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Music as emotional self-regulation throughout adulthood

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Abstract

Emotional self-regulation is acknowledged as one of the most important reasons for musical engagement at all ages. Yet there is little knowledge on how this self-regulatory use of music develops across the life span. A qualitative study was conducted to initially explore central processes and strategies of the emotional self-regulation during adulthood. The data were collected through group interviews and analyzed through qualitative content analysis. Participants were 21 interviewees with an age range of 21–70 years. The results clarified conceptual features of music-related emotional self-regulation in adulthood and revealed two main trends. First, the basic nature of regulation, including various regulatory goals and strategies, remained highly similar throughout adulthood. Second, however, several changes were also evident, and they could be further categorized into three types: change by age, event-related fluctuations, and retirement transition. The study provided knowledge about the role of music-related emotional experiences as a functional and meaningful part of human behavior and psychosocial development during adulthood.

Keywords

age, developmental psychology, emotion, emotional self-regulation, music

Introduction

Emotional self-regulation is one of the core human abilities related to emotions. Although emotions in general are considered to contribute to adaptive behavior, it is also sometimes necessary for optimal emotional responding to regulate how emotions are experienced or expressed (Feldman-Barrett & Gross, 2001). Emotional self-regulation refers to processes of modifying various aspects such as valence and intensity (or time course) of emotions (Cole, Martin & Dennis, 2004; Eisenberg, 2004; Eisenberg & Spinrad, 2004). It includes not only the regulation of emotional experience, but also the regulation of the physiological processes or behavioral expressions related to emotions (Eisenberg, 2004; Eisenberg & Spinrad, 2004; Gross, 1998). Regulation may or may not be conscious, and it may occur at different phases of emotional process, focusing on the antecedents of emotion (e.g., situation modification, redirecting attention) or on the emotional responses already generated (e.g., changing activated experience or

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expression; Feldman-Barret & Gross, 2001; Gross & John, 2003). Emotional self-regulation can be considered to include not only the regulation of specific emotions but also moods, which are generally differentiated from emotions based on their longer duration, lack of specific cause, and greater focus on internal experience instead of behavior (Gross, 1998; Larsen, 2000; Oatley & Jenkins, 1996; Parkinson, Toterdell, Briner, & Reynolds, 1996).

The use of music for emotional self-regulation is demonstrated in a substantial amount of research. Music listening has been identified as a common and effective means for mood regulation (North, Hargreaves, & O'Neill, 2000; Thayer, Newman, & McClain, 1994; Wells & Hakanen, 1991), and several regulatory mechanisms have been defined including, among others, the use of music for mood improvement, distraction, and relaxation (Behne, 1997; Greasley & Lamont, 2006; Saarikallio & Erkkilä, 2007; Sloboda, 1992; Wells & Hakanen, 1991). Furthermore, Saarikallio and Erkkilä (2007) demonstrated that clear theoretical connections exist between the regulatory strategies inductively identified within musical context and the regulatory strategies broadly discussed in general emotion regulation literature, including processes like venting, distracting or reappraising (e.g., Gross & John, 2003; Salovey, Bedell, Detweiler, & Mayer, 1999). Similarly, Van Goethem (2009) showed that several regulatory strategies discussed in general emotion regulation literature are often used in the context of music as well. Yet a lot more research about the connections between music-related regulation and general emotional self-regulation would be needed for developing conceptual clarity and understanding of the special regulatory characteristics related to music. With regard to age, research has shown that music is used for emotional self-regulation by adolescents (Behne, 1997; Laiho, 2004; North et al., 2000; Roe, 1985; Saarikallio & Erkkilä, 2007; Wells & Hakanen, 1991), adults (DeNora, 1999; Greasley & Lamont, 2006), and the elderly alike (Davidson, Lange, McNamara, & Lewin, 2008; Hays & Minichiello, 2005; Laukka, 2006). However, little is known about the age-related differences, and how the self-regulatory use of music develops across the life span from adolescence to old age.

Adolescent psychosocial development includes major changes such as the reconstruction of the self-concept and establishment of adult identity, the separation from parents and establishment of new close relationships to peers and partners, and the mastering of self-regulation, emotional autonomy, and control over one's own life (e.g., Erikson, 1968; Havighurst, 1971). The importance of music to adolescents is closely related to their social and emotional development. Music serves as a forum for contemplating and constructing the developing self-identity, offers a means to renegotiate close interpersonal relationships, and provides possibilities to experience mastery, agency, and self-control through self-directed activities (Arnett, 1995; Laiho, 2004; Larson, 1995; Schwartz & Fouts, 2003). In relation to emotional self-regulation and coping, music provides adolescents with a variety of ways of dealing with stress and negative emotion, but also empowers them through intensive positive and relaxing experiences (Behne, 1997; Saarikallio & Erkkilä, 2007; Wells & Hakanen, 1991). The salience of emotional self-regulation has been demonstrated in a wide range of studies exploring the different reasons why adolescents typically engage in music listening and other musical activities (e.g., Arnett, 1995; Gantz, Gartenberg, Pearson, & Shiller, 1978; Laiho, 2004; Larson, 1995; North et al., 2000). Studies have also identified several specific regulatory strategies which adolescents use to modify their moods and emotions, such as seeking solace and comfort from melancholic mood-congruent music, discharging and living out anger through aggressive music, maintaining a current positive mood and atmosphere with happy music, or distracting oneself away from worries with pleasant and happy music (Behne, 1997; Saarikallio & Erkkilä, 2007).

Adulthood development is characterized by relative stability, increasing independence, productivity, and responsibility. Developmental transition periods often occur in relation to life

choices concerning work and family (e.g., Levinson, Darrow, & Klein, 1978; Levinson & Levinson, 1996; Nevid & Rathus, 2005). Aging and retirement bring with them developmental challenges such as accepting the decline in physical and psychological abilities, feeling contentment with personal choices in life, adjusting to increasing solitude, confronting the losses of loved ones, and maintaining the experience of agency, capability, and interest in life (e.g., Atchley, 1977; Erikson, 1980, Havighurst, 1971). Even though certain abilities weaken with age, this does not seem to occur in relation to the emotion regulation abilities. Compared to young people, older people have been shown to report fewer negative emotional experiences and greater emotional control (Gross, Carstensen, & Pasupathi, 1997). Age also seems to be associated with increasing motivation to derive emotional meaning from life (Carstensen, Fung, & Charles, 2003).

The importance of music for adults seems to be strongly connected to emotional and self-conceptual processing. For instance, Sloboda, O'Neill and Ivaldi (2001) conducted an experience-sampling study with adults, in which they showed that most of music's functions in everyday life settings were related to memories, moods, and emotions. Respectively, Greasley and Lamont (2006) reported that the characteristics of adults' music use included the importance of personal choices and the use of music for emotional self-regulation, including mental work related to internal experiences and memories. Similarly, DeNora (1999) concluded that music serves as a resource for constructing self-identity as it supports the related biographical and emotional processing.

