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Attitudes towards sad music are related to both preferential and contextual strategies

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Abstract

Music-related sadness and its paradoxical pleasurable aspects have puzzled researchers for decades. Previous studies have highlighted the positive effects of listening to sad music, and the listening strategies that focus on mood-regulation. The present study explored people's attitudes towards sad music by focusing on a representative sample of the Finnish population. 358 participants rated their agreement with 30 statements concerning attitudes towards sad music. The ratings were subjected to factor analysis, resulting in 6 factors explaining 51% of the variance ($RMSEA = 0.049$). The factors were labeled AVOIDANCE, AUTOBIOGRAPHICAL, REVIVAL, APPRECIATION, INTERSUBJECTIVE, and AMPLIFICATION, and they were divided into two broad headings, *preferential* and *contextual* attitudes towards sad music. Contextual attitudes seemed to be ambiguous in terms of valence, whereas the preferential attitudes were more clearly identified in terms of positive/negative polarity. The results of the survey suggest that listening to sad music elicits a wide variety of responses that are not fully revealed in previous studies.

INTRODUCTION

In psychology, sadness is commonly considered a negative emotion that people tend to avoid and try to diminish as quickly as possible (Gross, 2008). According to previous emotion regulation research, when feeling bad individuals look for quick distracting activities or pleasurable experiences to reduce their negative emotions (see e.g., Lee *et al.*, 2013). In the context of the arts, however, people have drawn enjoyment and entertainment from sadness and tragedy since the days of the ancient Greeks. Studies in the

field of film research have provided empirical evidence that more sadness actually produces greater enjoyment in people while watching tragic films (Knobloch-Westerwick, Gong, Hagner, & Kerbeykian, 2012; de Wied, Zillmann, & Ordman, 1994). Similarly, the attractions of tragedy, violent entertainment and horror have puzzled researchers in various fields (e.g., Carroll, 1990; Duncum, 2006; Eagleton, 2003; Goldstein, 1999; Trimble, 2012; Zillmann, 1998). These phenomena can be described as paradoxical, since people seem to seek emotional experiences that they should not find pleasant in real life. Also, the emotional power of fiction *per se* can be seen as paradoxical by nature: how can one be affected by what one knows does not exist? It has been argued that when engaging with fiction, we are allowed to experience a variety of emotions vicariously and thus “safely”, since there are no real world consequences associated with the experienced emotions. This is possible by quieting down our appraisal system and suspending our disbelief, so the events in the world of fiction are able to stir emotions in us (Goldstein, 2009).

Music scholars (e.g., Kivy, 1990; Levinson, 1997) have pondered on music-related sadness and its paradoxical pleasurable aspects for decades, and in the field of music and emotions, the topic has received a great deal of interest in the past few years. For instance, several laboratory experiments have demonstrated that sad music fails to be perceived or experienced as negative (Eerola & Vuoskoski, 2011; Vuoskoski, Thompson, McIlwain, & Eerola, 2012), and it has been shown that sad music is sometimes used for mood-regulation purposes (van Goethem, 2010; Lee, Andrade, & Palmer, 2013; Saarikallio & Erkkilä, 2007). Also, people may use sad music as a therapeutic tool to cope with personal losses, relive certain memories and endure the negative emotions related to these events (Van den Tol & Edwards, 2013), or to understand their feelings and/or to solve the unwanted affects through introspection (van Goethem, 2010). Sad music is a potential medium of experiencing strong emotions: sad-sounding music is often reported to be capable of inducing strong emotional experiences in the listener (Gabrielsson, 2011). Moreover, sadness induced by music has been suggested to be comparable to genuine sadness elicited by autobiographical memories (Vuoskoski & Eerola, 2012), and that certain personality traits – dispositional

empathy among others – are connected with liking for sad music (Garrido & Schubert, 2011; Garrido & Schubert, 2013; Vuoskoski et al., 2012). Interestingly, those who tend to experience more empathic sadness in response to sad music also tend to enjoy sad music more (Vuoskoski & Eerola, 2012; Vuoskoski et al., 2012), suggesting a link between empathic engagement and the potentially positive effects of sad music. A model for the psychological mechanisms underlying the use of sad music for self-regulation was proposed by Van den Tol and Edwards (2013). They investigated the rationale for choosing to listen to sad music when feeling sad, and identified various kinds of strategies for choosing the right kind of music, as well as different regulating functions served by music. As for Garrido and Schubert (2013), they designed an instrument, The Like Sad Music Scale (LSMS), to study individual differences associated with the attraction to negative emotions in music. The scale is based on Oliver's (1993) Sad Film Scale (SFM), and summarizes the enjoyment of sad music using a single factor consisting of 9 items. Using this instrument, they identified three types of listener groups: two with adaptive and one with maladaptive listening strategies.

