Social and Applied Psychological Explorations of Music, Health and Well-Being

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Introduction

The successes of modern Western healthcare have included extended life expectancy and reduced illness and disease. Along with these gains, we increasingly search for interventions to facilitate people's quality of life in terms of both individual and group senses of wellness, satisfaction and contentment (www.mindhealthconnect.org.au/wellbeing). In other words, well-being is a strongly desired outcome for modern everyday life. As the introduction to this volume indicates, engagement in music (via listening and playing) has been found to have a positive role to play in everyday well-being. Music listening accompanies us through our everyday activities, owing to the ever-sophisticated technologies at our fingertips. As this chapter will reveal, in Western contexts, we often regulate our moods listening to music with different types of music satisfying different needs. Additionally, making music exerts considerable demands

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on the human central nervous system as it interactively engages memory and motor skills. Even when well embedded in memory and automated—for example in someone who has a piece well learned—the activity of performing music engages significant cognitive load, requiring ongoing active decision-making and fine mental and motor adjustments. Evidence also points towards these very demands having positive effects on brain plasticity, with musicians possessing more pronounced mental flexibility among those engaged in skilled activities (Altenmüller and Gruhn 2002; Altenmüller et al. 1997; Schellenberg 2004).

As suggested above, there are cognitive advantages for those who make music, but as a medium that typically has a strong social component, musical activity requires interpersonal interaction and aural and visual feedback to monitor and respond to unfurling music-specific and collaborative social cues from co-performers and/or audiences (Davidson and Broughton 2016). It seems that these interactions have further positive impact with the development of micro-social cue sensitivity as a vital part of music making. Cognitive enhancement and social skills can be developed at any time across the lifespan and, since music demands these intellectual and collaborative behaviours, it is particularly effective in accessing elements that help people feel in control, socially included and consequently experience positive well-being outcomes (see Davidson 2011).

The current chapter explores the specific well-being benefits that diverse forms of musical engagement can promote from the particular perspective of the social and applied psychology of music. Broadly speaking, this research has included explorations of the musical materials employed, the emotions evoked, the mode of presentation and the social context of the music. The disciplinary approach is predominantly evidence-based, addressing empirical questions (Skingley et al. 2011).

Historical Context

The first social psychologist of music to contribute to the field was Paul Farnsworth (1899–1978), with the text *The Social Psychology of Music* (Farnsworth 1958, 1969). Farnsworth was a radical behaviourist whose accomplishments in the psychology of music at Stanford were trailblazing.

He researched the historical and philosophical underpinnings of the various schools of psychology in his acclaimed publication with sociologist Richard LaPiere, *Social Psychology* (LaPiere and Farnsworth 1949).

Why begin with a reminder of investigative beginnings? In part to show that the modern discipline of psychology has been interested in the systematic study of music as a behaviour leading to social benefit for over 60 years. Also, to highlight that Farnsworth's early investigations explored music's potential for: expressing characteristics of the individual in society; reflecting and generating the processes of socialisation; and aiding with social adjustment and social interaction. The words 'health' and 'well-being' are not part of his discourse, but it is clear that music was explored as a tool for social facilitation and, in this way, was evaluated in terms of its contribution to social well-being. The research explored in the current chapter includes studies which have similar social and applied psychological agendas, their explicit intention being to study music and its role in a social context. Whether or not a specific intention of well-being benefits was a part of the research design in the cases explored, both health and well-being outcomes were nonetheless realised.

Continuing with the history of Farnsworth's studies in the 1940s and 1950s, it is vitally important to realise that his work was radically different from equivalent studies in the main field of psychology that were focused on an individual's perception and cognition and did not consider social and cultural impact on these capacities (North and Hargreaves 2008). In his texts, Farnsworth stressed what he believed to be the misguided nature of much of the psychological enquiry: that it focused on only what happened in the brain, usually explored in a sequence from sensation to thought and action. In other words, the role of social interaction was ignored in terms of how thought and perception were shaped. The orientation of Farnsworth's ideology is found in the introduction to the third edition of the textbook, *Social Psychology*, that 'the behavior of man [sic.] is largely a product of the behavior of other men [sic.], known collectively and abstractly as "society"' (LaPiere and Farnsworth 1949, p. 5).

After Farnsworth, the interest in social-psychological and applied aspects of music was relatively slow to emerge, with social psychologists tending to investigate theories that accounted for cultural practices, often manipulating a task experimentally to investigate its social impact. In

fact, the direct investigation of health benefits of musical engagement has been the principal focus of the discipline of music therapy. Music therapy has had a strong emphasis on the medical model of treatment, much of which has emerged from the discipline's roots in hospital settings—for example, being part of a multidisciplinary team treating a specific condition for functional health gain such as physical function improvement after stroke or mood regulation for bipolar disorder (Bunt 1994). But, it is important to acknowledge a strand of therapeutic practice and theory that emerged in Scandinavia that is now recognised as Community Music Therapy (Pavlicevic and Ansdell 2004), because it is typically focused within real-world community context, and has social interaction—'communitas'—at its core. An example of such music therapy might be work in a community choir or with a school class. This approach has as its distinguishing features that trained music therapists work as facilitators of social processes using music as the tool to direct the interpersonal and group relationships.

