On the one hand, this may be because adults are interested in music that they find artistically and intellectually stimulating (Schäfer & Sedlmeier, 2009). On the other hand, it implies an aesthetic and perhaps educated approach to listening to music (Juslin, 2013), suggesting that this may apply in some but not all circles. Another reason could be that younger people have a lower tolerance for listening to more varied genres of music and less curiosity about them (Louven, 2016).

Similarly, Unpretentious music that emphasizes cultural roots seems to appeal more to adults than teenagers, perhaps because teenagers are not yet aware of their emotional ties to their home or place of origin. Adults are more likely to move to other cities and countries to search for better living conditions, higher-quality academic education, or jobs with better wage prospects than they have at home (Bacallao & Smokowski, 2007; Grieco, 1982). Homesickness can be mitigated by doing activities that evoke memories, feelings, and nostalgic sensations, and this includes listening to music (Clark et al., 2016). Therefore, adults are

more likely to find meaning in genres of music that evoke cultural roots. From another perspective, young people are participating and engaging in traditional cultural manifestations less and less (Carvalho, 1999). In addition, adults are more likely to integrate themselves into social environments where the songs that are part of this type of music gain prominence as a symbol of cultural status (Bourdieu, 2010).

The Moving dimension presents the same behavior as the previous ones, as shown by North (2010). Songs that lend themselves to partner dancing are more popular among adults than teenagers. On the one hand, Moving musical genres are often associated with older people or considered old-fashioned, which suggests a dissociation between this type of music and youth culture. Thus, the rejection of this dimension might be associated with the lack of a sense of belonging and identity in teenagers (González, 2016). On the other hand, teenagers can also be shy about showing affection to their peers (Sousa & Caramaschi, 2011). Contact between bodies in partner dances can feel too intimate and invasive. Bodily changes, high levels of hormones, and natural shyness can lead to physical and emotional responses that they may consider uncontrollable. For adults, on the other hand, partner dance provides the potential for socialization and is often used for flirting, meeting new people, or having fun with friends. Finally, another reason why adults and teachers may perceive Moving styles differently relates to the places in which music is consumed. In general, Moving music is heard in nightclubs, where minors are not present. Therefore, teenagers' access to this type of music is restricted.

Unlike the Sophisticated, Unpretentious, and Moving dimensions, the Intense and Contemporary dimensions tend to be more favored by teenagers (Bonneville-Roussy et al., 2013). The musical genres grouped under these dimensions are often experienced as very important in their lives, helping them to form identities and establish interpersonal connections, and reinforcing feelings of opposition to social norms and standards (Delsing et al., 2008; Hällsten et al., 2019; Pais, 2008). Thus, teenagers tend to use music as a vehicle for expressing their thoughts, ideas, nonconformities, and daily conflicts. However, on reaching adulthood, changes in social, economic, and psychological spheres mean people become more concerned with their social roles (Harter, 2003; Steinberg & Monahan, 2007). Adults are more likely to use music as an emotional regulator or stimulus than as a means of expressing their identity. As a result, Contemporary and Intense dimensions become less important and assume a secondary role (Bonneville-Roussy et al., 2013).

Despite the findings of the present study, it should be remembered that identity construction is an ongoing process. Adults as well as teenagers construct and reconstruct their identities over time. According to Myers (1995), adulthood may be understood as a process of lifelong learning that is influenced by several variables such as life experience, education, and sociocultural aspects. For this reason, our findings contribute to an understanding of the differences between adults' and teenagers' musical preferences.

Limitations and Future Directions

Although we have produced a valid and reliable instrument for measuring the musical preferences of Spanish-speaking people, there were some limitations in its development. The difficulty of obtaining a more homogeneous set of samples may have influenced the results. In addition, the cultural context of the adult sample was more varied than the teenager sample. In the latter, the participants all attended the same two schools. We were unable to compare different cultural groups because there were so few non-Spanish participants.

Another limitation was that participants' musical preferences were assessed via a self-report questionnaire. Some studies have suggested that the use of excerpt-based assessments can reduce biases related to participants' individual perceptions of different musical styles (Fricke & Herzberg, 2017; Herrera et al., 2018). Further studies using this method would enhance future versions of the SMPA.

