

Consolation through music: A survey study

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Abstract

Even though music is widely used as a source of solace, the question as to how and why music offers consolation remains largely unexplored. The aims of the present study are as follows: (a) to compare listening to music versus other self-soothing behaviors, (b) to explore when music is used as a means for solace, (c) to identify aspects of music that are important for providing solace, and (d) to explore behavior while listening to consoling music. Participants completed an internet survey distributed through the websites of Dutch National Radio 2 and Radio 4 ($N = 445$). The survey consisted of the Geneva Emotion and Music Scale (GEMS), the solace-scale from the Music in Mood Regulation questionnaire (MMR), questions concerning means of solace, situations requiring comfort, song aspects, and feelings and activities during music listening. The main findings indicate that: (1) music is the most important source of consolation compared with other soothing behaviors, (2) situations in which people have experienced loss and sadness are the primary situations in which music offers solace, (3) consoling music induces a feeling of being moved and a mixture of both positive and sad emotions; the most important aspects of a song for soothing purposes are the music itself and the lyrics, and (4) music for comfort is listened to predominately in solitude, as the sole activity. On the basis of these findings, a characterization of listening to consoling music is compiled. Behavior and song aspects are discussed in terms of how and why they are helpful in providing solace.

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Consolation (comfort, solace) is behavior with the sole aim of reducing emotional stress after a loss or disappointment (“Consolation”, n.d.). It has been an important concept in various branches of healthcare and philosophy throughout history, mainly as a remedy against suffering (e.g., Elliot, 1977; Norberg, Bergsten, & Lundman, 2001). Its main goal is not to take away the source of distress but rather to counter negative feelings and restore a sense of community and meaningful belonging (Norberg et al., 2001; Ter Bogt, Vieno, Doornwaard, Pastore, & Van den Eijnden, 2015).

Mood management is one of the primary functions of music listening (Schäfer, Sedlmeier, Städtler, & Huron, 2013), and solace through music has been identified as one of several mood-altering strategies (Saarikallio, 2008, 2010; Saarikallio & Erkkilä, 2007; Saarikallio, Nieminen, & Brattico, 2012; Schäfer et al., 2013; Shiffriss, Bodner, & Palgi, 2015; Ter Bogt et al., 2015). Other strategies include entertainment, distraction and discharge (Saarikallio & Erkkilä, 2007). There is a rich history in classical (e.g., the requiem and lament), popular and “folk” music (i.e., parents comforting their children by singing) to sing away one’s sorrows.

Saarikallio and Erkkilä (2007) and Saarikallio (2010) identified several characteristics of mood regulatory strategies from in-depth interviews with music listeners. They concluded that seeking solace through music is preceded by a sad and troubled mood, much attention is given to the lyrics, and the music is often listened to alone. Solace shares characteristics with discharge in that it is preceded by a negative mood. However, although discharge aims at venting negative, mainly angry emotions, when music is used to console, the listener feels comforted.

Recently, Ter Bogt et al. (2015) suggested a model of consolation through music in which they explored the importance of lyrics, the way the music sounds, and “feeling at one with fans and/or the artist”. Their study involved 981 adolescents and young adults (aged 13–30) who completed an online survey on consoling aspects of music, personality, music involvement and preference. Their results revealed an important role for the way music sounds and its lyrics (lyrics were less important to jazz and classical music, which is likely due to the more instrumental nature of these styles). Interestingly, the findings in this study reveal weak but significant relationships between song aspects important to offering consolation and gender, music genre, and age. Because their sample focused on adolescents and young adults, differences in later life could not be examined.

Thayer, Newman, and McClain (1994) investigated a large number of general mood-regulatory behaviors, including listening to music, and reported little or no male/female differences. In terms of age, Saarikallio (2010) interviewed participants of different ages and reported no substantial differences in mood-regulation strategies with music throughout life, although at the same time the study suggested that music may fulfill different functions during various stages of life.

Although situations in which music is used as comfort have not yet been properly categorized, suffering and negative life events have generally been linked to a need for consolation (e.g., Norberg et al., 2001; Van den Tol & Edwards, 2013, 2015; Van den Tol, Edwards, & Heflick, 2015). In general, adults, sad listeners, and individuals seeking comfort prefer mood-congruent music (Hunter, Schellenberg, & Griffith, 2011; Saarikallio, 2010; Saarikallio et al., 2012; Van den Tol & Edwards, 2013). It is therefore likely that most comforting music sounds sad. Moreover, people who listen to sad music when feeling sad often explain their reason for

doing so in terms of the music portraying affect and lyrics with which they can identify, a concept that Van den Tol and Edwards (2001) defined as “connection”.