Music therapy is not the disciplinary focus of this chapter, but it is essential to acknowledge the powerful role music therapists have had in emphasising the role of the social context of music making in terms of the promotion of health and well-being. Those interested in this specific field are recommended to explore the work of Brynjulf Stige (e.g., Ansdell and Stige 2016; Rolvsjord and Stige 2013), and also Gary Ansdell (e.g., Ansdell 2014; Pavlicevic and Ansdell 2004).

After Farnsworth, the next significant psychology text on music and its social function came along some 60 years later, with Adrian North and David Hargreaves' (2008) *The Social and Applied Psychology of Music*. Their text maps areas of concern similar to those pursued by Farnsworth, but represents the burgeoning interest in the field that developed in the late 1990s. Reflecting theoretical refinements in psychological enquiries more generally, North and Hargreaves organised their discussions aligned to Willem Doise's (1986) intraindividual, interindividual, socio-positional and ideological frameworks that consider increasingly broad concepts and applications, reflecting the current volume's interest in micro- to macro-practical and theoretical accounts of music. Again, while North and Hargreaves did not promote a specific health and well-being perspective, they nonetheless addressed topics such as identity, listening

and performance behaviours, presenting research findings with implications for health and well-being benefits.

Given that all of the authors mentioned thus far have come from Western cultures and research paradigms, it is evident that the work undertaken in the field of social and applied psychology of music has been within Western societies, and, more specifically, with those of Caucasian European backgrounds. So inevitably, particular social practices form the evidence-base of the current chapter. This is problematic as there are other cultures where arts practices are strongly integrated into everyday life and whose roots are very clearly articulated as being of central importance to personal and cultural health (e.g., the Venda of Limpopo, South Africa—Emberly 2012). But, again, this is outside of the scope of the current chapter.

The current chapter presents a survey of recent social-psychological literature broadly, and the authors also draw from their own research offering case studies to highlight evidence of health and well-being benefits when applying a social-psychological approach to music studies. The chapter is constructed in three parts: the effects of listening to music; making music; and a final section which discusses theories that show promising application for future research that addresses health and well-being from a social and applied music psychology perspective. In each section, micro to meso levels are embraced, working through examples of studies that adopt intraindividual perspectives to those that realise inter-individual positive outcomes.

Social-Psychological Research on Music Listening and Its Relationship to Well-Being

Can Musical Preferences Influence Social Behaviour and Impact Well-Being?

One of the larger studies published exploring music and social behaviour was undertaken by North (2010). In it, 36,000 people in more than 60 countries were surveyed, aiming to uncover the relationship between personality and musical preference. Clear results were obtained:

Blues fans displayed high self-esteem, were creative, outgoing, gentle and at ease; Jazz fans had high self-esteem, were also creative, outgoing and at ease; Classical music fans showed high self-esteem, were creative, introverted and at ease; Rap fans had high self-esteem and were outgoing; Opera fans had high self-esteem, were creative and gentle; Country and Western fans were hardworking and outgoing; Reggae fans had high self-esteem, were creative, were not hardworking, but were outgoing, gentle and at ease; Dance fans were creative and outgoing, but not gentle; Indie fans had low self-esteem, were creative, not hardworking and not gentle; Bollywood fans were creative and outgoing; Rock/Heavy metal fans had low self-esteem, were creative, not hardworking, not outgoing, gentle and at ease; Chart Pop fans had high self-esteem, were hardworking, outgoing and gentle, but not creative and not at ease; and Soul fans had high self-esteem, were creative, outgoing, gentle and at ease.

What can we say about North's findings in terms of the theme of the current volume? That specific music attracts specific types of people? These findings offer a snapshot of the cohorts studied at a specific point in time and do not speak to causation, that is, the factors that are influencing these results. A preference for certain musical genres may have resulted from exposure to specific social environments. Also, people with particular personality traits may have predispositions to certain states and may be attracted to music that expresses their view of the world or their personal feelings in relation to beliefs and social situations (see Davidson and Garrido 2014).

One explanation of musical preference is Drive Reduction Theory, which proposes that we seek homeostasis so that when tension is present as a result of behaviour like aggression or grief, the person releases emotions in order to re-establish a state of balance. Accordingly, it has been argued that music listening can allow for the release of negative emotions in a harmless way, perhaps preventing that person from expressing these emotions through other potentially less socially acceptable means (Berkowitz 1962). It is possible that music such as rap and metal, which are often referred to as 'problem music' (North and Hargreaves 2006) may actually have a beneficial effect, allowing a cathartic release of psychological tension (Davidson and Garrido 2014).

