

Article



Listen Up: A case study examination of focused listening

 $\begin{array}{c} \text{Musicae Scientiae} \\ \text{I-I9} \\ \textcircled{o} \text{ The Author(s) 2023} \end{array}$

Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/10298649231203628 journals.sagepub.com/home/msx



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Abstract

Today, most everyday music listening is an accompaniment to other activities; it is far less common that listening is someone's primary activity, receiving most of their attention. In this article, we present a case study, Listen Up, run by Indigo Project, a mental health organization in Sydney, Australia, in which we explored relationships between participants' responses to the experience and their demographics and styles of music engagement. A sample of 187 Australian residents (aged 20–64 years) who attended Listen Up completed a survey measuring music engagement; emotional responses to the experience; perceived outcomes of the session; pre- and post-measures of stress, mood, and anxiety; and free-text responses to questions concerning their experiences of listening mindfully and any thoughts or feelings that arose during the session. Participants experienced an increased mood and decreased levels of stress and arousal after taking part in Listen Up. Their focused-listening experiences were not simply characterized by enjoying the music; rather, the emotions evoked were varied and complex. We characterized their emotional responses as negative, positive, evocative and expressive, and sad; in addition, participants characterized their own experiences as a cathartic journey resolving into a positive, peaceful, and calm state. Reported outcomes of participating in Listen Up included experiences described as being emotionally challenging, therapeutic, and physically uncomfortable. An affective music engagement style was positively associated with evocative and expressive and sad emotional experiences, and therapeutic outcomes. As a focusedlistening experience, Listen Up provides participants with the opportunity not only to attend to music but also to reflect on and process their personal thoughts and feelings. This research provides evidence for the emotional and mental health benefits of focused music listening, such that, focused listening reflects opportunities for strong experiences with music in today's listening landscape.

Keywords

everyday music listening, focused listening, emotional response, catharsis, well-being

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With the listening technologies of the 21st century influencing the ways in which people interact with music (Nill & Geipel, 2010; North et al., 2004; Sloboda et al., 2009), people are able to control—to a greater degree than hitherto—what they hear in many, varied environments at any time (Krause et al., 2016; North et al., 2004). Because our access and ability to listen to music has never been more extensive, much of modern listening accompanies other activities in daily life (Krause, et al., 2014). For instance, many people listen to music while exercising, working, and commuting, among other activities (Greb et al., 2018; Krause & North, 2017; Krause et al., 2015; North et al., 2004). When used in the practice of mindfulness, however, music is often listened to in a very intentional, focused way, such that, other distractions are removed, and individuals are encouraged to maintain their complete focus on the music. Graham (2010) proposed that musical stimuli may serve as an ideal source of focus for mindfulness, and the literature suggests that music in mindfulness interventions can lead to a decrease in fatigue and an improvement in focus and mood (Lesiuk, 2016; Liu et al., 2021). Intentionally, listening to music has been shown to promote well-being in several ways, including the reduction of pain through physiological arousal, cognitive recovery, and mood (Dingle et al., 2021).

In therapeutic settings, a commonly used focused or intentional listening technique is known as guided imagery and music (GIM). GIM is a method of receptive music therapy that uses music in conjunction with relaxation techniques, visualization, and active imagination to treat a range of health concerns (Bonny, 2001; Grocke, 2010). During GIM, the client's experiences are guided by a trained therapist whose role is to accompany the client therapeutically on the journey in the music (usually pre-selected, Western, and classical music) (Bonny, 2001). GIM has been shown to have positive effects on the well-being of clients (Jerling & Heyns, 2020), with improvements to anxiety, depression, work stress, mood disturbance, quality of life, and interpersonal problems, among other benefits (e.g., Beck et al., 2015; Burns, 2001; McKinney & Honig, 2017). While originally designed as an intervention for use with individuals, GIM has also been utilized in group settings with similar effectiveness (e.g., Rudstam et al., 2022, and their use of group music therapy for women with post-traumatic stress disorder [PTSD]). GIM has also been fostered in the practice of mindfulness as it allows individuals to experience the present moment and to take time to focus on a stimulus (Shum, 2020).

Music is used not only in the context of GIM but also in other ways, in mindfulness practices (e.g., Alqatari et al., 2022; Hernandez-Ruiz et al., 2021; Lesiuk, 2016; Liu et al., 2021; Sorensen et al., 2018). It has also been utilized to facilitate engagement in help-seeking (de l'Etoile, 2002), and to increase feelings of hope and ameliorate distress (McFerran et al., 2018), with music-based therapies shown to be particularly effective for those known to be ambivalent to or highly resistant to seeking health treatment (de l'Etoile, 2002).