Recent research has also suggested that music becomes especially important for the elderly (Gembris, 2008; Laukka, 2006). Senior citizens self-select the music they listen to, they concentrate on listening, and experience a lot of positive emotions while listening (Laukka, 2006). Starting group singing as a new musical hobby in later life provides mental and physical stimulation, positive mood benefits, and increased social interactions (Davidson et al., 2008). Both listening to music (Hays, 2005; Hays & Minichiello, 2005; Laukka, 2006) and singing and playing in a group (Davidson et al., 2008; Gembris, 2008) seem to be important to the elderly because they serve as a means for emotional self-regulation, emotional expression, and relaxation; they also reduce loneliness and provide experiences of togetherness, company and belonging, help to strengthen self-concept and self-understanding, and provide enjoyment, beauty, challenges, and meaningful content to life.

To summarize, the use of music for emotional self-regulation has been shown to be one of the most important reasons for musical engagement for adolescents and the elderly alike. Yet the regulatory processes are conceptually relatively poorly understood, and particularly little is known about how this self-regulatory use of music develops and changes with age. The aim of the current study was thus to explore the characteristic features of emotional self-regulation during different phases of adulthood. The topic was approached from the perspective of developmental psychology, and the purpose was to understand how the possible changes in music-related regulation were linked to the general psychosocial development. The study aimed both at conceptual clarification of the mechanisms, goals and strategies of emotional self-regulation through music, as well as at providing elaborate and comprehensive information about the possible differences and similarities in these processes at different ages.

Method

The investigation of complex and relatively unexplored processes required an inductive approach, and a qualitative interview study was conducted to construct a preliminary

Table 1. List of the interviewees based on the group in which they were interviewed (musical hobby groups grey, non-musical hobby groups white)

Group	Name	Age	Occupation	Main musical activities
Finnish grammar group	'Kathryn'	21	Student (biology)	Listening, 'singing at home'
	'Thomas'	32	Adult educator	Listening, keyboard in a band, accordion, singing, dancing
	'Heather'	22	Student (physics)	Listening, sang in choir as child
String orchestra group	'George'	60	Retiree	Listening, piano, singing in choir and theatre
	'Patricia'	45	Teacher	Listening, accordion, folk music groups
	'Ruth'	61	Retiree	Listening, violin, piano, Finnish zither, singing in choir
Gardening group	'Pamela'	59	Health officer	Listening as background
	'Ann'	63	Retiree	Listening, tried violin when younger
Choir group I	'Nancy'	69	Retiree	Listening, singing in choir
	'Karen'	45	Accounting entrepreneur	Listening, singing in choir and karaoke
	'Paul'	69	Retiree	Listening, choir singing
	'Elaine'	69	Retiree	Listening, singing alone and in choir
Computer skills group	'Kathleen'	53	Office worker	Listening, especially while jogging
	'Linda'	54	Office worker	Listening, tried guitar as child
Choir group II	'Jerry'	69	Retiree	Listening, just started singing in choir
	'Phyllis'	70	Retiree	Listening, singing in choir
	'Shirley'	70	Retiree	Listening, singing in choir and karaoke
	'William'	65	Retiree	Listening, piano in a band, accordion, singing in choirs
Japanese language group	'Ryan'	22	Student (physics)	Listening, has tried to do a little music on computer
	'Daniel'	21	Student (physics)	Listening, sometimes going to concerts
	'Christopher'	23	Student (IT)	Listening, guitar, base

understanding of the characteristics of emotional self-regulation through music. Participants were 21 voluntary interviewees, eight males and 13 females with an age range of 21–70 years. All participants were white, Finnish-speaking adults. The aim was to select the participants in such a manner that they would represent various ways of engaging with music. Therefore they were recruited from various types of study and hobby groups at the Adult Education Centre of Jyväskylä and the University of Jyväskylä, including a gardening group, a computer skills group, a Japanese language group, a Finnish grammar group, a string orchestra group, and two choir groups. Among the final group of participants, there were 14 who could be characterized as having music as a hobby (singing in a choir, playing an instrument, etc.) and seven persons who only engaged in music through listening. However, no clear distinction was made between musicians and non-musicians, as all participants were laypersons with music only as a leisure activity. A list of the participants, their musical activities, and the hobby group from which they were recruited is presented in Table 1.

Participants were interviewed in small groups consisting of volunteers from each study/hobby group. Thus there were seven groups in total, and the aim was to have 4 people in each

interview group. However, since not enough people volunteered from all hobby groups, some interview groups only had two or three people. The interviews took place at the locations where the hobby groups normally gathered, either before or after the normal gathering. Each interview session lasted about one and a half hours, thus producing a total of 10 hours of interview data, which was first recorded with an mp3 player, and then transcribed into literal text. The interviews were non-directive in nature. Certain predefined topic areas, such as the background information, the effects of music on mood, the meanings of music, the musical activities and preferences, and the age-related changes, served as the general framework for each discussion. However, fundamentally the interviewees were given the opportunity to talk freely about their experiences. Interviews were considered to be an appropriate data collection method as they allowed interaction between the researcher and the participants, made it possible to ask clarifying questions, and thus helped the researcher to understand the interviewees' personal experiences comprehensively and elaborately.

Group interviews were chosen as the data collection method since they have been shown to be effective in allowing a variety of points of view to emerge, participants to challenge and respond to each other's views, and to explain and compare their views in order to provide a richer flow of ideas and experiences (Saunders, Lewis, & Thornhill, 2003, p. 270). To ensure there was an open and confidential atmosphere, the participants were thoroughly informed about issues of anonymity and confidentiality. In addition, the interviewer encouraged equal involvement by all participants, such as by frequently asking possible contrasting or supporting views from all group members. The interviews had a relaxed atmosphere, included dynamic discussion, and were productive in creating rich and detailed data.

The data were analyzed through qualitative content analysis. Technical management of the relatively large amount of data was assisted by the use of HyperResearch (version 2.8), a program designed for organizing qualitative data. The verbal expression of the interviewees was first converted into codes (small units of meaning). The codes were then compared to each other in order to find shared and unequal elements, links, hierarchical structures and relationships between them. Each person was also analyzed as a small case study in order to situate and comprehend his/her music-related experiences within the context of his/her general development and life experiences. Finally, the data were synthesized into abstract categories and patterns. The analysis reached its end when the categories achieved saturation, that is, the properties of the emergent categories and patterns had been identified, situated within a larger framework, and they seemed to be able to cover and accurately explain the underlying quality of the empirical data.

The data analysis was primarily inductive and the emerging patterns were firmly grounded in the data. However, the concept of emotional self-regulation provided a theoretical framework and a point of comparison for the empirically constructed understanding. The analysis also included comparison with previous data from adolescents (Saarikallio & Erkkilä, 2007) in order to identify possible elements of similarity and difference in the emotional self-regulation through music between adolescents and adults.

Results

In general, the results revealed two main trends. First, the basic nature of emotional self-regulation through music, including the main regulatory goals and strategies, seemed to stay highly similar throughout adulthood. Second, however, some changes in the emotional self-regulation did occur during adulthood based on psychosocial development, life changes, and

personal life experiences. The changes were divided into three types: 1) Linear change by age; 2) Event-related fluctuation; and 3) Retirement transition. Moreover, some individual differences between the participants were observed.

Same strategies appear across the lifespan

The repertoire of various music-related emotion-regulatory strategies appeared to stay similar throughout adulthood. Interviewees from all ages used strategies such as *happy mood maintenance*, *revival*, *strong sensation*, *diversion*, *discharge*, *mental work*, *solace*, and '*psyching up*'.