Social Learning Theory, however, suggests that modelled behaviour or ways of thinking can encourage specific forms of behaviour that can be manifest at the small-scale, individual or mass-societal scale (Bandura et al. 1961). According to this theory, exposure to positive or negative emotions through various media can induce the emotions and/or encourage the behaviour seen.

Drive Reduction and Social Learning theories are both supported by logical arguments and help us to explain a relationship between personality and musical preference and also offer frameworks for how observed behaviours might become applied in 'treatment' conditions to assist well-being outcomes. Schäfer et al. (2013) identified three underlying dimensions for listening to music. The first, as an expression of social relatedness (e.g., musical listening might operate as a function of social group allegiance and self-identity) is clearly shown in the example of the musical preference research cited above. The second reason is to achieve self-awareness (e.g., listening helps when thinking about who you are and want to be); again this relates to preference and sense of identity. But the third, to regulate mood (e.g., listening to help relax or get into a more positive mood), is the most often cited reason for listening to music (Lonsdale and North 2011). It is possible to see applied potential in research such as North's work on musical preference and personality. For example, an association has been found between clinical depression and mood disorders and the preference for certain genres including heavy metal and techno (Doak 2003). So, if preference for heavy metal music is, as North found, correlated with over-sensitivity, moodiness, pessimism, discontentment, indifference to the feelings of others and even aggressiveness (Wells and Hakanen 1991), it might be that other genres of music can be used to help shift the mood state of someone experiencing negative emotional states after listening to heavy metal music.

Mood Management

At a macro level, happiness is often correlated with life satisfaction, and in combination these two factors are reported as the chief components of subjective well-being (Diener et al. 2009). In line with this relationship

between happiness and positive well-being, 'mood management theory' by Silvia Knobloch and Dolf Zillmann (2002) argues that Westerners' media consumption is based on a generic goal to reduce bad moods (anxiety and depression) and increase good moods (to be happy and positive). In the specific case of music, this theory suggests that people will prefer music that is going to make them happier, and also implies the potential for positive 'self-medication' using music.

William Thompson et al. (2001) carried out systematic listening studies to find that enjoyment ratings increased for music noted to represent happiness—fast classical music in a major key—when compared to a slow piece in a minor key. Even when listeners heard different versions of the same piece, but that was varied in tempo and key, liking ratings were still the highest for the happier sounding versions in fast tempos and major keys (Husain et al. 2002).

Further to this, different socio-economic groupings and generations report slightly different psychological benefits of listening to music. But, interestingly, upbeat and happy mood are not the only moods reported. Suvi Saarikallio and Jaako Erkkila (2007), for example, found that adolescents regulated their moods for the following effects: Entertainment (to enhance or maintain a happy mood), but also Revival (to relax or be rejuvenated), Mental Work (mental contemplation and reappraisal of emotions), Discharge (release and venting), Diversion (distraction from worries), Solace (to obtain comfort, support and emotional validation), and Strong Sensation (to induce intense emotion experiences). These different reports of music's uses have been captured in 'optimal stimulation theory' (Zentall and Zentall 1983), which states that there is an ideal level of arousal that produces the most comfortable and productive outcomes for each person that is dependent on more enduring traits like personality and also how much arousal is experienced when listening. Accordingly, a person in a high state of arousal would use slower music to lower their state of arousal in order to help them feel calmer and more relaxed. Investigating variation in mood-related uses of music, Sandra Garrido and Emery Schubert (2011) found that arousing music was used while carrying out mundane activities like waiting; or to improving concentration when tired. To calm down, people would generally listen to slower, simpler structured music.

However, to elaborate, there is evidence from research concerning everyday listening which suggests that arousal optimisation does not necessarily involve moderating from high to low (or low to high) arousal. Rather, music selections may be relative to a listener's arousal-based goals (Krause and North 2014). For instance, people prefer high-arousal music for aerobic exercise and low-arousal music for relaxation (Hargreaves and North 2010; North and Hargreaves 1996, 2000). In this way, people prefer music that matches their activity with regard to arousal level, and recent research concerning music playlists reiterates that finding (Krause and North 2014). This is evident with regard to specific mood-related uses of music too; as Garrido (2017) discussed, there are times when people seem to 'wallow' and 'enjoy having a good cry' (to paraphrase a sentiment she found reported across a range of different music listeners). Psychological theories can also help to explain this kind of behaviour. For example, a modified mood management theory suggests that humans will delay immediate gratification in order to enjoy more complex benefits such as being able to build up and then release negative emotions through a process of catharsis (Larsen 2000).