We hope that in future this study will help researchers in Spanish-speaking contexts to develop their studies of musical preference according to the specificities of their own cultures. On the one hand, we highlight the necessity of bearing in mind the theoretical assumptions of psychometrics, that is, the use of large homogeneous samples so as to reduce biases and make comparisons between groups. On the other hand, it is also important to conduct longitudinal studies to verify the stability of the SMPA over time.

Conclusion

In conclusion, we have demonstrated that the SMPA is an effective instrument for assessing the musical preferences of both teenagers and adults, with a standard structure for both groups, although there are evident divergences in how they perceive each musical genre. For this reason, researchers are advised not to carry out studies using the SMPA to compare teenagers and adults with each other, because, as we have seen, the two groups perceive each of the musical genres in different ways. The creation of the SMPA filled a gap in the literature, because there was a lack of consistent instruments to measure the musical preferences of Spanish-speaking individuals. Therefore, this study may encourage the expansion of research on musical preference in the Spanish-speaking world and, thus, make a contribution toward strengthening this field of study.

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Supplemental Material

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References

- Abengózar, M. C. (2007). Epitomising the modern Spanish nation through popular music: Coplas from la Caramba to Concha Piquer, 1750–1990. *Gender & History*, 19(3), 419–440. <https://doi.org/10.1111@j.1468-0424.2007.00494.x>
- Álvarez-González, J. (2010). Structural characteristics of the 50 highest-rated television shows broadcast by Univision and Telemundo network for the Hispanic markets in the United States and Puerto Rico. *Journal of Spanish Language Media*, 3, 92–122.
- Bacallao, M., & Smokowski, P. R. (2007). The costs of getting ahead: Mexican family system changes after immigration. *Family Relations*, 56, 52–66. <https://doi.org/10.1111/j.1741-3729.2007.00439.x>
- Barbero, M. I., Vila, E., & Suárez, J. C. (2006). *Psicometría* [Psychometry]. UNED.
- Barrera, F. (2015). De la copla flamenca a la canción indie: Intertextualidad y relaciones sociales a través del análisis de distintos modelos de adaptación musical. *Ethnomusicology Review*, 20, 1–18.
- Bauer, C., & Schedl, M. (2019). Global and country-specific mainstreamness measures: Definitions, analysis, and usage for improving personalized music recommendation systems. *PLOS One*, 14(6), 1–36. <https://doi.org/10.1371/journal.pone.0217389>