First, interviewees at all ages used music simply for *happy mood maintenance*, for experiencing positive moods, pleasure and enjoyment. The interviewees described situations in which they expressed and enhanced their already existing positive mood by playing the music louder, singing along, starting to play an instrument, or even dancing along. Happy mood maintenance was thus related not only to listening to music, but also to expressive engagement with music. However, the most typical situations for using music for entertainment and mood maintenance included the use of background music for the creation of a nice atmosphere. Music could provide a pastime as such, or accompany almost any activity, making it more enjoyable and helping to maintain or enhance the current positive mood:

> I really listen quite a lot while at home, while doing dishes, cleaning, and anything ... It's nice to have some noise there. If you're doing something, it somehow goes with that. (Kathryn, 21)

> When you listen to a song, you start to sing along, it sweeps you along ... And if [at] that moment a happy song comes, you sing and dance along. (Shirley, 70)

Second, music served as a means for *revival* and *relaxation*, providing a way for the interviewees of all ages to relax and get new energy when they felt stressed or tired, or to quiet down before going to bed. A typical feature of using music for revival was to take a break or detach from daily hurries, allowing oneself to take time and space just for oneself in order to relax, recover, and gain new strength with the help of music. In essence, music was used as a kind of private recharge moment, typically including concentrated listening to music, sitting or lying down in a relaxed position. Music was used in this way by interviewees of all ages, but the interviewees talked especially about the years in working life, when music helped them to feel refreshed after a hard day:

> I used to come home from work, and then you sit on a rocking chair, lift your feet up on a chair, and there's good music, then after 10 minutes you feel as if half of your housekeeping work has already been done, even though it has not. (Ann, 63)

Music also provided strong sensations and powerful emotional experiences. Interviewees of all ages talked about intense enjoyment, deep concentration, and emotional involvement in music. From the perspective of emotional self-regulation, the strategy of strong sensations served the purpose of allowing access to the experience of deep emotions and of somehow living life to the fullest with regard to emotional aspects of life. Some of these experiences were highly touching, 'larger than life' experiences, remembered years after the occasion. For instance, George, 60, talked about the unforgettable moments of participating in an opera production; Ruth, 61, mentioned the huge experience of hearing a live symphony orchestra concert for the first time at 18 years of age; Daniel, 22, thought back to the tremendous atmosphere of Metallica's concert; and Nancy, 69,

described a moment of incredible beauty while listening to a friend playing the trumpet on a clear winter night under the stars. Yet the acquisition of strong sensations often occurred in substantially more mundane and frequent situations, such as while singing in a weekly choir practice, while attending a smaller concert or family occasion, or while simply listening to music at home:

> For me funerals, or anything where there's an organ, almost always make me cry. Even if it's not a funeral but a happier occasion, it's just so.... Perhaps it's that, for me, if I see beautiful scenery, I may start to cry, it's just somehow so overwhelmingly moving. (Kathleen, 53)

Interviewees of all ages also used music for *diversion* or *distraction*. They were able to forget about unwanted thoughts, feelings, and worries with music that induced happy and pleasant feelings in them:

> I tend to detach myself from the negative feelings with the help of music. So that I don't go expressing them but try to get rid of them. For me, this detachment is most often, when something really bugs me I sit at the piano to play. And listening to the Finnish Zither tapes are the best way for me to detach from worries, preferably some Tulikari polka or some other lovely jingling, that's wonderful. (George, 60)

Some individual differences appeared in diversion, as some interviewees stated that, when feeling down, they would definitely want to listen to something uplifting and diverting to cheer them up, whereas others mentioned that happy music would only make them irritated, and they would prefer to listen to music that was more congruent with their current mood. This may reflect the fact that it is not enough for the distracting music to simply sound happy but it also needs to be able to induce positive feelings. It can, however, also refer to a more fundamental difference in the selection of various regulatory strategies, as some people may be more prone to maintain their negative mood and ruminate on it, while other people may be more disposed to quickly distract themselves and improve their mood.

Interviewees from all ages also mentioned the use of music for emotional *discharge* and *disclosure*, releasing and venting anger or sadness through music that expressed these emotions:

> I listen quite a lot to this more rough music when I'm angry. It's quite nice that you can put it on at full blast ... it somehow relieves you, while you drive and a monstrous music plays on the background. (Heather, 22)

> When I go jogging, it depends on my state of feeling. Like, we have had quite a tough relationship with our 18-year-old girl ... so there we were looking at each other, and I felt like going for a jog. And now and then I felt like crying, so I listened to hymns and cried even more while running, and pushed ahead there in my pain, and swore, but it always helped somehow that you could cry, or that you just put the music louder, and faster. (Kathleen, 53)

Some differences also existed between individuals in the use of music for discharge. Most participants mentioned the use of music for discharge, but Patricia, 45, and George, 60, stated that they would never use music to express anger, and would rather go for a jog instead, or use music for diversion. Also, when comparing various musical activities, the typical activity for discharge seemed to be listening. The Choir group II actually considered singing as something one would never begin to do when feeling bad, and a more natural thing to do would be, for instance, to start listening to hard rock.

For interviewees at all ages, music was an important framework for *mental work*, for facing, contemplating, reappraising, and working through unsettling emotional experiences. The typical pattern was to first go deeper into the current feelings, and then, as the music unfolded, somewhat progressively move towards a clearer, peaceful, lighter, or better mood state. William, 65, and George, 60, who both played music a lot, mentioned improvisation as an important means for doing this kind of mental processing, but for most interviewees the activity was listening:

> There are people who actually nourish their pain. And perhaps you can somehow live through your pain while you hear someone sing sad songs … I've been thinking that I go through the feelings I have so that I don't try to force myself to feel better by listening to something happy while I'm sad … I think that for me it helps, that if I'm dealing with some problem, and if there is also some music that deals with it, it does help me … I believe the changes in harmony are such, when the chords progress, and certain evergreens, they bring so many associations, and somehow help you to work through … I clearly work through my feelings through the music. (William, 65)

Music also provided *solace*, acting like a comforting friend. Indeed, Heather even called music a friend who helps, and Kathryn said that music provided first aid if friends were not around. The interviewees from all ages talked about feelings of being accepted and understood by the music when feeling sad, hopeless, and melancholic. A typical feature of solace was that music raised some nostalgic memories related to moments of happiness with significant people, providing a calming and comforting atmosphere of safety and acceptance. William referred to a memory about his grandmother, Patricia about her music teacher, Thomas about his uncle, and Nancy about her husband who had died a few years before:

> But after more time has passed, now, that song by Albinoni gives me a really peaceful and good feeling, and I almost smile, and think back through our life, and that I was given the chance to work through the loss for such a long time, together with him at the hospital, spent the night there and all, and his departure was so gentle and so, so that song makes me actually feel really good nowadays. I can't do anything else while I'm listening to it, I just listen, sit down, and think back, with gratitude, with love. (Nancy, 69)

Music was also often used for *energizing* and '*psyching up*'. Interviewees at all ages used music for uplifting their mood and raising energy levels for an activity. Typical situations included listening to energetic and fast music either before or during activities such as jogging and other sports, cleaning, and partying:

> When I'm going to sports training, I get adrenalin already beforehand, and feel like listening to something really fast, and almost aggressive music. (Ryan, 22)

> At least for me, since I have been exercising my whole life, and when you do gymnastics to the music, it gives you, even if you were a bit tired, it gives you spur and energy, really. (Shirley, 70)

Regulation aims for mood improvement, although often non-consciously, and focuses on several phases and components of emotion

In addition to the set of different strategies, other general features of regulation also remained highly similar across adulthood. First, practically all aforementioned strategies seemed to fundamentally aim for mood improvement, whether it was through creating and strengthening

positive emotional states (e.g., positive mood maintenance, strong sensations, energizing and 'psyching up'), through moving away from stress, worries, and tiredness (distraction, revival), or through feeling better after dealing with the negative emotion (discharge, mental work, solace). However, even though the final goal of the activity often clearly seemed to be mood improvement, the descriptions of the interviewees did not focus on the target mood, but rather focused on describing how the behavior stemmed from the current state.