Garrido (2017) reported one participant who described obsessively listening to music that made him feel both romantic and melancholic at once. Other studies have additionally found that depressed individuals disliked energetic music (Punkanen et al. 2011). People with depression are reported as having a reduced capacity to regulate their moods successfully. They frequently engage in behaviour such as rumination, which is likely to extend the duration of sad feelings and they have low motivation to do things that would improve their mood (Forbes and Dahl 2005).

Garrido and Schubert (2015) asked participants to choose pieces of music that made them sad and happy then listen to them reporting on the outcome. Results revealed that depression and general mood disturbance levels rose for *all* participants when listening to sad music. But those who tended to have the lowest initial mood levels, experienced greatest mood improvements after listening to happy music. This would suggest that listening to sad music is not a useful or 'healthy' strategy for managing sad moods for people with depression. However, for those experiencing typically moderated mood, music can help.

Garrido and Schubert (2013) also explored the relationship between the enjoyment of music evoking negative emotions and certain personality traits such as absorption, empathy and rumination. An online survey including the Like Sad Music Scale (LSMS) designed by Garrido revealed high scores in absorption (total immersion) were correlated with the enjoyment of strong emotions in connection with sad music. The findings suggest that people displaying absorption are capable of disconnecting from the unhappiness typically experienced with negative emotions. In other words, they could 'enjoy' feeling sad listening to music without experiencing the negative emotions they would have with a real life incident.

In sum, the research on music and mood management cited above suggests that there are several interacting factors in how people are affected by music. Overarchingly, even complex phenomena like enjoying a good cry to music can have positive well-being outcomes, but these phenomena are complex with a number of factors including personality operating.

Music Listening, Technology and Self—And Other—Regulation

Referring back to the three functions of music listening, rapidly changing technologies allow us to experience music of any sort, in any place, at any time. Recent social-psychological scholarship has begun to consider the devices used and how music is selected to listen to in everyday contexts (Krause and North 2017a; Krause et al. 2014, 2015, 2016b). Clearly this has implications for how we engage with music, especially potential for emotion regulation. Digital and internet technology enables people to more actively choose how they encounter music (Krause and North 2016). For instance, as the years pass, people increasingly create their own playlists (e.g., Heye and Lamont 2010) and streaming services have altered people's relationships with music via ownership/access (Mäntymäki and Islam 2015; Sinclair and Green 2016).

One systematic way to investigate individual music use habits has been the 'Experience Sampling Method' (Sloboda et al. 2001; see also Greasley

and Lamont 2011; Krause et al. 2015; Juslin et al. 2008; North et al. 2004). Its methodological advantage is that it is naturalistic: participants carry out their everyday activities and throughout the day they receive messages to answer questions about their musical activities as they move around in their daily routine. Moreover, an advantage is that it typically exploits the everyday tools used for music listening (e.g., mobile phones). Using the Experience Sampling Method, Amanda Krause and colleagues (Krause et al. 2014, 2015, 2016b) explored how listening devices (e.g., stereo, mobile phone, radio) and methods used for selecting the music (e.g., playlist, shuffle, specific choice) influenced the listeners' experience of that music.

The study sampled 177 residents of the UK, with just over 40% being university students (mean age of 32 years). Of over 2400 messages sent out (people were texted twice a day at different times for a week), participants reported encountering music 46% of the times they received a text. Of course this percentage strongly reflects the cohort, but that means that almost half of these 177 peoples' daily lives included music (indeed, the majority reported engaging in music listening for at least one hour a day).

While the results supported earlier work regarding where and when music was heard, importantly, Krause and colleagues focused on the level of control or choice that the participants experienced, and these findings can be considered with regard to everyday experiences and well-being. Results concerning the devices on which the music was heard indicated that mp3 players and personal computers (devices with high control) led to contentment and motivation, while the radio and broadcasted music in public (devices with low control) led to feelings of lethargy (Krause et al. 2015). The results considering the ways in which people select music (e.g., listening to the radio, choosing a specific item, random/shuffle, not having any control, someone else choosing, playlist, live performance, etc.) reiterated that one's experience of music in everyday life is related to control. Indeed, selection methods for which individuals perceive greater control gave rise to more positive responses to the music, including motivation and enjoyment (Krause et al. 2014). With regard to mood, people experienced positive affective experiences when their personal music was under their control, as opposed to music under the control of another person (Krause et al. 2014). Thus it was shown that newer,

digital technologies allow for more personalised listening choices, reflecting an active (as opposed to passive) use of music by the individual listener (Krause et al. 2016b).

The idea of control relative to music experienced in people's daily lives is important to consider with regard to mood and health and well-being more broadly. Research supports the link between control and health. For instance, a growing body of research has demonstrated that music listening can affect one's perception of pain and also one's recovery. For example, it has been found that preferred music increased one's tolerance and decreased anxiety when experiencing cold pressor pain (Mitchell et al. 2008) and a trip to the dentist, or having minor surgery under local anaesthetic can be better tolerated if we attend to music we know and like and use it as a distractor (Mitchell and MacDonald 2006). Overarchingly, it seems that an individual can use music under their own control positively. Broader extrapolation then links less control with less benefit, and certainly a lowered ability to self-manage via music.