Since the pleasurable aspects of listening to sad music have been in the focus of research in recent years, the results appear to highlight the fact that sad music in general is very much liked, even though listening to it may not always be beneficial for the listener (e.g., the maladaptive listening strategy in Garrido & Schubert, 2013). Although Garrido and Schubert (2013, p. 160) state that there are people whose “attraction to sad music is a manifestation of maladaptive mood regulation strategies or other generally unhealthy psychological habits”, the majority of the literature puts emphasis on the positive effects of sad music, and on how much people enjoy listening to it. The previous studies investigating the connection between sadness and music have relied on rather small samples of participants, and the selection of these participants seems to have been problematic, since the researchers have often purposely selected volunteers who like sad music and are already interested in the topic in the first place (e.g., Garrido & Schubert, 2013). Also, in many cases most of the participants have been mainly adolescents or young students (Saarikallio & Erkkilä, 2007; Van den Tol & Edwards, 2013; Vuoskoski & Eerola, 2012;

Vuoskoski et al., 2012), or they have been musically trained and/or played an instrument for many years (Garrido & Schubert, 2013). Thus, previous findings may have painted an overly positive picture about the overall enjoyment of sad music, as well as the reasons underlying it. Moreover, many of these studies (e.g., Hunter, Schellenberg, & Griffith, 2011; Van den Tol & Edwards, 2013; van Goethem, 2010) give a rather simplified view on the multifaceted phenomenon; They offer explanations (regarding the reasons for listening to sad music) involving self-regulation or coping purposes, but various other aspects have been left unexamined. For instance, is it possible that sad music could be pleasurable only because of its aesthetic value (Juslin & Isaksson, 2014)? And what about the situations where the listener has not chosen to listen to sad music, but is nevertheless affected by it? Could sad music only be something neutral to listen to without any mood-regulating or coping goals? There are people who do not enjoy listening to sad music and even avoid it, as their overall experience of it is rather unpleasant (Peltola & Saresma, 2014). Could these kinds of negative experiences be more prevalent than the previous studies would suggest? How common is it actually to enjoy listening to sad music in the first place?

Rationale of the present study

The aim of the present study is to explore the attitudes towards sad music in a nationally representative sample. Since past studies on the topic have been based on small convenience samples, they might not have revealed the full spectrum of this complex phenomenon. The main question of the present study therefore is: What is the full range of the attitudes towards sad music? Providing answers to the main question will also allow us to address questions such as what is the prevalence of the enjoyment of sad music, and what are the underlying reasons for the possible enjoyment of sad music. To explore several unaddressed aspects of the attitudes towards sad music in general, a survey methodology was adopted. By choosing to focus on a representative sample of the population, we plan to avoid the potential biases and drawbacks inherent in utilizing convenience samples – commonly used in past studies.

MOTIVES FOR LISTENING TO SAD MUSIC

A survey study was designed to explore the reasons and motivations for listening to sad music in everyday life. In addition to prevalence of experiences and attitudes towards sad music, the aim of the survey was to study demographic factors as potential mediating variables in participants' appraisal.

Method

Participants and procedure. A survey was administered to a nationally representative sample of Finnish adults (N=1500). The representativeness was based on age, gender and regional distribution, and this stratification was carried out by the national census organization, StatFin. The participants were recruited through an invitation letter that asked them to take part in a scientific study by completing an online questionnaire. A paper version of the questionnaire was available to those who wanted to participate but did not have internet access, and was sent to them on demand via mail (20 requests for paper version, 19 were returned). In the questionnaire, participants were asked to rate their agreement with 30 statements concerning their attitudes towards sad music and their everyday uses of such music. The statements were derived from a (previously collected) large qualitative dataset concerning the reasons for choosing to listen sad music, as described in the *Questionnaire* section. In addition, various demographic variables (age, gender, education, music listening habits, and place of residence) were collected. The participants also rated the relevance of 126 emotion terms for emotions induced and expressed by music¹. To prevent fatigue, no other background variables such as personality or medical history were collected.

After sending out one reminder to complete the survey, a total of 386 participants had responded, yielding a response rate of 26%. In self-administered mail surveys, it is typical to obtain less than 50% of the original sampling frame (e.g., Scherer, Wranik, Sangsue, Tran, & Scherer, 2004). There were 204 (52.8%) respondents that were women (8.8% did not reveal their gender), and the age range was 18–65 ($M = 45.5$,

¹ These ratings are not examined in the present study, since they are part of a wider research project.

$SD = 13.6$). In comparison with the population, the sample had an underrepresentation of young men (<33 years) and an overrepresentation of older women (>50 years of age, see Table 1). These two departures from population demographics, however, are similar to those observed in other survey studies on music and literary preferences, where older women tend to respond more frequently (Purhonen, Gronow & Rahkonen, 2009).

<INSERT TABLE 1 ABOUT HERE>

Most of the participants (54.4%) indicated that they listen to music at least once a week, although a considerable proportion (26.7%) reported listening to music multiple times each day. For statistical analyses, we divided participants into those who listen to music *rarely* (all who listen to music less than once a week, $n=27$), *often* (all who listen to music from several times a week to at least once a day, $n=228$), and *several times a day* ($n=103$). Most of the participants (41.4%) described themselves as music-loving non-musicians, while the remainder identified themselves either as non-musicians with no particular interest towards music (34.9%), amateur musicians (12.7%), or semi-professional or professional musician (2.2%). 8.8% did not disclose this information. Again, we simplified this information for statistical analyses, calling those *musicians* who either were amateur, semi-, or professional musicians ($n=58$) and everybody else *non-musicians* ($n=300$).