Although listening to sad music while feeling sad in order to lift one's spirits or cope with problems may seem paradoxical, recent research suggests that many people listen to sad music as a way to be in touch with these negative emotions because they believe that they benefit from such music in a variety of ways (e.g., Swaminathan & Schellenberg, 2015; Van den Tol & Edwards, 2013, 2015). Recent research demonstrates that listening to self-identified sad music may serve functions of promoting acceptance-based coping and consolation during aversive life situations. This enables one to feel, be in touch with, and experience one's own sadness (Van den Tol et al., 2015). In addition, it has been shown that self-selected sad music not only evokes sadness in its listeners, but positive and mixed mood states as well (e.g., Taruffi & Koelsch, 2014; Weth, Raab, & Carbon, 2015).

Although few studies have used the specific word *consolation* in combination with music research, the studies mentioned above demonstrate that the concept of feeling comforted through listening to music has received considerable interest. Music is often heard in the background in combination with other activities (e.g., Sloboda, O'Neill, & Ivaldi, 2001). It remains unclear, however, if this is also the case when the purpose of listening to music is for comfort/solace. Additionally, although most of the studies that have assessed mood changes with music have focused on adolescents and young adults (e.g., Miranda & Claes, 2009; Saarikallio & Erkkilä, 2007; Ter Bogt et al., 2015), recent evidence (Saarikallio, 2010; Shiffriss et al., 2015) suggests overall mood regulation using music remains the same across the lifespan, but few studies have specifically explored these concepts in later life. Furthermore, it remains to be explored whether people listen in solitude when seeking comfort.

Current study

The current study had four main aims: (1) to compare music as a means of solace to other sources of consolation, (2) to identify occasions in which music is used as a source of comfort, (3) to explore aspects of a song that are important for providing solace, and (4) to investigate behavior that accompanies listening to comforting music. In addition, we explored the roles of gender, music genre and age.

Method

Design

The research involved an online survey that included both Likert scales and open-ended questions. It was a cross-sectional, between-subjects design.

Participants

Our participants were recruited via the websites of Dutch National NPO Radio 2 (popular music) and NPO Radio 4 (classical music) during a three-week period. From a total of 862 respondents, 417 participants were excluded from further analyses due to (1) participants being underage ($n = 9$), (2) not providing written consent ($n = 12$), (3) clicking the link but choosing not to fill in the questionnaire, or (4) completing less than 25% of the questions ($n = 396$). This resulted in 445 participants (see Table 1 for a detailed overview). The participants

Table 1. Detailed overview of participant information.

	Popular music	Classical music	Undefined	Overall
Number of participants via Radio 2 website (popular)	221	17	6	244
Number of participants via Radio 4 website (classical)	21	175	5	201
Men	97	85	7	189
Women	145	107	4	256
Total	242	192	11	445
Mean age (<i>SD</i>)	42.0 (14.3)	57.0 (11.8)	59.9 (11.3)	48.9 (15.3)
Age range	18–74	21–81	36–78	18–81
Aged 18–30	64	6	0	70
Aged 31–60	162	100	5	267
Aged 60–81 (missing <i>n</i> = 1)	16	85	6	107

were divided into two groups of listeners: those preferring classical music and those preferring popular music during their most recent consoling event. This division was made on the basis of a participant-reported piece of music. Eleven participants provided no piece of music and were reported as “undefined”.

Materials

Consoling activities. The participants were asked to indicate their usage of 19 potential consoling activities (see Table 2 for the full list) that were previously identified as mood regulators (Gračanin, Bylsma, & Vingerhoets, 2014; Thayer et al., 1994) on 5-point Likert scales ranging from 1 (*does not apply at all*) to 5 (*applies completely*).

Situations triggering self-consolation and music used. The participants were asked to provide situations in which they used music for consolation. One question asked about situations in general (there was room to report three situations), and one question asked about the most recent situation in which music was used as a source of solace. The participants were further invited to report the title of the piece of music and accompanying artist/composer they had listened to on that occasion. These pieces of music were encoded into two broad categories of popular (e.g., pop, popular rock) and classical (e.g., classical, jazz) music on the basis of entries in the All-music.com database (<http://www.allmusic.com>). Three Likert scale questions ranging from 1 (*does not apply at all*) to 10 (*applies completely*) followed the open-ended questions and inquired further about the participants’ reported music: (1) *Do you consider this to be your favorite music?* (2) *I only want to listen to this song when I’m feeling blue*, and (3) *This is music that I need to listen to with full concentration*.

Consolation by music. A scale of nine items (Ter Bogt et al., 2015) measured the following three aspects of consolation by music: (1) *Consolation through music* ($\alpha = .84$), (2) *Consolation through oneness with fans or artist* ($\alpha = .75$), and (3) *Consolation through lyrics* ($\alpha = .84$). An additional item not in the original questionnaire was added for this study and measured *Consolation through evoked memories*. The response options ranged from 1 (*does not apply at all*) to 5 (*applies completely*).