Examining playlist uses in some detail, we might consider these to have potential 'self-medicating' functions. Digital listening technologies via playlists and mobile applications 'apps' can promote self-management of mood and health through their enhanced interactivity (Kibby 2009). As Tia DeNora (2000) asserted that listeners act as personal DJs, selecting music they feel they need to hear at different times and in different situations, playlists may afford listeners just that ability (Krause and North 2014). Indeed, in addition to using mobile listening devices to cope with stress and provide distance from unwanted environmental intrusions (Skånland 2011), it is possible that listeners could use listening apps to promote mood regulation and mindfulness. Recent findings concerning playlists considered everyday music listening in the context of eight different situations illustrated that preferred playlists differed by situation; moreover, the music selections were subject to injunctive norms (Krause and North 2014). That is, the music selected for a wedding playlist was much more homogeneous than that selected for listening when washing dishes or while on public transport—thus, broader social frameworks influence listening even at the level of an individual listener. Further, Jane Davidson and Sandra Garrido (2014) found that even traditional ceremonies like weddings and funerals are changing. For instance,

the deceased often leaves a playlist for the funeral that uses joyful music to celebrate the person's life and arouses responses such as fun and laughter in its aim to elicit fond memories rather than feelings of sadness and loss. This suggests that emotional function of music in ceremonies has the capacity to be used flexibly and for a range of beneficial outcomes.

As previously mentioned, little research has been done to consider macro-level correlates of music listening. However, recent research by Amanda Krause and Adrian North (2017c) demonstrated seasonal correlates of musical taste with regard to playlists. Specifically, their findings reported listening preferences for melancholy music for seasons of the year with cooler weather, arousing music during warmer seasons, and serene music for spring. Notably, these findings match the seasonal research concerning factors other than music, such as financial behaviours, criminal behaviours and mood disorders. Importantly, this sort of research highlights how cultural factors in everyday life may play a role in music behaviours, and Krause and North (2017c) advocate for more consideration of research across the macro areas of influence.

Thus far, we have explored social-psychological approaches to music and well-being in relation to listening; however, we now briefly summarise recent relevant findings that concern the health and well-being benefits of music making, again from a social-psychological and applied research perspective. Given that many chapters in the current volume are focused on music making, we have chosen to highlight some of our own recent empirical work to tackle this specific aim to give a fresh perspective (e.g., Lee et al. 2016).

Social-Psychological Research on Music Making and Well-Being

Participation Benefits to Well-Being

We begin this exploration of music making research by highlighting a challenge for researchers to identify the specific benefits that diverse forms of musical engagement may afford. In part, the difficulty arises in that many consider the value of participating in the arts as self-evident,

disregarding the need for systematic investigation into the topic (Skingley et al. 2011), and also because it is challenging to establish causal links between musical activities and specific health and well-being benefits (MacDonald et al. 2012). Moreover, two particular shortcomings concerning such work are the absence of both a common definition to 'health' and 'well-being' and application of a theoretical model (Clift and Hancox 2010; Livesey et al. 2012). Further, even though there has been a growth in terms of work that considers musical activities in terms of espoused well-being and health benefits, much of the prior work lacks objective evidence (Clift and Hancox 2010; Krause et al. 2016a).

Previous studies have highlighted positive relationships between music participation, health and well-being in terms of social, emotional, cognitive and physical health, musicianship, spiritual, identity, self-improvement and life satisfaction benefits. Illustrative examples of social benefits include networking, socialising and nurturing friendships (Eley and Gorman 2010; Jutras 2011; McQueen et al. 2013; Rohwer 2012), as well as feeling connected to and being involved in a community (e.g., Creech et al. 2013; Dingle et al. 2012; Gembris 2012; Von Lob et al. 2010). Emotional benefits include the use of music for mood regulation (e.g., Livesey et al. 2012; Judd and Pooley 2014), producing positive emotions such as feeling uplifted (e.g., Bungay and Skingley 2008; Coffman 2008; Hallam et al. 2012a; Jacob et al. 2009), stress release and relaxation (e.g., Clift et al. 2008; Jutras 2011), processing and expressing emotions (e.g., Bailey and Davidson 2005; Hays 2005).

Cognitive benefits have included thinking about self-esteem, self-worth and identity (e.g., Hallam et al. 2012b; Lally 2009). Other cognitive benefits refer to memory, concentration and intellectual stimulation (e.g., Creech et al. 2013; Gick 2011; Southcott 2009) and creativity and imagination (e.g., Kokotsaki and Hallam 2011; Lehmberg and Fung 2010). Music participation can facilitate spiritual experiences and transcendent feelings (e.g., Kokotsaki and Hallam 2007). These feelings may be religious in nature (e.g., Livesey et al. 2012; Rohwer 2010) or more broadly related to experiencing something "deep and meaningful" (e.g., Beck et al. 2000), a peak experience (Cohen 2007) or an aesthetic experience of beauty (e.g., Laukka 2007; Livesey et al. 2012).