Questionnaire. The questionnaire consisted of 30 items that were designed to broadly assess attitudes towards sad music. The statements were derived from a separate, previously collected qualitative data that consisted of 363 volunteers' free descriptions of their experiences of listening to sad music. These descriptions have been subjected to two data-led thematic analyses, first focussing on metaphorical language used in the descriptions (Peltola & Saresma, 2014), and second on experiences of sadness (Peltola & Eerola, submitted). These same free descriptions were used as a framework for generating the list of statements (presented in Table 2) for the present study. We did not constrain the statements solely

to the reasons for listening to sad music, since that precludes any potential responses that indicate a high dislike for sad music. In fact, we included statements reflecting a more negative attitude towards sad music, since these kinds of accounts were repeatedly found in the qualitative descriptions.

Participants were instructed to imagine music that they considered sad, and then rate each item: “Think about music that you somehow consider sounding sad. Below are a number of statements regarding attitudes towards sad music. Please read each statement and indicate the extent to which you agree or disagree with each item.” All items, such as “Listening to sad music induces unpleasant feelings in me” or “Listening to sad music makes me feel grateful for the things in my life” were rated using a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Table 2 contains all 30 items.

RESULTS

First, an initial screening of missing or anomalous responses and outliers was carried out. The responses of 28 participants were incomplete and were thus removed from the data. None of the statements had serious univariate outliers (all $p > .50$ in Grubbs’ test), and the mean and standard deviations of the statements were explored (available in Table 2). This confirmed an expected variation in the statements, some having particularly high mean ratings of agreement (item #25 “Feelings induced by sad music are dependent on my current situation in life”), whereas other statements (e.g., item #14 “Listening to sad music induces unpleasant feelings in me”) generated uniform disagreement (i.e., low M and SD). In summary, participants agreed most with the statements emphasizing the importance of lyrics to sadness in music (item #8), relevance of tragedies in personal life (item #28) and the current situation in life (item #25), and ease of empathizing with the sad narrative conveyed by the music (item #29). Items that related to regulation of emotions using sad music typically divided opinions more than other items (e.g., item #3 “I regulate my own negative feelings by listening to sad music”). Items relating to anxiety, irritation, and unpleasant feelings in association with sad music scored the lowest ratings of agreement. Hence, the overall pattern paints a positive picture of the attitudes related to sad music, although contextual aspects of

the experiences have a significant impact on their relevance, corroborating previous observations (Garrido & Schubert, 2013; Van den Tol & Edwards, 2013).

Next, participants' ratings were subjected to factor analysis. Initially, the factor structure underlying the 30 sadness-related statements was explored. The Kaiser-Meyer-Olkin measure of sampling adequacy was .89, well above the recommended value of .6, and Bartlett's test of sphericity was significant ($\chi^2(435) = 4672.08, p < .001$). Given these indicators, factor analysis was conducted with all 30 items. The number of factors was determined by retaining the factors with eigenvalues over 1, resulting in 6 factors. The initial eigenvalues showed that the first factor explained 11% of the variance, the second factor 9% of the variance, the third factor 7%, the fourth 8%, the fifth 7%, and the sixth 6% of the variance (overall 49%, RMSEA=0.048). There was little difference between the varimax and oblimin rotated solutions, and thus both solutions were examined in the subsequent analyses before deciding on an oblimin rotation for the final solution.

After the initial solution, five items (#6, #7, #11, #23, #30) were eliminated because they did not contribute to a simple factor structure and failed to meet the minimum criteria of having a primary factor loading of .4 or above, and no cross-loadings of .3 or above. Item #30 had factor loadings between .3 and .4 on F1 and F5. Items #6, #7, #11, #23, and #30 had low (<.35) loadings on all components, and thus had low communalities (<.45) and high Hofmann's (1978) row-complexity index (4.0, 3.2, 2.7, 3.0, and 2.5, whereas the rest of the items had a mean of 1.7 and a standard deviation of 0.6). Our interpretation is that several of these items may have afforded conflicting interpretations, for example, item #6 ("I think about my loved ones when I listen to sad music"), and item #11 ("When I listen to sad music, the feelings I experience are often somewhat conflicting"), whereas the other items were singular and not closely interrelated (items #7, #23 and #30).

A factor analysis of the remaining 25 items was conducted using oblimin rotation, with the six factors explaining 51% of the variance ($RMSEA=0.0487$). All items had primary loadings over .5. In this solution, the inter-item correlations within the factors were adequate (between .63 and .86; see Table 2).