Table 2. Overview of possible self-consoling activities.

	Men (SD)	Women (SD)	Effect size
Listen to (special) music	4.45 (.80)	4.54 (.71)	
Comfort from others	3.59 (1.1)	3.84 (1.0)	
Crying	3.26 (1.1)*	3.92 (.94)	0.10
Pleasant memories	3.43 (1.1)	3.41 (1.1)	
Creative activities	2.78 (1.4)*	3.24 (1.4)	0.03
Reading stories or poems	2.86 (1.2)	3.20 (1.2)	
Bathing or showering	2.50 (1.2)*	3.31 (1.2)	0.09
Eating or drinking	2.51 (1.2)*	3.16 (1.2)	0.07
Sleeping	2.62 (1.1)*	3.02 (1.2)	0.03
Dress warmly	2.14 (1.1)*	3.16 (1.3)	0.15
Comfort from a pet	2.15 (1.3)*	2.84 (1.5)	0.06
Watch television or film	2.29 (1.2)	2.58 (1.3)	
Spend money	2.06 (1.1)*	2.58 (1.2)	0.05
Pray, turn to God	2.12 (1.3)	2.25 (1.4)	
Ritual activities	2.17 (1.2)	2.13 (1.2)	
Cherish a specific object	1.76 (.94)*	2.17 (1.1)	0.03
Alcohol and drugs	2.04 (1.2)	1.81 (1.1)	
Massage, beauty treatment	1.47 (.84)*	2.08 (1.2)	0.08
Sauna	1.56 (.83)*	1.90 (1.1)	0.03

Note. Items were rated from 1 (*does not apply at all*) to 5 (*applies completely*); *significant gender difference at $p < .0015$; effect size = η_p^2 .

Music in Mood Regulation. The participants provided ratings from 1 (*strongly disagree*) to 5 (*strongly agree*) on six solace items of the Music in Mood Regulation Scale (MMR; Saarikallio, 2008). The internal consistency in the current sample was $\alpha = .83$.

Listening behavior. Seven items measured listening behavior (see Table 4). The participants were asked to rate these items on scales ranging from 1 (*does not apply at all*) to 5 (*fully applies*). Four additional items measured the emotional properties of the music that participants listen to.

Geneva Emotional Music Scale. The participants were asked to think of the previously reported consoling song, and then provide ratings from 1 (*not applicable at all*) to 5 (*fully applies*) on 14 items with $\alpha = .81$ (see Table 5) from the Geneva Emotional Music Scale (GEMS; Zentner, Grandjean, & Scherer, 2008; see also Zentner & Eerola, 2011; Vuoskoski & Eerola, 2011, for a discussion on the GEMS). The GEMS was specifically designed to evaluate musical emotion, with items mainly focusing on aesthetic emotions (i.e., emotions evoked by art without direct utilitarian functions).

Music qualia. The participants were asked to provide indications of several opposite emotional states on how they were *feeling* while listening to comforting music on 5-point Likert scales (see Table 5).

Procedure

The research was announced on the Dutch Radio 2 and Radio 4 websites via news articles asking for volunteers on a study into music and solace (Dutch: Troost) of approximately 20

minutes in length. The questionnaire was programmed in Qualtrics and was preceded by an information and consent form. All participants included in the analyses provided consent.

The survey consisted of questions presented in the following order: mood-managing behaviors, situations requiring comfort, song aspects, listening behavior, the Geneva Emotion and Music Scale (GEMS), emotional qualities, and the solace-scale from the Music in Mood Regulation questionnaire (MMR).

Statistical analyses

All analyses were carried out using SPSS 21.0. Consoling activities and GEMS ratings were investigated with MANOVAs with a Bonferroni correction of $\alpha = .0015$ (.05/34) for post hoc tests, and effect sizes are reported as partial eta squared (η_p^2). The possible effects of gender, music genre and age were explored through regression analyses for the other scales. Only the significant findings of $p = .005$ or smaller are reported for the regression analyses, and effect sizes for significant findings are given as R^2 . Findings from the total group of participants will be dealt with first, followed by an exploration of the variables gender, music genre and age.

Results

Consoling activities

To obtain insight into the kind of activities that participants used for self-consolation, mean values were calculated for all items. Out of 19 items “listening to music” was chosen as the most frequently employed self-soothing behavior, followed by “crying”, “comfort from others”, and “pleasant memories”.

A MANOVA was carried out to identify gender differences. The MANOVA revealed a significant difference between men and women: Wilks' $\Lambda = .68$, $F(19, 425) = 10.7$, $p < .001$, $\eta_p^2 = .32$. Bonferroni-adjusted post-hoc tests ($\alpha = .0015$) were carried out to determine which behaviors differed significantly (Table 2).