- Boer, D., Fischer, R., Tekman, H. G., Abubakar, A., Njenga, J., & Zenger, M. (2012). Young people's topography of musical functions: Personal, social and cultural experiences with music across genders and six societies. *International Journal of Psychology*, 47(5), 355–369. <https://doi.org/10.1080/00207594.2012.656128>
- Bonneville-Roussy, A., Rentfrow, P., Xu, M., & Potter, J. (2013). Music through the ages: Trends in musical engagement and preferences from adolescence through middle adulthood. *Journal of Personality and Social Psychology*, 105(4), 703–717. <https://doi.org/10.1037/a0033770>
- Bonneville-Roussy, A., & Rust, J. (2018). Age trends in musical preferences in adulthood: 2. Sources of social influences as determinants of preferences. *Musicae Scientiae*, 22(2), 175–195. <https://doi.org/10.177/1029864917704016>
- Bonneville-Roussy, A., Stillwell, D., Kosinski, M., & Rust, J. (2017). Age trends in musical preferences in adulthood: 1. Conceptualization and empirical investigation. *Musicae Scientiae*, 21(4), 369–389. <https://doi.org/10.1177/1029864917691571>
- Bourdieu, P. (2010). *Distinction: A social critique of the judgement of taste*. Routledge.
- Carvalho, J. J. (1999) Transformações na sensibilidade musical contemporânea. *Horizontes Antropológicos*, 5(11), 53–91. <https://doi.org/10.1590/S0104-71831999000200004>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, 14, 464–504. <https://doi.org/10.1080/10705510701301834>
- Clark, I. M., Baker, F. A., & Taylor, N. F. (2016). Older adults' music listening preferences to support physical activity following cardiac rehabilitation. *Journal of Music Therapy*, 53(4), 364–397. <https://doi.org/10.1093/jmt/thw011>
- Clark, S., & Giacomantonio, S. G. (2013). Musical preferences and empathy: Toward predicting prosocial behavior. *Psychomusicology*, 23(3), 177–186. <https://doi.org/10.1037/a0034882>
- Colley, A. (2008). Young people's musical taste: Relationship with gender and gender-related traits. *Journal of Applied Social Psychology*, 38(8), 2039–2055. <https://doi.org/10.1111/j.1559-1816.2008.00379.x>
- Cremades, R., Lorenzo-Quiles, O., & Herrera, L. (2010). Musical tastes of secondary school students with different cultural backgrounds: A study in the Spanish North African city of Melilla. *Musicae Scientiae*, 14(1), 121–141. <https://doi.org/10.1177/102986491001400105>
- Delsing, M. J., ter Bogt, T. F., Engels, R. C., & Meeus, W. H. (2008). Teenagers' musical preferences and personality characteristics. *European Journal of Personality*, 22(2), 109–130. <https://doi.org/10.1002/per.665>
- Dobrota, S., & Ercegovic, I. R. (2019). Gender differences in musical taste: The mediating role of functions of music. *Društvena Istraživanja*, 28, 567–586. <https://doi.org/10.5559/di.28.4.01>
- Ferwerda, B., Yang, E., Schedl, M., & Tkalcic, M. (2019). Personality and taxonomy preferences, and the influence of category choice on the user experience for music streaming services. *Multimedia Tools Applications*, 78, 20157–20190. <https://doi.org/10.1007/s11042-019-7336-7>
- Fricke, K. R., & Herzberg, P. Y. (2017). Personality and self-reported preference for music genres and attributes in a German-speaking sample. *Journal of Research in Personality*, 68, 114–123. <https://doi.org/10.1016/j.jrp.2017.01.001>
- Garrido, S. (2014). A systematic review of the measurement of mood and emotion in music studies. *Psychomusicology*, 24(4), 316–327. <https://doi.org/10.1037/pmu0000072>
- George, D., Stickle, K., Rachid, F., & Wopnford, A. (2007). The association between types of music enjoyed and cognitive, behavioral, and personality factors of those who listen. *Psychomusicology*, 19, 32–56. <https://doi.org/10.1037/h0094035>
- González, M. (2016). Social trend of hip hop dance: As identity and cultural practices in youth. *American International Journal of Social Science*, 5(2), 61–71.
- Gouveia, V., Pimentel, C., Santana, N., Chaves, W., & Paraíba, C. (2008). Escala abreviada de preferência musical (STOMP): Evidências de sua validade fatorial e consistência interna [Short test of music preference (STOMP): Evidences of its factor validity and reliability]. *Psico*, 39(2), 201–210.
- Gradante, W. (2001, May 20). *Copla*. Grove Music Online. <https://www.oxfordmusiconline.com/grove-music/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000006421>