Indeed, another aspect of regulation, which remained fairly similar throughout adulthood, was the relative lack of conscious awareness about the goals of regulation. The descriptions of all participants included statements indicating that *music was selected based on the current mood*: music had to fit the situation, the atmosphere, and their own mood state. The chosen music was typically something the interviewees *just felt like* listening to at that moment, without really thinking why. The following excerpts are examples of this mood-directed selection of music:

> It depends on your feelings ... *based on your feelings you choose* whether it's a bit heavier, or classical, or whatever it is. (Thomas, 32; my emphasis)

> It is so that you listen, or *select the music based on what you are currently feeling*, and it actually ... gives kind of reinforcement, so that you look for a counterpart from the music, to the mood state that you are in. (Ryan, 22; my emphasis)

Through age and experience the interviewees had acquired increasing knowledge on what kind of music they felt they liked, preferred, or 'needed' in certain situations. Karen, for instance, mentioned that when her sister's husband died, and she was feeling really sad, she knew right away that she wanted to listen to a specific record, the same one that she had listened to years before when another close person had died. However, despite a relatively high awareness of what type of music would fit a mood or a situation, the participants' descriptions rarely included references to choosing to listen to certain music *in order to make one feel* a certain emotion. Below are some examples of this kind of conscious awareness of the regulatory goals:

> I think *I've begun to consciously select* something, with which you can create mood improving ... happy stuff, I've begun to do that more consciously. (William, 65; my emphasis)

> I also listen *in order to relax*, typically something relaxing ambient or chill, and also if I don't get to sleep at nigh I put on something peaceful. (Christopher, 23; my emphasis)

> Or sometimes *you take something relaxing*, so that you *try to dampen* your bad feeling, and you rethink issues, that is it really so bad now. (Thomas, 32; my emphasis)

Descriptions indicating conscious goal-orientation regarding the target mood occurred most typically in relation to situations where music was used to change energy levels in order to relax or to perk up. In addition, the conscious awareness of the regulatory goals seemed to be more typical to some interviewees than others. Among these persons were Thomas, 32, and William, 65. They both were very outspoken and elaborate in their descriptions of the emotional effects and emotional use of music, and seemed to be quite well aware of what kind of emotional effects they were hoping to get. A unifying factor between these two men was that they both actively engaged in music in a variety of ways, through playing in bands, singing, and playing different instruments. In addition, Choir group II, which William was a member of, had a relatively long

discussion about the interviewees' general attitudes towards emotions. In that discussion, William said that also in other areas of his life he focused a lot on his emotions, wanted to contemplate them, work through them, and understand them. Meanwhile, Jerry, 69, another man in the same group, said that he never worried about anything for too long, or didn't really focus on his emotions. He also denied that he would consciously select music in order have mood-effects. See the following excerpt from a discussion with Choir group II (my emphasis):

William (65): I work through something with the music, even though you don't think that the emotional life is there, going alongside.
Phyllis (70): Maybe not consciously…
William (65): Yeah, so that 'well, I'll take this to make me happy'.
Shirley (70): Yeah, *you can't do that*.
Jerry (69): *I at least can't*.

A couple of other elements of the general nature of regulation also seemed to remain similar at all ages. First, even though the current investigation focused mainly on the subjective experience – as opposed to physiological reactions or behavioral expression – several implications for music's influence on physiology and expression also arose. For instance, the feeling of lifting spirits and the *physiological modulation* of raising energy were often blended as a single regulatory act (e.g., the strategy of 'psyching up'). Similarly, the feeling of happiness was often accompanied by *behavioral expression* of happiness through singing or dancing along (e.g., the strategy of happy mood maintenance). The results thus suggest that the regulation not only focuses on the subjective experience, but occurs at levels of the other components of emotion as well.

Furthermore, music also seemed to have an effect at several phases of the emotion generation process. As described in the introduction, emotional self-regulation may focus on different phases of emotions, such as on the antecedents of emotion (e.g., situation modification, redirecting attention) or on the emotional responses already generated (e.g., changing activated experience or expression) (Feldman-Barrett & Gross, 2001; Gross & John, 2003). When examining the regulatory strategies, it appeared that music-related emotional self-regulation covered a variety of different phases. For instance, listening to music served as a situation modification through atmosphere creation (e.g., happy mood maintenance, revival, 'psyching up'). Music also promoted attention deployment by directing attention away from unwanted thoughts and feelings (e.g., diversion), or by focusing attention on specific thoughts and feelings (e.g., strong sensation or mental work). Some strategies, such as mental work or solace, can also be seen as attempts to change the activated experience, and the strategy of discharge reflects the modification of the activated emotional expression (expressing negative mood through music instead of yelling, for instance).

Change occurs in relation to age, life events, and retirement

Despite the relative stability of the general nature of music-related emotional self-regulation, some changes could also be clearly observed. For example, some interviewees, such as Elaine, Linda, and Kathleen said that the general importance of music in their lives had increased with age:

> Its meaning has grown, the meaning of music in my life…. It's probably that you listen more, and you allow that to yourself … Previously I listened with a constant hassle around, so you could only hear a short part … And it's also that now you can select yourself what to listen to. In my childhood home there were always the rest of us 10 (siblings), and mum and dad also, they had their own things. And

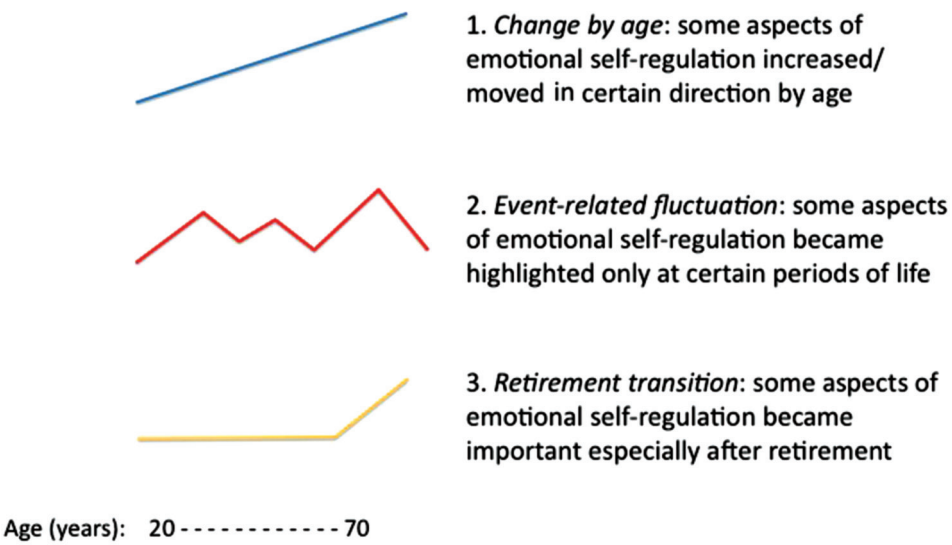

Figure 1. Illustration of the three types of change in music-related emotional self-regulation during adulthood.