There was no difference between men and women for “listening to music”, although most other consoling activities revealed distinct male/female differences. These gender-specific patterns appeared to be largest for “crying”, “dressing warmly”, “comfort from a pet”, and “bathing or showering”. The “listening to music” item was subsequently investigated in more detail. There was no overall difference between music types for “listening to music”; however, when taking age into account, the regression analysis revealed a weak decrease of “listening to music” with age $\beta = -.10$, $t(442) = -2.07$, $p = .039$, $R^2 = .01$, $F(1, 442) = 4.29$, $p = .039$. The “listening to music” item correlated substantially with the MMR solace-scale, $r(420) = .58$, $p < .001$ and the consolation through music subscale, $r(445) = .39$, $p < .001$. The MMR solace-scale and the consolation through music subscale correlated significantly as well, $r(420) = .46$, $p < .001$.

Situations triggering self-consolation and information about most recent consoling events

The participants reported three situations triggering self-consolation. These situations were labeled according to their contents. The mean frequencies across the three reported occasions were calculated and are reported in Table 3.

The participants reported a variety of mainly negative life events for which they turned to music as a source of comfort for situations in general as well as recent events. These situations ranged from dramatic occurrences to daily sorrows.

Table 3. Situations in which music is used as comfort and general information on most recently used comforting music.

Situations in which music is used as solace	Situations in general	Most recent situation
The loss of a loved one, or a pet	25.3%	33.9%
Sad, lonely, depressed, misunderstood	16.8%	15.5%
General stress, "things aren't going as planned"	15.2%	6.5%
Problems in a relationship, arguments	17.0%	17.3%
Suffering of (significant) others	7.9%	9.2%
Health problems (self)	7.1%	< 5%
Rest category: e.g. overwhelming emotions, recalling memories	< 5%	< 5%
	Popular music (<i>SD</i>)	Classical music (<i>SD</i>)
Do you consider this to be your favorite music?	7.7 (2.0)	8.0 (1.7)
I only want to listen to this song when I'm feeling blue	3.9 (2.9)	3.1 (2.5)
This is music that I need to listen to with full concentration	5.0 (2.9)*	6.1 (2.7)

Note. The last three items were rated from 1 (*does not apply at all*) to 10 (*applies completely*).

* $p = .001$.

The participants also reported a wide variety of artists, songs and composers when asked to provide a song that accompanied their most recent solace situation, including a substantial number of musical pieces particularly composed for memorial services (i.e., requiem) as well as popular songs dealing with sadness.

The results further indicated that participants rated this music as their favorite and that they used this music when seeking comfort, but listened to it on other occasions as well. This music required some concentration to listen to (see Table 3). A multiple regression analysis with predictors of age, gender and music genre revealed that music genre significantly predicted these levels of concentration, $\beta = .19$, $t(429) = 3.43$, $p = .001$, $R^2 = .04$, $F(3, 429) = 6.55$, $p < .001$. The mean values demonstrated that in comparison to listeners of popular music, classical music listeners stated that their music required more concentration.

Consolation by music

The participants reported the way music sounds, the lyrics, and the memories that the music evokes as important for providing comfort (Table 4). A sense of oneness with other fans or artists was not seen as important. Multiple regression analyses with predictors of age, gender and music genre revealed several effects. Music genre significantly predicted ratings on the way the music sounds, $\beta = .18$, $t(429) = 3.21$, $p = .001$, $R^2 = .03$, $F(3, 429) = 4.78$, $p = .003$, an emphasis on lyrics, $\beta = -.44$, $t(429) = -9.08$, $p < .001$, $R^2 = .22$, $F(3, 429) = 40.89$, $p < .001$, and evoked memories, $\beta = -.21$, $t(429) = -3.92$, $p < .001$, $R^2 = .05$, $F(3, 429) = 6.78$, $p < .001$. The mean values showed that the way the music sounds was more important to classical music, whereas lyrics and evoked memories were more important to popular music. Although oneness (i.e., feeling at one with the artist or with other fans) was not regarded as important, gender predicted oneness, $\beta = -.14$, $t(429) = -3.21$, $p = .001$, $R^2 = .04$, $F(3, 429) = 5.72$, $p = .001$. Men provided higher ratings for oneness than women.

Table 4. Overview of mean values on the consolation by music scale, listening behavior and MMR.