<INSERT TABLE 2 ABOUT HERE>

The factors were labeled as AVOIDANCE (F1), AUTOBIOGRAPHICAL (F2), REVIVAL (F3), APPRECIATION (F4), INTERSUBJECTIVE (F5), and AMPLIFICATION (F6). AVOIDANCE comprises statements relating to music-related sadness being experienced negatively: sad music is unpleasant (items #14 and #26), irritating (item #13), makes one feel anxious (item #15) or tired (item #16). AUTOBIOGRAPHICAL comprises statements that music or the sadness induced is related to personal memories and situations from the past (items #22, #28, and #25), that the music is something easy to empathize with (item #29), and that it is listened to only in a certain state of mind (item #1). REVIVAL comprises statements relating to the positive experience of music-related sadness: sad music gives strength (item #12), improves mood (item #24), calms one down (item #2), and helps one to cope when feeling bad (items #3 and #27), all resembling an existing mood regulation factor indicated previously (Saarikallio, 2008). APPRECIATION comprises statements relating to sad music's ability to make one appreciate the value and purpose in life (items #20, #5, #19, and #21). INTERSUBJECTIVE comprises items stating that one is not alone when listening to sad music (item #10), lyrics are an important part of the experienced feelings (item #8), and that music helps one to cope with one's unaccepted feelings by acting as a kind of 'peer support' (item #9). Finally, AMPLIFICATION comprises items relating to intensification of negative emotions beyond voluntary control (items #17, #18 and #4). It is worth noting, though, that this factor displayed the weakest interrater agreements ($\alpha=.63$), which we assume is related to the low number of items associated with the factor.

Since the analysis of factors utilized oblimin rotation, factors display modest correlations, shown in Table 3. Out of the resulting correlations, INTERSUBJECTIVE and AUTOBIOGRAPHICAL show the highest correlation since the statements included in them often relate to particular persons or situations that are connected through memories. Also logically, AVOIDANCE is negatively related to APPRECIATION, and small positive correlation between AVOIDANCE and AMPLIFICATION demonstrates that the latter factor is not inherently meant to amplify negative or positive aspects of sad music.

<INSERT TABLE3 ABOUT HERE>

Connections between background variables and the factors

To explore potential individual differences with respect to the attitudes towards sad music, we investigated the effect of background variables on the factor scores of each of the six factors by carrying out six four-way ANOVAs. The background factors were Gender (male, female), Age (divided into six 8-year bins), Musical Sophistication (non-musicians and musicians), and Frequency of Music Listening (3 levels; rarely, often, and several times a day). The factors AVOIDANCE and APPRECIATION did not portray any differences across the background variables. For the AUTOBIOGRAPHICAL factor, Gender, Age and Frequency of music listening all displayed significant main effects (Gender, $F(1, 292) = 10.68$, $p < .01$, $\eta_p^2 = .03$, Age, $F(5, 292) = 2.92$, $p < .05$, $\eta_p^2 = .05$, and Frequency of listening, $F(2, 292) = 4.06$, $p < .05$, $\eta_p^2 = .07$). No significant interactions emerged. Women tended to score higher values in the AUTOBIOGRAPHICAL factor (women $M = 0.13$, men = -0.18), and there was a descending tendency across age, also qualified with negative linear contrast, $t(1,346) = 2.69$, $p < .01$). The frequency of music listening seemed to be associated with higher scores on the AUTOBIOGRAPHICAL factor (mean factor scores were for rarely -0.43 , which is different in Tukey's post-hoc test at level $p < .05$ from scores of often 0.03 , and constantly, 0.04). To aid interpretation, a full illustration of factor scores for all factors across Age and Gender is shown in Figure 1.

<INSERT FIGURE 1 ABOUT HERE>

Those who rarely listen to music exhibit higher factor scores in avoidance ($M=0.30$), which is unsurprising, although not significantly different from the means of participants that listen to music often ($M=-0.02$) or several times a day ($M=-0.04$, $F(2,292)=2.87$, $p=.058$). For the REVIVAL factor, there was a significant main effect of Age ($F(5, 292) = 4.76$, $p<.001$, $\eta_p^2=.07$), indicating that age exhibits a clear negative trend across the factor scores (see Figure 1; $p<.001$, linear contrast). Again, there were no interaction effects. The INTERSUBJECTIVE factor displayed a main effect of Age ($F(5, 292) = 2.25$, $p<.05$, $\eta_p^2=.05$), where older age groups display lower scores (see Figure 1). Finally, the AMPLIFICATION factor yielded two main effects, Age ($F(5, 292) = 6.37$, $p<.001$, $\eta_p^2=.09$), which displayed a similar negative trend across age as the REVIVAL factor (see Figure 1; $t(5,346)=5.36$, $p<.001$ using a negative linear contrast), and Musical Sophistication ($F(5, 292) = 4.08$, $p<.05$, $\eta_p^2=.09$). The latter result suggests that AMPLIFICATION is somewhat linked with the level of musical expertise, as musicians obtained higher factor scores ($M=0.32$) than non-musicians ($M=-0.06$).