> then, while living with my own children, they were actually the ones who.... I think that, for too long, I lived through my children, and it hasn't been until now that I am starting to do things that I myself actually have really wanted to do, and it goes also for music, that now I can take my own stand. It's not my children's fault, it's nobody's fault; it's me who hasn't been able to. (Kathleen, 53)

The age-related increase in the importance of music is, in fact, in line with notions made in previous research (Gembris, 2008; Laukka, 2006). But the question is then, what is the reason for this? The interviews revealed several possible explanatory factors, which will be discussed later, in relation to three different types of change. Visual illustrations of the types of change are demonstrated in Figure 1.

The first type of change was labeled *change by age*, and it was related to features that seemed to change or grow in a specific direction throughout adulthood. The speed with which this type of change occurred varied, but it constantly moved in a certain direction as the years passed. For instance, through age and experience, the interviewees seemed to acquire an increasing amount of knowledge about music's power. To put it simply, the older they were, the more likely they were to have had experiences that had convinced them about music being able to empower and heal people. Several interviewees talked about how music had helped them though hard times in their own life, providing solace, comfort, and empowerment, and sometimes the power of music had also been observed in others. As an example, Ann told how she really realized the power of music when her mother had suffered a stroke and received great help in recovery through listening to music. Karen, for her part, had observed that music had the power to create experiences of pleasure and happiness for seriously handicapped people:

> I realized, or woke up to, really, the kind of power music has, when we were at a gig with the trio in an invalid home, where some of the patients were really seriously disabled, and when we sang Christmas

> songs, and there were, of course, some familiar songs. And you could see, like this one woman, sitting in a wheelchair in a kink position, and when the familiar songs came, she sang along in her way, and there were almost tears in my eyes, seeing the effect, that you could see that she enjoyed it. (Karen, 45)

Various musical experiences and musical memories also seemed to increase the possibility of music to serve as a resource for emotional work related to self-identity. The interviewees repeatedly described how music brought back memories of their past and life history. Thus, it seems plausible to argue that the ability to use musical material for emotional self-regulation grows with every musical memory:

> I think listening to music is like watching a photo album. There are so many familiar songs you have listened to and they bring so many memories to you. (Thomas, 32)

Another interesting observation about the change by age was related to musical taste. Linda, Kathryn, Kathleen, Thomas, and Ann commented that their musical preferences had become more open with age. The interviewees could have started to listen to more styles themselves, or just develop a wider acceptance and understanding of the value and meaningfulness of different styles, for instance through making their own music, or through their children's musical preferences. See the following excerpt from a discussion with the computer skills group:

> Kathleen (53): I'm really omnivorous for music, so that almost anything goes. The older I get, the more. Somehow more comes all the time; something good comes with getting old [smiles].
>
> Linda (54): Same here, I feel that I've become more open by age, I listen to a lot of classical music, but also popular. And even though they say that when you get older you become ill tempered and discriminative, I feel that I understand even the hard rock. Not that I'd really like it, but I understand that it raises questions, and am open to hear it. I open-mindedly take in the new music.

Another type of change was labeled *event-related fluctuations*, referring to the regulatory features that alternated according to life situations, became highlighted at some periods of life, and faded away at others. This type of change was especially related to the social aspects of regulation. Different social connections, such as family, friends, first love, or own children, became highlighted in different life situations, and caused changes in what kind of social experiences the regulation focused on, and what kind of social contexts the regulation occurred in. For instance, music was a way to increase strong emotions related to a first love in young adulthood, and served as an important means for alleviating loneliness through keeping up social connections among the elderly:

> Oh, good heavens, say, when you are in love and hold hands and lovely flute music plays, I still get tears in my eyes! It was some outdoor event, I don't even remember who played and what, but it was so touchy, oooh, the feeling I had, I'll never forget. (Ann, 63)

> This choir, it's a lifeline, really, especially now that I live alone. I guess it makes a break to the week, and to the day, when you know that now you're going to sing again, and meet the choir members again. (Elaine, 69)

Another significant aspect of event-related fluctuations was that the importance or meaningfulness of music, especially in terms of emotional self-regulation, seemed to increase and

become highlighted particularly during hardships and difficult life experiences. Music appeared to become emotionally important during difficulties due to its ability to comfort, co-experience, distract, heal, and empower:

> Especially when my father died, music was a comfort, or a power. I listened a lot then. During difficult life situations it's quite a good thing. It's hard to explain, but in the music, you don't need words, you can relate to it, it can make you happy or even angry, it holds all human emotion. (Ann, 63)

The third type of change was related to a special transitional period of adulthood, and was labeled *retirement transition*. In essence, certain features in emotional self-regulation through music remained relatively stable through the years of study and working life, but then suddenly changed at the time of retirement. First of all, there simply seemed to be more time for music after retirement. Studies, working life, and family life are busy years, and during these periods of life the interviewees often used music for revival, as a breathing space. Music continued to be a source for revival and relaxation after retirement, but other functions also became salient. The elderly interviewees stressed the importance of music for pastime and entertainment, and considered music as a meaningful component and content of their daily life. Listening to music and musical activities also alleviated the feelings of loneliness, as already mentioned before. Some of the elderly interviewees had started new musical hobbies such as singing in a choir or playing an instrument now when they had more time:

> My singing hobby started a bit too late, I have always wanted to sing, but there has never been a chance until now that I'm retired, as an old man starting, realizing that too late, it would have been easier to learn when I was younger. But I still got to do it anyway … and it's because now I have more free time than during working life. (Jerry, 69)

Another feature which became salient among the elderly was music's role in providing feelings of agency, mastery, and capability. Musical hobbies did provide experiences of success and capability across the lifespan, but the importance of keeping up one's abilities seemed to be emphasized when getting older. The interviewees described music as a hobby that offered them experiences of succeeding, and challenging their abilities:

> I've thought, during the decades, that this [choir] is a challenge for me, so that if I'm going to get dementia, it would come later. I'll be 70 next year, but I don't know, I still feel young even though the body doesn't always keep up [laughs]. (Nancy, 69)

Discussion

The results showed that the general nature of music-related emotional self-regulation, including the repertoire of various regulatory strategies, remains relatively similar throughout adulthood. However, several changes were also evident, and they could be further categorized into three types: change by age, event-related fluctuations, and retirement transition. Furthermore, the results also indicated an existence of certain individual differences. A summary of these findings is presented in Table 2.