Can you indicate how you were comforted by music while listening:	Popular music		Classical music		Significant difference between music styles <i>p</i>
	Men (<i>SD</i>)	Women (<i>SD</i>)	Men (<i>SD</i>)	Women (<i>SD</i>)	
Consolation by music itself	4.10 (.72)	4.15 (.72)	4.22 (.62)	4.44 (.52)	.001
Consolation by a sense of oneness	1.93 (1.0)	1.77 (.99)	1.79 (.83)	1.40 (.63)	
Consolation by lyrics	3.52 (1.2)	3.89 (1.0)	2.45 (1.1)	2.54 (1.3)	< .001
Consolation by evoked memories	3.73 (1.3)	3.42 (1.4)	3.19 (1.5)	2.92 (1.5)	< .001
MMR Solace-scale	4.08 (.55)	4.13 (.61)	4.08 (.58)	4.23 (.64)	
Listening behavior					
When I listen to music to console myself:					
I turn up the volume	3.99 (.92)	4.16 (1.0)	3.47 (1.1)	3.74 (1.0)	< .001
I do nothing other than listening to music	3.75 (1.1)	3.75 (1.0)	3.32 (1.3)	3.50 (1.2)	
I shut out my surrounding environment	4.04 (1.1)	3.97 (1.0)	3.60 (1.1)	3.79 (1.1)	
I put on a headset	2.82 (1.5)	2.37 (1.5)	2.21 (1.4)	2.01 (1.4)	
I need to listen to a specific song	3.45 (1.3)	3.48 (1.3)	2.86 (1.4)	2.77 (1.3)	< .001
I keep listening to the same music	2.95 (1.4)	3.32 (1.3)	2.53 (1.2)	2.81 (1.3)	
I really need to be alone	3.45 (1.3)	3.59 (1.4)	3.22 (1.2)	3.60 (1.3)	
When I need comforting, I mostly listen to sad music	2.91 (1.3)	3.03 (1.3)	3.24 (1.2)	3.07 (.97)	
When I need comforting, I mostly listen to happy music	2.50 (1.1)	2.62 (1.1)	2.29 (.98)	2.53 (.92)	
Most of my favorite music sounds happy	3.04 (1.1)	3.16 (1.0)	2.56 (.93)	2.74 (.90)	< .001
Most of my favorite music sounds sad	2.69 (.94)	2.75 (.96)	3.09 (1.0)	3.09 (.96)	< .001

Note. Items were rated from 1 (*does not apply at all*) to 5 (*applies completely*).

Listening behavior

When using music for consoling purposes, the participants reported that they turned up the volume, listened alone, or shut out their environment. Listening to music was their sole preoccupation. The participants further preferred listening to the same music for extended periods of time (Table 4). The regression analyses revealed that listening to popular music predicted a greater increase in volume than classical music, $\beta = -.20$, $t(427) = -3.80$, $p < .001$, $R^2 = .06$, $F(3, 427) = 9.29$, $p < .001$. The need to listen to a specific song is predicted by music genre and was more common for listeners of popular music, $\beta = -.23$, $t(427) = -4.30$, $p < .001$, $R^2 = .06$, $F(3, 427) = 9.10$, $p < .001$. Finally, the need to be alone decreased with age, $\beta = -.18$, $t(427) = -3.24$, $p = .001$, $R^2 = .03$, $F(3, 427) = 5.16$, $p = .002$.

A paired samples *t*-test revealed that participants preferred to listen to sad rather than to happy music when wanting solace $t(418) = 5.87$, $p < .001$ (see Table 4 for mean values). There

Table 5. Overview of reported GEMS ratings and music qualia feelings.

GEMS	Popular music (SD)	Classical music (SD)	Effect size
Filled with wonder	3.48 (1.2)	3.73 (1.1)	
Transcendence	2.97 (1.3)*	3.63 (1.3)	0.06
Beauty	3.48 (1.3)*	4.22 (1.0)	0.09
Fascinated	3.74 (1.2)	4.03 (1.0)	
Tenderness	3.57 (1.2)	3.65 (1.2)	
Nostalgic	3.73 (1.1)*	3.03 (1.3)	0.08
Peaceful	3.46 (1.1)	3.53 (1.0)	
Powerful	3.68 (1.2)	3.55 (1.2)	
Energized	3.19 (1.3)	3.05 (1.2)	
Joyful activation	2.33 (1.3)*	1.86 (1.0)	0.04
Tense	1.53 (.90)	1.28 (.68)	
Sad	3.80 (1.1)	3.60 (1.2)	
Moved	4.19 (.96)	4.35 (.82)	
Bored	1.20 (.63)	1.04 (.32)	
<i>Music qualia feelings</i>			
Positive – Negative	2.15 (1.1)	1.68 (.88)	
Excited – Calm	3.70 (1.1)	4.08 (.95)	
Tired – Awake	3.46 (.97)	3.67 (.92)	
Moved – Indifferent	1.61 (.70)	1.49 (.69)	
Weak – Strong	3.66 (1.1)	3.69 (.97)	
Happy – Sad	3.37 (1.1)	3.31 (.98)	
Tense – Relaxed	3.72 (.98)	4.00 (.92)	
Fascinated – Bored	1.99 (.76)	1.87 (.83)	