DISCUSSION

The results of the survey suggest that listening to sad music elicits a wide variety of responses. The 25 items that were retained yielded six factors, which were mostly unrelated to background variables (although Age, Frequency of Listening, and Musical Sophistication did contribute to certain factors). However, the factor structure itself reveals a rather more intricate pattern of attitudes towards sad music than previously reported. We interpret these factors as representing *preferential* and *contextual* aspects that relate to attitudes towards music and sadness. The former comprises the factors APPRECIATION, REVIVAL, and AVOIDANCE, where the first two factors include positive attitudes toward – and preference for – sad music that can be seen to resemble classic approach behaviors (Davidson, Ekman,

Saron, Senulis, & Friesen, 1990) already familiar from the previous studies (e.g., Garrido & Schubert, 2013; Van den Tol & Edwards, 2013). The prevalence of the positive attitudes indicates that many listeners are able to draw comfort and physical pleasure (REVIVAL) and perspective for life (APPRECIATION) from sad music. However, the last factor illustrates more negative attitudes toward – and even avoidance of – sad music, which previously have not received much attention. We believe that this tendency to emphasize the approach rather than withdrawal behaviors towards sad music may be the unfortunate by-product of focusing research efforts on volunteers particularly interested in music, the topic itself, or both (e.g., recruiting musicians or people who suffer mild depression). These kinds of convenience and volunteer samples have a high risk of sample selection bias (Hibberts, Johnson, & Hudson, 2012), and therefore do not necessarily accurately reflect the phenomenon in the general population. In the present study, a notable proportion (10–17%) of the respondents gave ratings of 4-5 (moderately or strongly agree) to the items in the AVOIDANCE factor (46 for #13 “Sad music irritates me”, 39 #14 “Listening to sad music induces unpleasant feelings in me”, 51 #15 “Listening to sad music makes me anxious”, 64 #16 “Listening to sad music makes me tired”), suggesting that the prevalence of the appreciation of/liking for sad music may have been overestimated in previous studies. For example, Garrido and Schubert (2013) focused almost solely on the “attractive aspects” of the phenomenon.

The second type of attitudes, comprising three factors – AUTOBIOGRAPHICAL, INTERSUBJECTIVE and AMPLIFICATION – seems to be related to contextual aspects that cannot easily be classified in terms of negative/positive polarity. Many of these attitudes are dependent on one’s life circumstances, the listening context, one’s prevailing mood, or on other people in one’s life. For instance, listening to sad music requires “a certain state of mind”, it can “intensify the negative feelings” one already has in that specific moment, and the feelings induced by sad music are dependent on one’s “current situation in life”. These attitudes seem to be somewhat ambiguous in terms of valence; especially the factors AUTOBIOGRAPHICAL and AMPLIFICATION are ambiguous, since music is capable of inducing both

fond and aversive personal recollections (F2) as well as negative feelings (F6) that can be experienced as desirable or undesirable.

The factors discovered in the present study bear resemblance to some of the listening strategies identified by Van den Tol and Edwards (2013), who explored peoples' rationale for choosing to listen to sad music when feeling sad. For example, memory (F2) plays a significant role in their model, both in strategies for choosing the music ("Memory triggers") and in categories of self-regulative functions ("Retrieving memories"). Intersubjective aspects (F5) of music listening are similarly portrayed in a prominent way in their study, grouped into three separate categories ("Connection", "Social", and "Friend") retaining different kinds of social and 'person-to-person' features of listening to sad music. These parallels suggest that interpersonal and autobiographical aspects are indeed central to people's motivations for listening to sad music – when feeling sad or otherwise. Previous work has shown that people tend to seek out social contact when feeling sad (especially as a result of social loss; Gray, Ishii, & Ambady, 2011), and that sad music can serve as a surrogate for empathic social contact with a friend (Lee et al., 2013). In the present study, the INTERSUBJECTIVE factor correlated strongly with the positive preferential factors APPRECIATION and REVIVAL, as well as with the AUTOBIOGRAPHICAL factor. This suggests that there is a strong interpersonal aspect in the pleasure derived from sad music; an interpretation further supported by previous findings linking dispositional empathy to the enjoyment of sad music (Garrido & Schubert, 2011; Vuoskoski et al., 2012). There is also some previous evidence indicating that autobiographical, emotional memories induced by music are for the most part related to intersubjective situations (Baumgarten, 1992). This might indeed be the case for sad music in particular, as Lee et al. (2013) have shown that sad music is sought out especially after experiencing social loss. The study by Van den Tol and Edwards (2013) also revealed connections between the strategies "Memory triggers" and "Connection", and the function "Social", further suggesting that the interpersonal and autobiographical aspects of sad music are more or less interwoven.