General nature of regulation remains stable

First, the general nature of music-related emotional self-regulation appeared to remain similar across adulthood. One typical feature of regulation was that the majority of the regulatory

Table 2. The elements of stability, change, and individual differences in music-related emotional self-regulation during adulthood

Elements of stability (typical features of regulation at all ages): • Wide array of different regulatory strategies • Music is selected based on current mood (rather than target mood) • Regulation aims for mood improvement • Different emotion components (subjective experience, physiology, expression) are interconnected • Music operates at several phases of emotional process (e.g. both situation modification and reappraisal of already evoked experience)
Elements of change (features that change due to age, development, and life situations): • *Age-related change*, such as increase in experiences of music's power and in music's connections to personal life history • *Event-related fluctuation*, such as music becoming important during difficulties, and different social aspects becoming highlighted due to social context • *Retirement transition*, including music becoming important as pastime, preventive against loneliness, and providing a sense of ability
Individual differences (features that differ between persons): • *Preference for certain strategies*, such as distraction away from sad mood versus reinforcement of and contemplation over current melancholy • *Self-awareness or consciousness* over one's regulatory goals, strategies, and habits

strategies were related to a broader goal of mood improvement. Another typical feature was that adults at all ages seemed to select music based on a current mood rather than consciously aiming for a target mood. The most conscious aspect of regulation seemed to be the physiological arousal or energy level; that is, conscious goal-orientation regarding the target mood typically occurred in relation to situations where music was used to relax or to perk up. Another aspect of the regulation that remained similar was that music-related emotional self-regulation affected not only the subjective experience but also the physiological responses and behavioral expressions. The results thus suggest that the physiological and expressive components are an inseparable part of the music-related emotional self-regulation, and a more detailed investigation about the relationships between the different components, using appropriate data collection methods, could provide important viewpoints for future research.

As regards to the phases of the emotion generation process, music also seemed to have an effect at several phases, and certain regulatory strategies could be linked to certain phases of the process (e.g., discharge seems to be about expressing an already-generated emotional experience, thus occurring relatively late in the emotional process). Despite these corresponding features, it is far from clear how to match each music-related regulatory strategy with the time-course-related components of emotional process, so further research focusing especially on this aspect is perhaps needed. This could provide viewpoints to understanding the effects of various strategies on wellbeing, as it has been proposed that regulation occurring earlier in the emotional process is more salutary (Gross & John, 2003). However, based on the current study it can already be said that music seems to have an impact on moods and emotions at a variety of levels: both for different components of emotion, and also for different phases of emotional process. This as such may have some explanatory value for understanding music's emotion-regulatory power.

The above mentioned features reflect the general nature of music-related emotional self-regulation, which appeared to remain relatively stable across the adulthood years. One more

feature that remained similar was the repertoire of various regulatory strategies; adults at all ages used all the strategies that were identified. The strategies identified in the current study seem to show correspondence to the mood-regulatory functions of music for adults demonstrated in previous studies. For instance, based on qualitative data, Greasley and Lamont (2006) reported that music functions as a way to relax (similar to revival), serves the transcendental function of working through thoughts (similar to mental work) and provides a way to one's past (including similar elements to strong sensation, solace, and mental work).

Similarly, Van Goethem (2009) reported that music is effectively used especially for distraction (similar to diversion), relaxation (similar to revival), and introspection (similar to mental work). Also, Sloboda, Lamont, and Greasley (2009) discussed the everyday functions of music in a review paper and identified four recurrent functions of self-chosen music use. First, music helps to distract and reduce boredom (similar to diversion and happy mood maintenance). Music also energizes and gives rhythm to activities through entrainment (similar to 'psyching up'). Lastly, background music provides meaning enhancements; that is, it adds to the significance of a task (similar to happy mood enhancement, and somewhat similar also to strong sensation). The regulatory strategies observed in the current study were also closely similar to the ones previously identified in comparative data from adolescents (Saarikallio, 2008; Saarikallio & Erkkilä, 2007). Moreover, the strategies showed correspondence to the three music-related regulatory strategies reported by Behne (1997) to be used by adolescents, including the release and living out of negative feelings (similar to discharge), the search for consolation from sad music (similar to solace), and the tendency to turn to peaceful and emotional music to get away from sadness (similar to diversion). Similarly, they resembled the emotional functions of adolescents' music listening discussed by Schwarz and Fouts (2003), including the use of music for distraction (similar to diversion), the use of music for soothing emotional concerns, for reflecting and validating one's feelings, and dealing with issues of connection and longing (similar to solace and mental work), and the use of music for cathartic release of unhappiness, anger or anxiety (similar to discharge).

It can be argued, then, that individuals employ the same palette of regulatory strategies from adolescence to old age, and similar strategies seem to emerge in different studies. The question remains, however, as to whether some individual and situational differences exist in these strategies based on various personal factors such as musical background, personality, or age, and in relation to various contextual factors such as social situations or cultural contexts.

Age-related changes and individual differences were found

Certain differences or changes related to age and development across adulthood could be observed in the current study. Even though all types of regulatory strategies were used across the life span, certain regulatory strategies seemed to become more salient at certain ages or during certain life events. For instance, the use of music for revival and relaxation after a hard day appeared to be highlighted during the years in working life and the use of music for solace and comfort increased during difficult life experiences. These changes could be further categorized into three types: change by age, event-related fluctuations, and retirement transition. Change by age included the following aspects: the understanding of music's power deepened, the connections between personal life history and musical experiences strengthened, and the appreciation of various musical styles widened. These aspects gradually moved in a certain direction by age, and were actually related not to age itself but rather to the acquisition of an increased number of experiences by age.

Another type of change was labeled event-related fluctuations, since these features alternated according to current life events, including the content of regulation changing based on social context, and the general importance of music for self-regulation becoming highlighted during difficulties. The third type of change, retirement transition, coincided with retirement, and included music becoming more important as a pastime and as entertainment, preventive against loneliness, and a source for experiences of ability and agency. These findings meaningfully connect the use of music to the general tasks of psychosocial development during adulthood.

During the adulthood years, the strengthening link between musical experiences and personal life history as well as the growing understanding of music's power increase the likelihood of the musical material to serve as a tool for emotional work related to self-identity. This is in line with the findings of previous studies, which have identified mood regulation and personal choice as characteristic features of adults' music use (DeNora, 1999; Greasley & Lamont, 2006; Sloboda et al., 2001). The results of the current study also provide a psychological explanation for previous discoveries of music becoming important for the elderly (Gembris, 2008; Laukka, 2006). Music seems to provide a means to cope with the psychosocial challenges associated with aging, such as adjusting to solitude, facing the loss of loved ones, and maintaining experiences of agency and interest in life.

Certain individual differences could also be observed in the current study. The conscious awareness of the regulatory goals seemed to be more typical to some interviewees than others. Greater awareness appeared to be related to more active engagement with music, which is in line with previous research showing that more engaged music listeners are more conscious about their mood-regulatory use of music than less-engaged music listeners (Greasley & Lamont, 2006). In addition, the current data suggest that greater conscious awareness of one's music-related emotional self-regulation may also be related to more active general focus on and awareness of emotional experiences in other areas of life as well. Future research should, therefore, consider both musical background and general emotionality as possible explanatory factors for the amount of conscious awareness over music-related self-regulation.

The results also showed another feature that seemed to include contrasting behavioral patterns between individuals: the tendency to use music either to distract oneself away from unwanted feelings (diversion) or to get some reinforcement of one's feelings, express them, and work through them (solace, discharge, mental work). This distinction has some connection to general mood-regulation literature's proposition that regulation of negative moods can be divided on one hand into the tendency to focus on the negative mood (possibly in order to understand it), and on the other hand into the tendency to focus on something else, either some completely emotion-irrelevant material or some positive aspects of the negative situation (Rusting & DeHart, 2000). The music-related regulatory strategy of diversion closely resembles the attempt to focus on something else. It is similar to the concept of distraction – the use of pleasant activities to lighten moods – which is considered to be one of the most advanced and effective ways of mood regulation (Salovey et al., 1999). The strategy of mental work includes elements of reinterpreting the situation and possibly focusing on the positive aspects, which closely resembles another effective general regulatory strategy called reappraisal (Gross & John, 2003).