Note. *significant music genre difference at $p < .0015$; effect size = η_p^2 . GEMS items were rated from 1 (does not apply at all) to 5 (applies completely). Qualia items were rated from 1 (leftmost) to 5 (rightmost).

is a significant negative correlation between listening to happy and sad music ($-.37, p < .001$), which suggests that both types of music are used for self-comfort, though not interchangeably. Listeners of popular music reported a preference for happy music, $\beta = -.25, t(403) = -4.50, p = .001, R^2 = .06, F(3, 403) = 8.22, p < .001$, whereas classical music listeners preferred sad music as their favorite, $\beta = .26, t(403) = 4.69, p < .001$, and this preference for sad sounding music decreased with age, $\beta = -.15, t(403) = -2.67, p = .008, R^2 = .05, F(3, 403) = 7.40, p < .001$.

Geneva Emotional Music Scale and music qualia

We compiled an emotional profile of consoling music on the basis of the responses on the GEMS and items on experienced feelings (Table 5).

For both genres, being moved emerged as the most important feeling when listening to comforting music. This was followed by sadness, beauty, fascination, tenderness, peacefulness and being filled with wonder. Comforting music is further seen as powerful. A MANOVA on the GEMS items yielded a significant difference for music genre, Wilks' $\Lambda = .75, F(14, 408) = 9.86, p < .001, \eta_p^2 = .25$. Bonferroni-adjusted ($\alpha = .0015$) post-hoc tests were carried out to see which emotions differed significantly and are reported in Table 5. Beauty and transcendence are more important to classical than to popular music listeners, whereas nostalgia and joyful activation are more important to popular than to classical music listeners.

Qualia items on feelings revealed a similar pattern to the GEMS. Consoling music is mostly experienced as positive, calming, sad, moving and somewhat empowering. Several emotions were reported more strongly with increasing age. The regression analyses demonstrated that age predicted an increase in feeling positive, $\beta = -.25$, $t(408) = -4.59$, $p < .001$, $R^2 = .10$, $F(3, 408) = 14.81$, $p < .001$, calm, $\beta = .16$, $t(408) = 2.91$, $p = .004$, $R^2 = .06$, $F(3, 408) = 8.03$, $p < .001$, and awake, $\beta = .16$, $t(408) = 2.92$, $p = .004$, $R^2 = .04$, $F(3, 408) = 4.99$, $p = .002$ when listening to music.

Discussion

The current study had the following four aims: (a) to compare the use of music versus other options as a means for providing solace, (b) to explore when music is used as a means for solace, (c) to identify emotional and aspects of songs that are important for providing solace, and (d) to examine behavior accompanying music listening for comforting purposes. We further explored data for possible influences of age, gender and music preference.

Concerning our first research question, participants rated “listening to music” at the top of their consoling behaviors, confirming music’s important soothing and mood-managing functions (e.g., Schäfer et al., 2013; Thayer et al., 1994; Van Goethem & Sloboda, 2011). Unlike several of the other rated behaviors, there are no effects of gender or music genre for using music for consoling purposes. These results are similar to the findings on general mood-managing strategies by Thayer et al. (1994) who also reported little to no differences in music usage, whereas other behaviors show gender-specific patterns.

In addition, there were no differences on the MMR solace-scale (Saarikallio, 2008), that correlated highly to “listening to music”, for any background characteristic or music style. Taken together, these findings support the idea that music is used by many people for similar purposes irrespective of gender and music preference (Ter Bogt et al., 2015).

Regarding the second research question, situations triggering the use of music included: losses, grief over loved ones, problems with relationships, ill health of oneself or a significant other, periods of sadness and general stress. These findings are similar to situations in which sad music is listened to (Taruffi & Koelsch, 2014; Van den Tol & Edwards, 2013), and confirm the notion that solace is mainly sought in situations that can be characterized as daily setbacks or unsolvable and hard to cope with (Norberg et al., 2001; Saarikallio & Erkkilä, 2007; Ter Bogt et al., 2015). Emotion-focused or, in specific instances, acceptance-based coping rather than problem-focused coping seems more relevant in these situations (Van den Tol, 2012; Van den Tol et al., 2015). A common reason for listening to comforting music was feeling misunderstood, validating findings by Van den Tol and Edwards (2013) in which participants indicated that listening to sad sounding music when feeling sad can provide listeners with a feeling of acceptance or understanding (similar to a trusted friend) when real social support is lacking. In general consolation theory (e.g., Rasmussen, Sandman, & Norberg, 1997), the “genuine presence of others” is assumed to be crucial to the consoling experience. The current study did not, however, directly measure social support. However, items from the solace-scale of the MMR (Saarikallio, 2008) on which participants in this study scored high, inquire about viewing music as an understanding friend.