Other social-psychological outcomes include perceptions of improved life satisfaction and quality of life (e.g., Clift et al. 2010; Douglas 2011). Sometimes this is referred to as life satisfaction or quality of life (e.g., Clift et al. 2008; Gembris 2008), while in other research, as feelings of satisfaction or a satisfying experience (e.g., McQueen et al. 2013; Tonneijck et al. 2008). Other research has pointed to benefits in terms of mental well-being (e.g., Dabback 2009; Jutras 2011); personal, overall or general well-being (e.g., Hays 2005; Lord et al. 2010); emotional well-being (e.g., Coffman 2008; Michalos 2005); and psychological well-being (e.g., Lehmberg and Fung 2010; Tsugawa 2009). In addition, evidence demonstrates that musical involvement provides an enriching experience (e.g., Tonneijck et al. 2008; Tsugawa 2009), adds meaning/purpose to life (e.g., Pothoulaki et al. 2012; Southcott 2009) and promotes feelings of vitality and rejuvenation (e.g., Forssen 2007; Gembris 2012; Varvarigou et al. 2012).

It is important to note, however, that previous studies have focused on different social-psychological elements making such work limited in a number of important ways. In addition to different foci (e.g., social or emotional outcomes), some research was conducted with a specific population (e.g., the elderly, professional musicians) and/or considered a specific type of musical participation (e.g., singing, community band). Moreover, results were reported largely independent of other work using researcher-developed and defined categorisations. Therefore, in order to address the lack of any empirical attempt to categorise the potential social-psychological benefits of music participation widely, we (Krause et al. 2016a) undertook a targeted mini review of the current state of literature. Ninety-seven of 202 original published works (meeting the selection criteria) identified well-being correlates in some manner. A meta-analysis revealed a number of facts about the present state of this research base. Firstly, most of the research that detailed well-being benefit was qualitative or mixed methods research, with little quantitative research. Secondly, most of the work was community participation-focused as opposed to explicitly healthcare or education/professional practice-focused. Thirdly, a surprising number of works did not adequately detail characteristics of the sample and/or methodology (e.g., type of music activity) involved.

Incredibly, the review data identified more than 500 musical correlates of well-being. As no previous empirical study has made a systematic categorisation of these correlates, we created a measure through a multistep process involving removal of redundancy, review by a panel of experts and a pilot test of the measure (Krause et al. 2016a). The 36-item measure, which covers five dimensions of social-psychological well-being benefit types (namely, mood and coping, esteem and worth, socialisation, cognition and self-actualisation), addresses a gap in the research and we regard it as a useful tool for future research.

In addition to the consideration of the benefits or outcomes associated with music making, a social-psychological perspective considers the motivations people have to participate in music making activities. Such motivations can be related to the perceived health and well-being benefits of participating in music making activities. For example, through focus groups with older community singers, the current authors and colleagues (see Lee et al. 2016) identified different motivations to attend community choirs. Some of the reasons were music-related (the importance of singing in their lives and experiencing pleasure from singing without pressure); however, interestingly, the majority of the reasons were tied to social and health benefits. In particular, these individuals highlighted how they experience spiritual and uplifting emotions, form bonds with the other members and find strength in overcoming their age, disease and hardships (Lee et al. 2016).

Supporting previous research, participation in the singing group provided the opportunity to experience benefits to health and well-being, including experiencing and working through emotions, socialising with other people and sharing experiences and creating purpose and meaning in life. While singing was a primary motivator to join the groups, participants expressed how the communal, social and health benefits (improved breath control) reinforced and sustained their involvement (Lee et al. 2016). This evidence serves to illustrate how social-psychological perspectives can illuminate micro- to meso-level factors contributing to musical experience.

The role of the facilitator (i.e., the person who leads the music making activity) was also highlighted (Lee et al. 2016). The facilitator is an important social-psychological variable influencing motivation for investment in and the potential outcomes of the music participation. Indeed leadership

style and facilitation practices represent an area ripe for research with regard to how facilitators can promote participation in a way that explicitly promotes and fosters health and well-being (Lee et al. 2016, 2017).

Given that in order to experience benefits from music making, people must be involved in a musical activity, it is important to consider how facilitators stimulate engagement opportunities (e.g., music educators, community music leaders) and then promote long-term investment in individuals. Recently, the current authors (Krause and Davidson 2016) conducted semi-structured interviews with leading European and Australian music educator-research experts aimed at identifying best practices that facilitate investment towards life-long musical engagement. Focusing on the study participants' reflections of their own practices and beliefs, findings indicate influences exist across different social-psychological levels—from the individual learner and teacher to curriculum and educational frameworks to broader community and cultural frameworks.