Although no significant associations between most of the background variables and the factor scores were found, Age, Gender and Frequency of music listening emerged as contributing variables. Frequency of listening was mostly connected with contextual attitudes, implying a causal relation; the more important part music plays in one's life, the more contextual meanings it probably receives. Younger participants' higher ratings for REVIVAL and AMPLIFICATION corroborate previous findings that have found adolescents often using music as a tool for mood regulation (Saarikallio & Erkkilä, 2007). Although the youngest participants in the present study were 18 and above, this finding could suggest that young adults are more likely to intentionally seek out strong emotional experiences than older adults. Moreover, as Holbrook and Schindler (1991) suggest, early adulthood might be the period in a person's life when music is associated with emotionally powerful events. Interestingly, AUTOBIOGRAPHICAL was also rated higher in the case of younger female participants (see Figure 2), even though one might think that music-related memories and reminiscing could be important for seniors as well. However, statistically speaking this observation is not entirely clear since the interaction between age and gender was not significant and a main age difference within the women was observed between the oldest age group and the other age groups (Tukey post-hoc tests, $p < .05$). Of course, it is possible that the context of 'sad music' guided younger participants in particular to associate music with memories. It has been suggested that older people develop more positive attitudes towards life and past events, whereas young adults often focus on the more negative aspects of life (Mroczek & Kolarz, 1998; Sutin *et al.*, 2013). Based on the results of the present study, it could be interpreted that listening to sad music evokes memories in younger participants because they are inclined to look back on events of bittersweet quality, while older participants, being nostalgic about their past, do not associate sad music with past episodes in their lives. Of course, it is probable that people of younger generations listen to music more in general compared to elderly ones; hence music is more often involved in their personal life and recollections of past events.

Although we have grouped our factors under two interpretative headings – preferential and contextual attitudes – they are, of course, heavily interrelated. As shown above, there are intersubjective and

contextual aspects in many of the items that cannot be separated from the more individual aspects. Also, many of the contextual aspects may be directly related to preferences and vice versa. For instance, if the feelings experienced while listening to sad music are evoked by fond memories associated with the music, it is likely that the music too is then experienced as pleasant. On the other hand, in the case of aversive memories, the music can be experienced negatively and a person may even start to avoid that particular piece of music.

Conclusions

This study has revealed the complexity of attitudes towards – and the motivations for listening to – sad music. Although the themes identified here are somewhat similar to those reported by Van den Tol and Edwards (2013), the present study incorporated a wider range of contexts and motivations, thus resulting in a more comprehensive picture of the variety of reasons for listening to sad music. Although the materials used in both studies were originally based on people's free descriptions, Van den Tol and Edwards focused on different reasons to listen to sad music *when feeling sad*, whereas our survey was based on descriptions of different emotional experiences relating to sad music listening. Although the theoretical starting points of these two studies were somewhat different, the self-selected participants' style of reporting their experiences seems to be quite similar regardless of the different motivation or context of music listening. When people are asked to write about their experiences of listening to music that they consider 'sad', the issues they address appear to be more or less compatible. This might suggest that the experiences have some universal base, or that the participants have certain assumptions of the type of information that is expected in the research context of sadness and music.

The factor structure presented here still requires confirmatory analyses with separate sets of data to corroborate the overall structure. Even though the present study had a large, nationally representative sample of participants, the fact that the study was conducted in Finland – a Nordic country with a fairly homogeneous population, and especially famous for its emblematic melancholic music culture – may have

had an effect on results, whereupon a survey with identical statements conducted in another country and a different cultural environment might reveal different kinds of attitudes towards sad music. However, the overlap between the present and previous studies suggests that autobiographical and interpersonal aspects play a pivotal role in people's engagement with sad music. Future studies investigating music-induced sadness could benefit from utilizing the statements reported in the present study, as they might help to elucidate why different people have differing reactions to a given piece of nominally sad music. Furthermore, it may be that – as various personality traits have been associated with the enjoyment of sad music – people with different personalities have different listening strategies and different reasons for listening to sad music. It may be that interpersonal engagement – both the empathy received from and felt for the music – plays a crucial role in the pleasure and revival drawn from sad music. Future studies on music-related sadness should pay more attention to background variables of the participants, and avoid using biased samples (adolescents, young university students, people who suffer from depression etc.) to get more versatile view on these intriguing relations between sadness, music and the listener.

REFERENCES

- Baumgarten, H. (1992). Remembrance of things past: Music, autobiographical memory, and emotion. *Advances in Consumer Research*, 19, 613–620.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Carroll, N. (1990). *The philosophy of horror, or paradoxes of the heart*. New York: Routledge.
- Davidson, R. J., Ekman, P., Saron, C. D., Senulis, J. A., & Friesen, W. V. (1990). Approach-withdrawal and cerebral asymmetry: Emotional expression and brain physiology I. *Journal of Personality and Social Psychology*, 58(2), 330–341.
- de Wied, M., Zillmann, D., & Ordman, V. (1994). The role of emphatic distress in the enjoyment