We further found that the songs that are listened to for self-comfort purposes are not limited to this use. In line with previous research on people’s motivations for listening to sad music (Van den Tol & Edwards, 2013, 2015), the participants reported not only listening to comforting music while in distress but also valuing these pieces of music in general. Classical music required more concentration while listening than popular music. It remains to be determined

however, if the ratings on concentration are higher or lower compared with listening to music for purposes other than solace. Additionally, there was not much overlap in reported artists and songs/musical pieces between participants from either the classical or popular music population. This illustrates the importance of personally relevant music for mood-regulating purposes. Personally selected music appears to be more likely to enhance mood than music selected by others (e.g., Saarikallio et al., 2012; Swaminathan & Schellenberg, 2015).

The third research question inquired about song aspects and emotions important for providing solace. The way that the music sounds, its lyrics (though only for popular music) (Ter Bogt et al., 2015), and the memories it evokes are important for music to provide solace. The evoked memories are more important to listeners of popular music than to classical music listeners. The importance of music itself, lyrics and not feeling at one with the artist or other fans, closely resembles the recent findings by Ter Bogt et al. (2015). The lyrics may play a less important role in classical music because of the emphasis on instrumental elements in this genre. In addition, the vocals may be hard to understand, because of the way that they are sung or because they are in a foreign language. A study into the structural nature of soothing music may be of interest here.

The emotional ratings provided on the GEMS revealed that “being moved” is the highest ranked emotional experience while listening to consoling music. This makes sense because there needs to be an emotional response for mood management to happen (Van Goethem & Sloboda, 2011). Comforting music is also experienced as aesthetically pleasing, sad, calming and somewhat empowering, but not as tense or boring. The items on the qualia music-scale once more confirmed that listening to comforting music gives participants a mixture of sad, calming and positive feelings. Recent findings by Weth and colleagues (Weth et al., 2015) show that the seemingly contradictory finding of experiencing both sad as well as positive feelings is particularly salient for self-selected sad music. In previous research, the experience of positive affect and enjoying the listening experience were identified as the most important emotional reasons for listening to music (Saarikallio & Erkkilä, 2007; Van Goethem & Sloboda, 2011).

The differences between classical and popular music in reports of transcendence, beauty and nostalgia may be mainly due to the genre of music listened to and not a specific soothing quality. Popular music may often refer to more worldly affairs than classical music, whereas classical music traditionally has a more spiritual connotation and an emphasis on reflective emotions (Zentner et al., 2008), which explains the higher scores on both beauty and transcendence. On the other hand, popular music is often heard throughout the day in combination with a range of other activities (e.g., Schellenberg & von Scheve, 2012) and may thus induce more feelings of nostalgia as witnessed in the current study. The latter is further supported by the reported greater emphasis on evoked memories for consolation with popular music.

It should be noted, however, that the construction of the GEMS is mainly based on results with listeners of classical music and may thus be particularly suited for measuring emotions associated with classical music rather than with other music styles (Swaminathan & Schellenberg, 2015; Zentner et al., 2008). The current sample, however, shows no anomalous ratings for popular and classical music that cannot be explained with the specifics of these genres in mind.

Sad sounding music is preferred over happy music when in need of solace, and listeners of classical music prefer sad music in general. This confirms previous findings (Hunter et al., 2011) demonstrating that individuals in a sad mood looking for comfort search for mood-matching music (Saarikallio et al., 2012). This may likely be explained by the strong connection that people feel between the mood of the music and their own (Van den Tol & Edwards, 2013). Another explanation may be that sadness is an integral part of the aesthetic experience

of classical music (Eerola & Vuoskoski, 2010; Vuoskoski, Thompson, McIlwain, & Eerola, 2012) or that classical music is more associated with music training. Increased music training, in turn, is associated with greater emotional experiences with sad sounding music and may thus explain several of the stronger emotional responses with classical music (Park et al., 2014).

The desire to listen to sad music, and to a lesser extent, listening to music when seeking comfort in general, decreased with age. In addition, older participants reported feeling more positive, awake and calm than younger respondents. A possible explanation may be that older individuals are occupied with other activities in later life, or that the focus on negative events and consequently the need for consolation lessens with age. A decrease of listening to sad music with increasing age has recently also been reported by Shiffriss et al. (2015). These authors attributed this to a positivity bias in later life, when people tend to focus on positive events and avoid negative situations, the so-called socioemotional selectivity theory (Carstensen et al., 2011). Even though some the effects of age found in the present study were small, why listening to music when seeking comfort decreases with increasing age requires further investigation. The respondent sample in the current study consisted mainly of middle-aged and older participants (restricted range). Developments across the lifespan may become clearer with the inclusion of a larger sample of younger individuals (adolescents and young adults).