- Greenberg, D., Matz, S., Schwartz, H., & Fricke, K. (2020). The self-congruity effect of music. *Journal of Personality and Social Psychology*. *Advance online publication*. <https://doi.org/10.1037/pssp0000293>
- Grieco, M. S. (1982). Family structure and industrial employment: The role of information and migration. *Journal of Marriage and Family*, *44*(3), 701–707. <https://doi.org/10.2307/351590>
- Hällsten, M., Edling, C., & Rydgren, J. (2019). School's out forever? Heavy metal preferences and higher education. *PLOS One*, *14*, e0213716. <https://doi.org/10.1371/journal.pone.0213716>
- Hargreaves, D. J., North, A., & Tarrant, M. (2015). How and why do musical preferences change in childhood and adolescence? In G. E. McPherson (Ed.), *The child as musician: A handbook of musical development* (pp. 303–322). Oxford University Press.
- Harter, S. (2003). The development of self-representations during childhood and adolescence. In M. Leary & J. Tangney (Eds.), *Handbook of self and identity* (pp. 610–642). Guilford Press.
- Herrera, L., Soares-Quadros, J. F., Jr., & Lorenzo-Quiles, O. (2018). Music preferences and personality in Brazilians. *Frontiers of Psychology*, *9*(1488), 1–12. <https://doi.org/10.3389/fpsyg.2018.01488>.
- Hui, W. (2009). Music listening preferences of Macau students. *Music Education Research*, *11*(4), 485–500. <https://doi.org/10.1080/14613800903391749>
- JASP Team (2019). JASP (Version 0.12.2) [Computer software]. <https://jasp-stats.org/download/>
- Juslin, P. (2013). From everyday emotions to aesthetic emotions: Towards a unified theory of musical emotions. *Physics of Life Reviews*, *10*(3), 235–266. <https://doi.org/10.1016/j.plrev.2013.05.008>
- Katz, I. (2001, May 20). *Flamenco*. Grove Music Online. <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000009780>
- Langmeyer, A., Guglhör-Rudan, A., & Tarnai, C. (2012). What do musical preferences reveal about personality? A cross-cultural replication using self-ratings and ratings of music samples. *Journal of Individual Differences*, *33*, 119–130. <https://doi.org/10.1027/1614-0001/a000082>
- Leppink, J. (2019). *Statistical methods for experimental research in education and psychology*. Springer.
- Lorenzo-Quiles, O., Garrido, A., & Soares-Quadros, J. F., Jr., (2014). Estudio sobre preferências de estilo musical em estudantes espanhóis de ensino superior do real conservatório superior de música “victoria eugenia” [Study about the preferences of musical style of Spanish students of higher education at the Conservatory of Music]. *Música Hodie*, *14*(1), 211–222. <https://doi.org/10.5216/mh.v14i1.32979>
- Lorenzo-Quiles, O., Soares-Quadros, J. F., Jr., & Abril, J. E. (2020). Musical preferences of Brazilian high school students. *PLOS One*, *15*(9), e0239891. <https://doi.org/10.1371/journal.pone.0239891>
- Louven, C. (2016). Hargreaves' “open-earedness”: A critical discussion and new approach on the concept of musical tolerance and curiosity. *Music Scientiae*, *20*(2), 235–247. <https://doi.org/10.1177/1029864916633264>
- Malefyt, T. D. (1998). “Inside” and “outside” Spanish flamenco: Gender constructions in Andalusian concepts of flamenco tradition. *Anthropological Quarterly*, *71*(2), 63–73.
- Maroco, J. (2014). *Análise de equações estruturais: Fundamentos teóricos, smoothware e aplicações*. ReportNumber.
- Marshall, W. (2010, May 26). *Reggaetón*. Grove Music Online. <https://www.oxfordmusiconline.com/grove-music/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002087540>.
- Martín, T. (2020). *Transnational flamenco: Exchange and the individual in British and Spanish flamenco culture*. Palgrave Macmillan.
- McFerran, K. S., Garrido, S., O'Grady, L., Grocke, D., & Sawyer, S. M. (2015). Examining the relationship between self-reported mood management and musical preferences of Australian teenagers. *Nordic Journal of Music Therapy*, *24*(3), 187–203. <https://doi.org/10.1080/08098131.2014.908942>
- Mehl, M. R., & Pennebaker, J. W. (2003). The sounds of social life: A psychometric analysis of students' daily social environments and natural conversations. *Journal of Personality and Social Psychology*, *84*, 857–870. <https://doi.org/10.1037/0022-3514.84.4.857>
- Molina, J., & Soares-Quadros, J. F., Jr., (2019). Preferencias musicales, factores de influencia y medios de consumo musical en estudiantes de música. In J. Soares-Quadros Jr. (Ed.), *Música, Cultura e Educação* (pp. 277–312). EDIFMA.