While focused on promoting investment, the interviewees shared information reflective of how the promotion of musical investment has implications for health and well-being. In particular, findings demonstrated that beyond being familiar with music as a performer, creator and listener, facilitators also needed to understand how music can serve socio-emotional functions. Moreover, best practice acknowledges that music making exists within a broader cultural context which influences/shapes the experience.

While the research evidence concerning the social-psychological benefits of music making is growing, additional work on well-being outcomes is needed. Importantly, as Raymond MacDonald (2013) argued, the need exists for research concerning the relationships between music and well-being to better understand the processes and outcomes of musical participation.

Theoretical Considerations

Since we opened this chapter by presenting a short historical overview of how social-psychological and applied aspects of music research began, we would like consider some current theoretical thinking that can guide

future empirical research focused on music and health and well-being. In particular, there are at least four theoretical models that offer different yet complementary perspectives, including David Hargreaves, Dorothy Miell and Raymond MacDonald's (2005) Reciprocal Feedback model, Albert Mehrabian and James Russell's (1974) Pleasure-Arousal-Dominance model, Martin Seligman's (2011) PERMA model of well-being, and Jane Davidson and Sandra Garrido's (2014) Music Listening Goals Framework.

Reciprocal Feedback Model

Presented by Hargreaves et al. (2005), the Reciprocal Feedback Model outlines how three components, namely, the *music*, the *situations and contexts* and *individual* reciprocally influence the individual's *response* (see Fig. 1). Each of the dimensions influences and interacts with the others as well as the response. Important to the present discussion are three points. Firstly, as Hargreaves (2012) stated, 'the music, the listener and the context are in a constant state of mutual interaction' (p. 553). Secondly, the *situations and contexts* dimension covers elements spanning

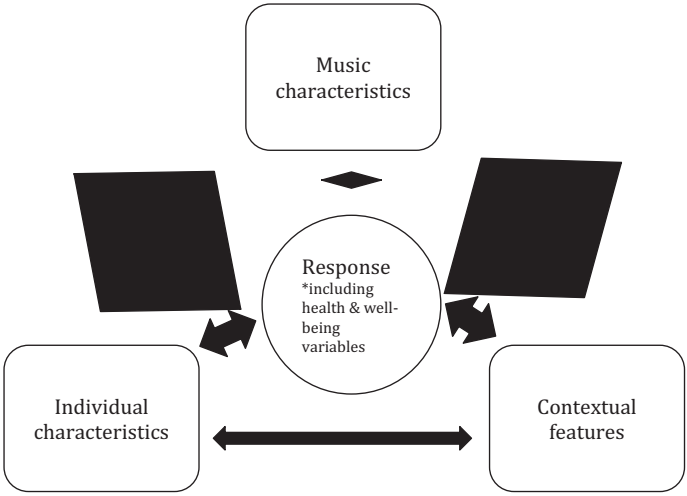

Fig. 1 Reciprocal Feedback Model based on Hargreaves 2012

Doise's (1986) levels of interpretation ranging from the broad cultural and social contexts down to everyday and immediate situations. Thirdly, in the revised and simplified reciprocal model of music processing, which more clearly encompasses music performance, creativity, listening and imagination, the response component may involve production, imagination and or perception of music (Hargreaves 2012). In this way, the theory applies to varied music experiences, including both listening and music making. The notion of inter-directional influences highlights how a response is not fixed, but depends on the interaction between the individual, music and context. By acknowledging the importance of contextual influences, the theory operates from a social-psychological perspective, making it a useful framework for considering music engagement with regard to health and well-being. Specifically, health and well-being variables of interest would occupy the middle *Response* space in the model. Whether focused on affective responses such as mood (e.g., the work discussed by Garrido above) or psychological well-being (e.g., the work by Krause et al. discussed above) or another measure of health, the model then takes into account the social-psychological influences.

Mehrabian and Russell's Pleasure-Arousal-Dominance Model

Mehrabian and Russell's (1974) model states that a person's response can be described in terms of three dimensions: pleasure, arousal and dominance. The pleasure dimension is defined as feelings of happiness to unhappiness; arousal is defined as mental alertness (e.g., sleepiness to frantic) or physiological arousal (e.g., increased heart rate); and dominance is defined as the feeling of being in or lacking control over one's environment (Mehrabian and Russell 1974; Yani-De-Soriano and Foxall 2006). The model has been used with regard to emotions and, recently, has been applied to everyday music (e.g., Krause's work on listening discussed earlier in this chapter). With regard to music, pleasure refers to the degree of preference or liking for the music, arousal concerns how arousing an individual finds the music, and dominance relates to how much choice and control a person has over their music choices (Krause and North 2017a, b).