Finally, in terms of behavior while listening, the current data suggest that music was often listened to in solitude, as the sole activity, and with a focus on the self. In addition, there is a tendency for participants to listen to a specific song and the same type of music repeatedly during a consoling episode. The finding that music providing solace is often listened to in solitude confirms reports by Saarikallio and Erkkilä (2007). Listening to it as a sole activity seems unique to mood management because most other music listening occurs in combination with other activities (Sloboda et al., 2001). Solace situations probably require a focus on the self and the mood that individuals are in (Van den Tol, 2012). However, it may also be that listening to comforting music makes it easier to focus on oneself.

Limitations

All data were self-reports by radio listeners looking for information on the website of their radio station. They may therefore have a greater interest in the music that they listen to than individuals not visiting these sites. Furthermore, participants may have overstated the importance of music as a means of consolation because it was clear from the outset that this was a questionnaire on music and solace. In addition, these self-reports rely on the ability to recall instances requiring solace provided by music. Our sample may thus be biased towards participants with a greater disposition to listen to music in times of distress than the general population, as well as towards people who generally have a more positive outlook on the use of music for regulation of psychological states. These limitations should be taken into account when interpreting the results of the current study.

Several recent papers indicate a link between depression, anxiety and rumination and the use of music for emotion regulation (Randall, Rickard, & Vella-Broderick, 2014; Thomson, Reece, & Di Benedetto, 2014). Moreover, research has indicated that depressed individuals, ruminators or individuals suffering from negative emotions or life circumstances are more likely to listen to sad music when feeling sad, or perceive this behavior to be beneficial (Garrido, & Schubert, 2011, 2013; Matsumoto, 2002). However, while some listeners believe listening to sad music is helpful to them, they actually receive little to no benefit from listening to it (e.g., Garrido & Schubert, 2013). In the current study, we did not investigate possible negative effects of consolation through music; however, recent findings by Carlson et al. (2015) suggest solace

to be an effective mood regulator and not to be correlated with anxiety or neuroticism, unlike the strategy of discharge.

More structured self-report measurements during comforting episodes may be possible through the use of large-scale studies that apply Experience Sampling Methodology (ESM) (Christensen, Barrett, Bliss-Moreau, Lebo, & Kaschub, 2003; Randall et al., 2014; Reis & Gable, 2000). ESM has been used successfully in music research to catalogue musical emotions in everyday life and may thus be well-suited to investigate consoling episodes as well (Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008; Juslin, Liljeström, Laukka, Västfjäll, & Lundqvist, 2011; Sloboda, 2011; Sloboda et al., 2001). Modern technologies such as smartphones and smartwatches, allow for easy to use ESM with fairly non-invasive timed surveys with additional features, such as graphic representations to present valence and arousal and heart-rate measurements (Rachuri et al., 2010, Randall et al., 2014). An ESM study aimed at collecting data during episodes of (self-) consolation via music or other sources among a broader population may provide valuable insight into the exact nature of the episode, its emotional contents and additional activities.

Future studies may want to include measures of personality because it has been shown that personality may play a role in both solace seeking (Ter Bogt et al., 2015) and music preference (e.g., Rentfrow & Gosling, 2003). Emotional engagement with music and formal music training may further moderate the use of music as a source of solace (Park et al., 2014; Saarikallio et al., 2012; Shiffriss et al., 2015; Ter Bogt, Mulder, Raaijmakers & Gabhainn, 2010; Ter Bogt et al., 2015). Moreover, motivation for selecting specific pieces (e.g., beauty, nostalgia, connection) of music has also been found to be important in explaining self-regulatory motivation and effects of music listening (Van den Tol & Edwards, 2014; Van den Tol & Ritchie, in press). An additional goal of future research should be to determine the duration of the comforting episode by music and how long its subsequent effect lasts. Is music as solace only used as a short-term relief of distress, or does music provide longer periods of comfort? Finally, how does music relate to other forms of consolation? Are other comforting behaviors used less when using music, or do individuals use several of these behaviors consecutively or at the same time? These are some questions with important implications for everyday life that should be addressed in future research.

Conclusion

As illustrated by the large number of different artists, composers and pieces of music reported by respondents in this study, a characterization of consoling music itself is difficult to provide because personal meaning of music is derived from past experiences, personality, exposure and other factors. Rather, this survey provides insight into how listeners experience and engage episodes of consolation through music.

The present study largely confirms the findings of Saarikallio and Erkkilä (2007), which showed that consoling music is preceded by negative life events, is listened to in solitude, and is listened to with some focus on lyrics (here only found for popular music). In addition, we identified song aspects and behaviors important to music's consoling abilities, including the way that music sounds, the memories that it evokes, an emotional pattern of being moved, sadness, positive affect, nostalgia, transcendence and calmness, as well as a tendency to listen to the same piece of music repeatedly during a consoling episode as a single activity. Several of these properties, such as lyrics, may be more important to some genres of music than to others, meriting a more in-depth study of these variables. Other factors, particularly age, also warrant further exploration.

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