- Myers, D. (1995). Lifelong learning: An emerging research agenda for music education. *Research Studies in Music Education*, 4(1), 21–27. <https://doi.org/10.1177/1321103X9500400104>
- Nave, G., Minxha, J., Greenberg, D. M., Kosinski, M., Stillwell, D., & Rentfrow, J. (2018). Musical preferences predict personality: Evidence from active listening and Facebook likes. *Psychological Science*, 29(7), 1145–1158. <https://doi.org/10.1177/0956797618761659>
- North, A. (2010). Individual differences in musical taste. *American Journal of Psychology*, 123, 199–208. <https://doi.org/10.5406/amerjpsyc.123.2.0199>
- North, A., & Hargreaves, D. (2008). *The social and applied psychology of music*. Oxford University Press.
- Pais, J. (2008). Culturas de grupo. In M. Lages & A. Matos (Coord.), *Recursos de Interculturalidade. Contextos e Dinâmicas* (pp. 207–255). Alto-Comissário para a Imigração e Diálogo Intercultural.
- Rea, C., MacDonald, P., & Carnes, G. (2012). Listening to classical, pop, and metal music: An investigation of mood. *Emporia State Research Studies*, 46(1), 1–3.
- Rentfrow, P. J., Goldberg, L. R., & Levitin, D. J. (2011). The structure of musical preferences: A five-factor model. *Journal of Personality and Social Psychology*, 100, 1139–1157. <https://doi.org/10.1037/a0022406>
- Rentfrow, P. J., Goldberg, L. R., Stillwell, D. J., Kosinski, M., Gosling, S. D., & Levitin, D. J. (2012). The song remains the same: A replication and extension of the MUSIC model. *Music Perception*, 30, 161–186. <https://doi.org/10.1525/mp.2012.30.2.161>
- Rentfrow, P. J., & Gosling, S. D. (2003). The do re mi's of everyday life: The structure and personality correlates of musical preferences. *Journal of Personality and Social Psychology*, 84, 1236–1256. <https://doi.org/10.1037/0022-3514.84.6.1236>
- Restrepo Betancur, L. F., & Ocampo Quiceno, M. F. (enero-abril, 2020). Géneros musicales preferidos por universitarios de la ciudad de Medellín, Colombia [Preferred musical genres by university students from the city of Medellín, Colombia]. *Revista Virtual Universidad Católica del Norte*, 59, 150–165. <https://doi.org/10.35575/rvucn.n59a9>
- Schäfer, T., & Mehlhorn, C. (2017). Can personality traits predict musical style preferences? A meta-analysis. *Personality and Individual Differences*, 116, 265–273. <https://doi.org/10.1016/j.paid.2017.04.061>
- Schäfer, T., & Sedlmeier, P. (2009). From the functions of music to musical preference. *Psychology of Music*, 37, 279–300. <https://doi.org/10.1177/0305735608097247>
- Selfhout, M. H., Branje, S. J., ter Bogt, T. F., & Meeus, W. H. (2009). The role of musical preferences in early teenagers' friendship formation and stability. *Journal of Adolescence*, 32, 95–107. <https://doi.org/10.1016/j.adolescence.2007.11.004>
- Sousa, N. C., & Caramaschi, S. (2011). Body contact between teenagers through ballroom dancing at school. *Motriz*, 17(4), 618–629. <https://doi.org/10.1590/S1980-65742011000400006>
- Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. *Developmental Psychology*, 43(6), 1531–1543. <https://doi.org/10.1037/0012-1649.43.6.1531>
- Terrazas-Bañales, F., Lorenzo-Quiles, O., & González-Moreno, P. (2013). Consumo musical de estudiantes universitarios de México. Una comparación entre alumnos de distintas facultades de una universidad Mexicana [Music consumption of Mexican university students: A comparison between students from different faculties]. *Revista Electrónica de Leeme*, 32, 121–134.
- Vella, E., & Mills, G. (2016). Personality, uses of music, and musical preference: The influence of openness to experience and extraversion. *Psychology of Music*, 45, 1–17. <https://doi.org/10.1177/0305735616658957>
- Werner, A. (2019). What does gender have to do with music, anyway? Mapping the relation between music and gender. *Per Musi*, 39, 1–11. <https://doi.org/10.35699/2317-6377.2019.5266>
- Zweigenhaft, R. L. (2008). A do re mi encore: A closer look at the personality correlates of musical preferences. *Journal of Individual Differences*, 29, 45–55. <https://doi.org/10.1027/1614-0001.29.1.45>