- of cinematic tragedy. *Poetics*, 23, 91–106.
- Duncum, P. (2006). Attractions to violence and the limits of education. *Journal of Aesthetic Education*, 40(4), 21–38.
- Eagleton, T. (2003). *Sweet violence. The idea of the tragic*. New Jersey, NY: Blackwell Publishing.
- Eerola, T. & Vuoskoski, J. K. (2011). A comparison of the discrete and dimensional models of emotion in music. *Psychology of Music*, 39(1), 18–49.
- Gabrielsson, A. (2011). *Strong experiences with music. Music is much more than just music*. Bradbury, R. (transl.) Oxford: University Press.
- Garrido, S., & Schubert, E. (2011). Individual differences in the enjoyment of negative emotions in music: a literature review and experiment. *Music Perception*, 28(3), 279–296.
- Garrido, S., & Schubert, E. (2013). Adaptive and maladaptive attraction to negative emotions in music. *Musicae Scientiae*, 17(2), 147–166.
- Goldstein, J. (1999). The attractions of violent entertainment. *Media Psychology*, 1, 271–282.
- Goldstein, T. L. (2009). The pleasure of unadulterated sadness: Experiencing sorrow in fiction, nonfiction, and “in person”. *Psychology of Aesthetics, Creativity, and the Arts*, 3(4), 232–237.
- Gray, H. M., Ishii, K., & Ambady, N. (2011). Misery loves company: When sadness increases the desire for social connectedness. *Personality and Social Psychology Bulletin*, 37, 1438–1448.
- Gross, J. J. (2008). Emotion regulation. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.) *Handbook of Emotions* (pp. 497–512). New York: The Guilford Press.
- Hibberts, M., Johnson, R. B., & Hudson, K. (2012). Common survey sampling techniques. In L. Gideon (ed.). *Handbook of Survey Methodology for the Social Sciences* (pp. 53–74). New York: Springer.
- Hofmann, R. J. (1978). Complexity and simplicity as objective indices descriptive of factor solutions. *Multivariate Behavioral Research*, 13, 247–250.
- Holbrook, M. B. & Schindler, R. M. (1989). Some exploratory findings on the development of

- musical tastes. *Journal of Consumer Research*, *16*, 119–124.
- Hunter, P. G., Schellenberg, E. G., & Griffith, A. T. (2011). Misery loves company: Mood-congruent emotional responding to music. *Emotion*, *11*, 1068–1072.
- Juslin, P. N. & Isaksson, S. (2014). Subjective criteria for choice and aesthetic value of music: A comparison of psychology and music students. *Research Studies in Music Education*, *36*, 179–198.
- Kivy, P. (1990). *Music alone: Philosophical reflections on the purely musical experience*. Ithaca, NY: Cornell University Press.
- Knobloch-Westerwick, S., Gong, Y., Hagner, H., & Kerbeykian, L. (2012). Tragedy viewers count their blessings: Feeling low on fiction leads to feeling high on life. *Communication Research*, *40*(6), 747–766.
- Lee, C. J., Andrade, E. B., & Palmer, S. E. (2013). Interpersonal relationships and preferences for mood-congruency in aesthetic experiences. *Journal of Consumer Research*. DOI: 10.1086/670609
- Levinson, J. (1997). Music and negative emotion. In J. Robinson (ed.), *Music and meaning* (pp. 257–273). Ithaca, NY: Cornell University Press.
- Mroczek, D. K. & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, *75*(5), 1333–1349.
- Oliver, M. B. (1993). Exploring the paradox of the enjoyment of sad films. *Human Communication Research*, *19*(3), 315–342.
- Peltola, H.-R. & Saresma, T. (2014). Spatial and bodily metaphors in narrating the experience of listening to sad music. *Musicae Scientiae*, *18*(3), 292–306. DOI: 10.1177/1029864914536199.
- Peltola, H.-R. & Eerola, T. (submitted). Fifty shades of blue: typology of music-induced sadness. *Musicae Scientiae*.
- Purhonen, S. , Gronow, J., & Rahkonen, K. (2009) Social Differentiation of Musical and Literary

- Taste Patterns in Finland. *Research on Finnish Society*, 2, 39–49.
- Saarikallio, S., & Erkkilä, J. (2007). The role of music in adolescents' mood regulation. *Psychology of Music*, 35(1), 88–109.
- Saarikallio, S. (2008). Music in mood regulation: initial scale development. *Musicae Scientiae*, 12(2), 291–309.
- Scherer, K. R., Wranik, T., Sangsue, J., Tran, V., & Scherer, U. (2004). Emotions in everyday life: probability of occurrence, risk factors, appraisal and reaction patterns. *Social Science Information*, 43(4), 499–570.
- Sutin, A.R, Terraccino, A., Milaneschi, Y., An, Y., Ferrucci, L., & Zonderman, A. B. (2013). The effect of birth cohort on well-being: the legacy of economic hard times. *Psychological Science*, 24(3), 379–385.
- Trimble, M. (2012). *Why humans like to cry. Tragedy, Evolution, and the Brain*. Oxford, UK: Oxford University Press.
- Van den Tol, A. J. M., & Edwards, J. (2013). Exploring a rationale for choosing to listen to sad music when feeling sad. *Psychology of Music*, 41(4), 440–465.
- van Goethem, A. (2010). *Affect regulation in everyday life: Strategies, tactics, and the role of music*. (Doctoral dissertation). Keele University.
- Vuoskoski, J. K., Thompson, W. F., McIlwain, D., & Eerola, T. (2012). Enjoyment of sad music. Who enjoys listening to sad music and why? *Music Perception*, 29(3), 311–317.
- Vuoskoski, J. K. & Eerola, T. (2012). Can sad music really make you sad? Indirect measures of affective states induced by music and autobiographical memories. *Psychology of Aesthetics, Creativity, and the Arts*, 6(3), 204–213.
- Vuoskoski, J. K. & Eerola, T. (2013). Extramusical information contributes to emotions induced by music. *Psychology of Music*, 43(2), 262–274.
- Zillmann, D. (1998). The psychology of the appeal of portrayals of violence. In J. Goldstein

(Ed.), *Why we watch: The attractions of violent entertainment* (pp. 179–211). New York: Oxford University Press.