While much research has previously considered music experiences in terms of pleasure and arousal, the addition of considering the dominance (control) dimension provides a richer understanding. Evidence regarding how we encounter our music (the earlier discussion in this chapter concerning the devices and selection behaviours) as well as the broader health research evidence concerning preferred music in pain and recovery settings illustrate that the concept of control is relevant to musical interactions. In particular, the model's dominance component links the idea of control directly to a person's experience of the situation and their surroundings. Krause and colleagues acknowledge that more research attention is needed to refine its application (Krause and North 2017a, b) including the consideration of music making in addition to listening, and future work could specifically address health and well-being outcomes. In particular, this promising theoretical model can be focused on well-being by considering how experiencing different levels of pleasure, arousal and dominance in combination might better promote health and well-being through music engagement.

PERMA Model

From positive psychology, Seligman (2011) constructed the five-component PERMA model of well-being. The five components include positive emotions (experiencing emotions such as hope, contentment, empathy and love), engagement (being deeply involved in a chosen activity or pursuit), relationships (regarding a person's ability to foster positive relationships with other people), meaning (which refers to having a deep understanding of why and how one does things) and accomplishment (one's goals and ambitions). This psychological model offers a framework for which the value and experience of music interactions/engagement can be interpreted, especially with its explicit focus on well-being (Lee et al. 2016, 2017). Using case study data describing successful Australian school music programmes, Lee et al. (2017) illustrated that school not only focused on skill development but provided opportunities aligned to the five PERMA categories, which, in turn, offered psychological well-being for all those involved. When designing future research on

health and well-being, this model offers an interesting framework and has clear implications for practice.

Music Listening Goals Framework

Focused on self-selecting music for listening in the everyday context, Davidson and Garrido (2014) offered a mood regulation framework concerning listening outcomes. Through various listening goals, both adaptive (e.g., improved mood) and maladaptive (e.g., rumination, worsened mood) outcomes can be experienced. Thus, it has a health focus. Moreover, although Davidson and Garrido presented the framework relative to listening, research has identified the included motivations as pertinent to both music listening and making. Thus, there is the potential to expand upon this framework to encompass music engagement more broadly (Fig. 2).

It is important to note that the four models mentioned above are not in conflict with each other. Rather, one can easily see how they fit together. Davidson and Garrido's (2014) listening goals framework provides depth to the *individual* component in the Reciprocal Feedback Model. Moreover, the consideration of pleasure, arousal and dominance

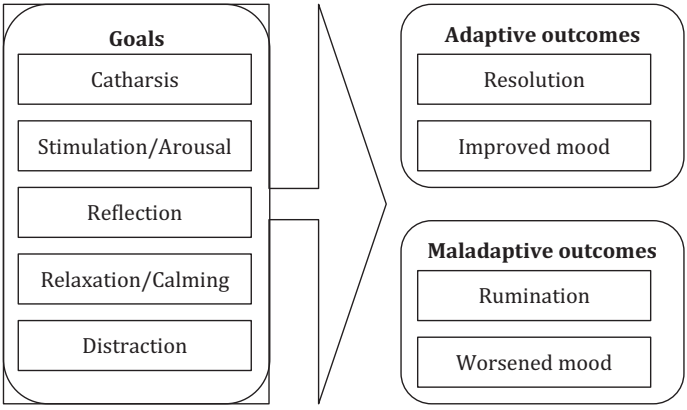

Fig. 2 Mood outcomes from music listening/making based on Davidson and Garrido 2014

(control) provides depth to understanding the individual's characterisation of the *music* and *situation* as well as his/her *response*. Applying the PERMA model's breadth facilitates consideration of psychosocial well-being across a range of dimensions. Moreover, though they may not explicitly focus on explaining health and well-being, by considering musical experience and engagement using such social-psychological approaches, these theoretical models can frame explorations into health and well-being response.

Conclusions

In summarising some of the most recent research and theory on the social-psychological and applied aspects of music engagement, we have demonstrated how a social-psychological perspective can help to understand how such influences shape our musical experiences and health and well-being. Such social-psychological influences range from micro- to macro-level determinants, interacting across the levels to influence our experiences every day. Just as the words 'health' and 'well-being' were not a part of Farnsworth's discourse, not all of the recent social-psychological work explicitly labels itself as pertaining to health and well-being. Regardless, it is clear that music continues to be explored with regard to its social uses and that the associated findings help to refine our understanding of the connection between music and well-being.

As pointed out earlier in the chapter, one of the shortcomings of this kind of research to date has been its lack of consideration of non-Western and cross-cultural contexts. The current researchers are engaging with exciting work that intends to blend the social and applied psychology of music with acculturation psychology (Berry et al. 2011), in which we wish to explore the processes involved in musical cultural exchanges between two or more initially distinct groups. We hope, through this exploration, to understand the changes enacted in each group as a result of these musical exchanges and will consider the broader health and well-being benefits.

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