However, mental work and solace also include the element of specifically focusing on the negative mood in order to understand it, and overt focus on the emotional experience may further lead to rumination and constant monitoring of one's feelings, which has been considered as a maladaptive coping strategy (Garnefski, Teerds, Kraaij, Legerstee, & Van den Kommer, 2004; Salovey et al., 1999). The connections between music-related regulatory strategies and

general emotion strategies may provide a useful viewpoint for future research to understand the effectiveness of music-related regulation in terms of adaptive behavior and emotional well-being. Furthermore, they may contribute to our understanding about the individual differences in music-related emotion regulation, as musical behavior is likely to be affected by the person's general emotion-regulatory behavior and tendencies.

There were some differences in how well the regulatory strategies identified in the current study corresponded to strategies widely discussed in general emotion regulation literature. Close correspondence could be observed between strategies such as emotional disclosure, venting or catharsis (similar to discharge), distraction (similar to diversion or revival), and introspection or reappraisal (similar to mental work) (e.g., Gross & John, 2003; Salovey et al., 1999; Tice & Bratlawsky, 2000). The strategies that did not show an equal amount of correspondence to concepts used in general emotion regulation or coping literature included happy mood maintenance, 'psyching up', strong sensations, and solace. The first three strategies are closely related to positive emotions, and the problem of finding correspondence to them is related to the fact that general emotion regulation theories have mainly focused on dealing with negative emotions. Yet positive emotions have been proposed to broaden individuals' thought–action repertoire and build resources (Fredrickson, 2001) and regulate and mitigate negative feelings and their ill-effects on self-control (Izard, 2002). Furthermore, music research has shown that the importance of music is strongly linked to enjoyment and positive feelings (Juslin & Laukka, 2004; Saarikallio & Erkkilä, 2007; Van Goethem, 2009). For instance, Van Goethem (2009) showed that the emotions most typically regulated through music were happy and calm. Therefore, the regulatory functions related to maintenance and increase of positive moods and emotions are essential for understanding the special role of music as a means for emotional self-regulation, and may also provide fresh perspectives for affect regulation research within general psychology.

In addition to the salience of positive emotions, a relatively music-specific feature in emotional self-regulation may also appear to be the use of music for solace. The results of the current study are in line with previous studies that have referred to music as an understanding and valued friend (Sloboda, 1992; Small, 1998, p. 202). Moreover, Ruud (1997) has argued that the first musical memories often include feelings of 'being held' by parents, and that songs are links to these experiences of being in a safe, accepting and trustworthy relationship. Perhaps music-related emotional self-regulation holds a special character that could be described as something like imaginary social regulation, somewhat comparable to talking to friends.

Concluding thoughts

The current study was a small-scale qualitative inquiry, and therefore has some limitations regarding the generalizability of the results. First, the study was carried out within Finnish culture, which might have its own cultural characteristics. Also, even though participants were selected to represent varying degrees of musical engagement, they all held a positive attitude towards music, and already as such may represent a special group. Moreover, the most typical musical hobby among the current sample was singing in a choir, which may also have some influence. Also, none of the participants were professional musicians. Therefore, more focused research on various types of music professionals or, contrastingly, on persons who do not engage in or even enjoy music could provide quite interesting and varying points of view.

However, it must be noted, that research comparing musicians and non-musicians has rarely been able to show difference in the emotional response to music (Brattico et al., 2008),

and the reasons for both listening and playing seem to be similar, both including emotional effects and identity formation as essential components (North et al., 2000). Similarly, the only observed difference in the current data in relation to musical background was the level of conscious awareness of music use.

The current study was able to provide preliminary information about possible individual differences and age-related changes. However, the existence of the types of changes and differences, and causal effects related to the possible explanatory factors, would need to be confirmed with further studies using wider samples. An important issue to also note is the reliance of the current study on self-report data. Subjective experiences are difficult to objectively interpret, measure, and compare, and emotional self-regulation itself includes processes that are partly unconscious (Gross, 1998), which makes the task even harder. Interview as a data collection method allowed interactive communication and detailed description of experiences and the analysis aimed at truthful and inductive interpretation of the participants' experiences. Still, it is possible that the interviewees were not able to consciously report all self-regulatory processes that actually existed in their everyday life. One suggestion for further studies could be to use additional data collection methods such as observation or physiological measures. They would be especially useful in looking at the relationship between the subjective, physiological, and expressive components of emotions.

Another problematic issue in the current study was the reliance on retrospective data, which complicates objective analysis of change. It is possible, for instance, that in retrospect an individual is assured that music is currently a more important part of his or her life than ever before, but had the same question been asked at various points in the person's life, the result could have been different. Therefore, longitudinal approaches would be beneficial for investigating age-related change, especially regarding causal elements. With regard to the various types of change identified, the current study could also operate at a relatively superficial level regarding the second type of change, the event-related fluctuations. It was demonstrated that certain life-events, such as a loss of a close person, would increase the use of music for emotional self-regulation, but the more detailed tracking of event-related changes would actually require a more elaborate approach regarding time course such as experience sampling method.

In sum, the current study provided comprehensive information about the use of music for emotional self-regulation during adulthood. The characteristics of music-related regulation were elaborated, links to general psychological mechanisms of emotional self-regulation were demonstrated, and psychosocial reasons related to change were discussed. The study also provided suggestions for future research regarding individual differences, components of emotion, and methodological concerns. In general, the current study has increased understanding of the music-related emotional experiences from the viewpoint of theoretical propositions regarding individuals' lifelong psychosocial development and emotional self-regulation. In essence, the study provided further knowledge about music-related emotions as a functional and meaningful part of human behavior.

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References

Arnett, J. J. (1995) Adolescents' uses of media for self-socialization. *Journal of Youth and Adolescence*, 24(5), 535–549.

Atchley, R. C. (1977). *The social forces in later life: An introduction to social gerontology*. Belmont, CA: Wadsworth.

Behne, K. (1997). The development of 'Musicerleben' in adolescence: How and why young people listen to music. In I. Deliége & J. A. Sloboda (Eds.), *Perception and cognition of music* (pp. 143–159). Hove: Psychology Press.

Brattico, E., Pallesen, K. J., Varyagina, O., Bailey, C., Anourova, I., Jarvenpaa, M., et al. (2008). Neural discrimination of nonprototypical chords in music experts and laymen: An MEG study. *Journal of Cognitive Neuroscience*.

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion*, 27(2), 103–123.

Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: methodological challenges and directions for child development research. *Child Development*, 75(2), 317–333.

Davidson, J., Lange, A. McNamara, B., & Lewin, G. (2008). *The silver chain to learning and wellbeing: Group singing*. Paper presented at the 2nd European Conference on Developmental Psychology of Music, 10–12 September, London, UK.

DeNora, T. (1999). Music as a technology of the self. *Poetics: Journal of Empirical Research on Literature, the Media, and the Arts*, 26, 1–26.