Tables

Table 1. Age and gender distribution of the sample and population.

Age	Female		Male	
	Sample	Population	Sample	Population
18-25	8.5%	7.8%	3.7%	8.1%
26-33	8.0%	8.0%	4.8%	8.5%
34-41	5.4%	7.7%	8.5%	8.2%
42-49	5.4%	8.0%	8.0%	8.2%
50-57	15.6%	8.8%	8.0%	8.8%
58-65	14.8%	9.1%	9.4%	8.8%
TOTAL	57.7%	49.4%	42.3%	50.6%

Sample $n=352$ (6 did not reveal gender), Population $N = 3,382,741$.

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Table 2. 30 items and their means and standard deviations, and factor loadings and communalities based on a principle components analysis with oblimin rotation for the 25 retained items.

Items	F1	F2	F3	F4	F5	F6	Comm unality	M	SD
#1 I listen to sad music only in a certain state of mind	.43						.25	3.40	1.19
#2 Listening to sad music relaxes me		.59					.50	3.15	1.16
#3 I regulate my own negative feelings by listening to sad music		.48					.58	2.91	1.32
#4 Sad music intensifies my own negative feelings						.41	.34	2.85	1.23
#5 Listening to sad music makes me feel grateful for the things in my life				.50			.46	2.64	1.16
#6 * I think about my loved ones when I listen to sad music								3.17	1.23
#7 * I often cry when I listen to sad music								2.59	1.29
#8 Sad lyrics are an essential part of the sadness expressed by music					.56		.33	3.85	1.02
#9 When I listen to sad music, I feel that my own negative feelings are justifiable					.55		.55	2.92	1.19
#10 When I listen to sad music, I feel that I am not alone with my feelings					.78		.66	3.31	1.17
#11 * When I listen to sad music, the feelings I experience are often somewhat conflicting								2.68	1.07
#12 Listening to sad music gives me strength			.54				.67	2.87	1.19
#13 Sad music irritates me	.75						.61	2.10	1.14
#14 Listening to sad music induces unpleasant feelings in me	.87						.74	1.97	1.09
#15 Listening to sad music makes me anxious	.87						.79	2.06	1.13
#16 Listening to sad music makes me tired	.70						.49	2.22	1.21
#17 I sometimes deliberately seek sadness by						.51	.50	2.23	1.26

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listening to sad music

#18 Sad music can make me sad although I felt happy before listening to it	.33		.44	.42	2.86	1.29
#19 Sad music sounds more genuine to me than happy music		.46	.31	.41	3.11	1.32
#20 My appreciation of life grows when I listen to sad music		.86		.77	2.46	1.14
#21 Sad music reminds me that we, as mortal beings, have only a limited amount of time in our lives		.45		.44	2.25	1.22
#22 The feelings I am experiencing while listening to sad music, are evoked by memories associated with the music	.59			.43	3.25	1.17
#23 * After listening to sad music, I feel depressed					2.51	1.09
#24 Listening to sad music uplifts me	.52			.51	2.75	1.10
#25 Feelings induced by sad music are dependent on my current situation in life	.57			.36	3.75	1.09
#26 I do not want to listen to sad music when I am sad	.41	-.34		.35	2.48	1.22
#27 I listen to sad music when I am sad	.38	.47		.56	2.94	1.25
#28 Sad music reminds me of the tragedies of my personal life	.59			.53	3.49	1.11
#29 I easily empathize with the sad atmosphere or narrative conveyed by sad music	.56			.54	3.62	1.16
#30 * Sad music is able to make the atmosphere go down very easily					3.10	1.30

Loadings	3.01	2.37	2.26	1.95	2.00	1.19
Reliability (Cronbach α)	.86	.83	.75	.70	.73	.63

Note. The items with asterisk were eliminated from the final, 25-item measure.

TABLE 3. Factor correlations.

	1.	2.	3.	4.	5.
1. AVOIDANCE					
2. AUTOBIOGRAPHICAL	.06				
3. REVIVAL	-.33**	.20**			
4. APPRECIATION	-.05	.30**	.35**		
5. INTERSUBJECTIVE	-.02	.51**	.41**	.48**	
6. AMPLIFICATION	.13*	.37**	.25**	.22**	.29**

* $p < .05$, ** $p < .001$.

Figure captions

Figure 1. Means and 95% confidence intervals for the factor scores (Y axis) across Age (X axis) and Gender (men black, women grey lines) for the six factors.