Eisenberg, N. (2004). Emotion-related regulation: An emerging construct. *Merrill-Palmer Quarterly*, 50(3), Special Issue: The Maturing of the Human Developmental Sciences: Appraising Past, Present, and Prospective Agendas, 236–259.

Eisenberg, N., & Spinrad, T. L. (2004). Emotion-related regulation: Sharpening the definition. *Child Development*, 75(2), 334–339.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.

Erikson, E. H. (1980). *Identity and the life cycle*. New York: Norton.

Feldman-Barrett, L., & Gross, J. J. (2001). Emotional intelligence: A process model of emotion representation and regulation. In T. J. Mayne & G. A. Bonanno (Eds.), *Emotions: Current issues and future directions* (pp. 286–309). New York: The Guilford Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist*, 56(3), 218–226.

Gantz, W., Gartenberg, H. M., Pearson, M. L., & Shiller, S. O. (1978). Gratifications and expectations associated with pop music among adolescents. *Popular Music and Society*, 6, 81–89.

Garnefski, N., Teerds, J., Kraaij, V., Legerstee, J., & Van den Kommer, T. (2004). Cognitive emotion regulation strategies and depressive symptoms: Differences between males and females. *Personality and Individual Differences*, 36, 267–276.

Gembris, H. (2008). *Musical activities in the third age. An empirical study with amateur musicians*. Proceedings of the 2nd European Conference on Developmental Psychology of Music, 10–12 September, London, UK.

Greasley, A. E., & Lamont, A. M. (2006). *Music preference in adulthood: Why do we like the music we do?* Proceedings of the 9th International Conference on Music Perception and Cognition, 22–26 August, Bologna, Italy.

Gross, J. J. (1998) Sharpening the focus: Emotion regulation, arousal, and social competence. *Psychological Inquiry*, 9(4), 287–290.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348–362.

Gross, J. J., Carstensen, L., & Pasupathi, M. (1997). Emotion and aging: Experience, expression, and control. *Psychology and Aging*, 12(4), 590–599.

Havighurst, R. J. (1971). *Developmental tasks and education*. New York: Longman.

Hays, T. (2005) Well-being in later life through music. *Australasian Journal on Ageing*, 24(1), 28–32.

Hays, T., & Minichiello, V. (2005). The meaning of music in the lives of older people: A qualitative study. *Psychology of Music*, 33, 437–451.

Izard, C. E. (2002). Translating emotion theory and research into preventive interventions. *Psychological Bulletin*, 128(5), 796–824.

Juslin, P. N., & Laukka, P. (2004). Expression, perception, and induction of musical emotions: A review and a questionnaire study of everyday listening. *Journal of New Music Research*, 33(3), 217–238.

Laiho, S. (2004). The psychological functions of music in adolescence. *Nordic Journal of Music Therapy*, 13(1), 49–65.

Larsen, R. J. (2000). Toward a science of mood regulation. *Psychological Inquiry*, 11 (3), 129–141.

Larson, R. (1995). Secrets in the bedroom: Adolescents' private use of media. *Journal of Youth and Adolescence*, 24(5), 535–549.

Laukka, P. (2006). Uses of music and psychological well-being among the elderly. *Journal of Happiness Studies*. DOI 10.1007/s10902–006–9024–3.

Levinson, D. J., Darrow, C. N., & Klein, E. B. (1978). *Seasons of a man's life*. New York: Random House.

Levinson, D. J., & Levinson, J. D. (1996). *Seasons of a woman's life*. New York: Alfred A. Knopf.

Nevid, J. S., & Rathus, S. A. (2005). *Psychology and the challenges of life: Adjustment in the new millennium* (9th ed.). Hoboken, NJ: John Wiley & Sons.

North, A. C., Hargreaves, D. J., & O'Neill, S. A. (2000). The importance of music to adolescents. *British Journal of Education Psychology*, 70, 255–272.

Oatley, K., & Jenkins, J. M. (1996). *Understanding emotions*. Oxford: Blackwell.

Parkinson, B., Toterdell, P., Briner, R. B., & Reynolds, S. (1996). *Changing moods: The psychology of mood and mood regulation.* New York: Addison Wesley Longman Publishing Company.

Roe, K. (1985). Swedish youth and music: Listening patterns and motivations. *Communication Research*, 12(3), 353–362.

Rusting, C. L., & DeHart, T. (2000) Retrieving positive memories to regulate negative mood: Consequences for mood-congruent memory. *Journal of Personality and Social Psychology*, 78(4), 737–752.

Ruud, E. (1997). Music and identity. *Nordic Journal of Music Therapy*, 6(1), 3–13.

Saarikallio, S. (2008). *Cross-cultural investigation of adolescents' use of music for mood regulation*. Proceedings of the 10th International Conference on Music Perception and Cognition, 25–29 August, Sapporo, Japan.

Saarikallio, S., & Erkkilä, J. (2007). The Role of music in adolescents' mood regulation. *Psychology of Music*, 35(1), 88–109.

Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (1999). Coping intelligently. Emotional intelligence and the coping process. In C. R. Snyder (Ed.), *Coping, the psychology of what works* (pp. 141–164). New York: Oxford University Press.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students*. Harlow: Pearson Education.

Schwartz, K. D., & Fouts, G. T. (2003). Music preferences, personality style, and developmental issues of adolescents. *Journal of Youth and Adolescence*, 32(3), 205–213.

Sloboda, J. A. (1992). Empirical studies of emotional response to music. In M. R. Jones & S. Holleran (Eds.), *Cognitive bases of musical communication*. Washington, DC: American Psychological Association.

Sloboda, J. A., Lamont, A., & Greasley, A. (2009). Choosing to hear music: Motivation, process and effect. In S. Hallam. I. Cross, & M. Thaut (Eds.), *The Oxford handbook of music psychology* (pp. 431–440). New York: Oxford University Press.

Sloboda, J. A., O'Neill, S. A., & Ivaldi, A. (2001) Functions of music in everyday life: An exploratory study using the experience sampling method, *Musicae Scientiae* 5(1).

Small, C. (1998). *Musicking: The meanings of performing and listening*. Hanover, NH: University Press of New England.

Thayer, R. E., Newman, J. R., & McClain, T. M. (1994). Self-regulation of mood: Strategies for changing a bad mood, raising energy, and reducing tension. *Journal of Personality and Social Psychology*, 67(5), 910–925.

Tice, D. M., & Bratlawsky, E. (2000). Giving in to feel good: The place of emotion regulation in the context of general self-control. *Psychological Inquiry*, 11(3), 149–159.

Van Goethem, A. (2009). *The functions of music for affect regulation*. Paper presented at the 1st International Conference on Music and Emotion, 31 August–3 September, Durham, UK.

Wells, A., & Hakanen, E. A. (1991). The emotional use of popular music by adolescents. *Journalism Quarterly*, 68(3), 445–454.

Appendix

Outline for interviews:

Informing

- this research
- this interview

General background

- name, age
- short life history (home towns, work, family)

Music as hobby

- in what way has music been part of life?
- listening/active music making

Musical taste

- types of music
- situations

Music and mood

- does music affect mood?
- does music evoke emotional experiences?

Musical experiences

- meaningful memories with music
- strong experiences

Meaning of music

- is music good for you?
- why is music meaningful?

In relation to all the abovementioned: differences and changes based on

- situations and contexts
- changes by age/over the years
- the type of music