Indeed, a growing body of research has evidenced the role of music and music listening in promoting health and well-being (Krause et al., 2018, 2021; McCrary et al., 2022; Raglio, 2021; Vidas et al., 2022), including both explicitly therapeutic and everyday engagement. Benefits arise, for example, through the association of listening with relaxation and enjoyment (e.g., Baylan et al., 2018; Diaz, 2013) and its use as a coping mechanism for dealing with stress (Adiasto et al., 2022; Krause et al., 2023; Vidas et al., 2021), pain (Howlin et al., 2022), and anxiety (Harney et al., 2023). Research has supported the use of everyday listening practices to cope with stress (e.g., Krause et al., 2023) manage one's moods and emotions (Randall et al., 2014; Saarikallio et al., 2013), and help with self-awareness (e.g., Elvers et al., 2018; Schäfer et al., 2013), although the extent to which music listening is effective (e.g., on reducing stress) depends on the individual (Galanakis et al., 2009) and their listening style (e.g., Miranda & Claes, 2009). For instance, people with an affective listening style are more likely to use music

to cope with everyday stressors (Krause et al., 2023). It is also possible that these benefits may be related to the nature and level of the listener's attention; Shifriss et al. (2014) report that individuals who indicated that they use music for mood regulation also reported focusing, or directing more attention, to their emotions.

Listening to music also has the potential to create strong emotional responses, including those known as strong experiences with music (SEM—e.g., Gabrielsson, 2010; Gabrielsson & Wik, 2003). SEM refers to intense (or peak) listening experiences that often bring about feelings of transcendence and transformation, expressed through both positive and negative reactions (Gabrielsson et al., 2016). Gabrielsson and Wik (2003) outlined common reactions reported during SEM, which included intense and/or powerful, positive and negative feelings; mood and/ or affect regulation; existential, transcendental, and religious aspects; self-confidence; community; and mixed, conflicting, and changed emotions. Gabrielsson (2011) also found that SEM has a wide range of personal and social consequences. For example, people reported that they experienced feeling free, refreshed, or as though they had experienced an inner purification (catharsis) that had had a healing effect (Gabrielsson, 2011). For some people, SEM provided the impetus for them to go on, relieving their mental pain, and offering them fresh hope and courage. Other people described feeling more open and unreserved, or reported that SEM had effected a change in their beliefs and view of the world (Gabrielsson, 2011). Similarly, Green (2016) found that participants attribute inspiration, influence, conversion, and continued motivation to epiphanies during, or as the result of, peak listening experiences.

This brief review indicates, then, that music listening is associated with benefits to health and well-being and, further, that focused listening, in particular, may affect emotional experiences. While recent research has begun to theorize contextual, everyday listening (e.g., Krause & North, 2017); little is known about focused listening in the contemporary, digital age. In this article, we present a case study, the Indigo Project's Listen Up, to examine a modern, focused, listening experience.

The Indigo Project's Listen Up

The Indigo Project is a mental health organization encompassing a psychology practice and a creative workshop academy hosting a range of workshops, courses, and events. Drawing on positive psychology, mindfulness, and neuroscience, it helps people deal with their overactive minds, reach their potential, and find greater meaning and value in their lives (https://www. theindigoproject.com.au/). The Indigo Project's range of workshops, courses, and events, in which music often plays a central role, address core themes, such as self-awareness and empowerment, as well as stress and anxiety management. The Indigo Project describes Listen Up as an immersive music mindfulness experience, designed to enhance the way we listen to music (https://www.theindigoproject.com.au/workshop/listen-up/; see also Welsh, 2017). The experience is designed for participants to experience music without distractions; therefore, participants are encouraged to pay attention, on purpose, and to use music as an anchor to the present moment. The Indigo Project's creative director, Rich Lucano, works with the founder, Mary Hoang, to curate the music for the experience. The music is selected to ground participants, calm them, and heighten their awareness of thoughts and emotions. During each Listen Up session, Mary guides attendees through a series of exercises designed to help participants listen mindfully to the soundtrack of the session.

Listen Up sessions traditionally take place in person, rather than online, in the Indigo Project's studio, and last for approximately 50 min. The lights in the studio are dimmed and participants are invited to lie down on cushions and mats. Two versions of Listen Up are

available. The guided-album experience uses a single album as the listening stimulus. The sound-journey experience involves listening to stimuli curated by Rich, drawing on soundtrack, ambient, and experimental music. In both versions, the stimuli are listened to in full, with subtle guidance designed "to aid participants in maintaining an awareness of thoughts, emotions and body sensations" (M. Hoang, personal communication, October 13, 2019). At the conclusion of the session, light gradually returns to the room, and the participants are invited to sit up and chat with each other, sharing their experiences, before leaving the session.

As a case study, Listen Up has the potential to further our theoretical understanding of the differences between *focused listening*, the type of listening promoted by Listen Up, and *background* listening, typical of modern everyday life in which people tend to listen when they are alone and doing something else at the same time. The study aimed to consider participants' experiences of Listen Up and was guided by the following research questions:

Research Question 1 (RQ1): What were participants' emotional responses to the Listen Up session, and were they related to their age and gender, and/or their style of music engagement?

Research Question 2 (RQ2): What were the outcomes of participating in Listen Up, as perceived by participants, and were they related to their age and gender, style of music engagement, and/or participation in a previous Listen Up session?

Research Question 3 (RQ3): Did participating in Listen Up have positive outcomes for mental health, including improvements in stress, mood, and anxiety?

Method

Participants

Individuals who attended a Listen Up session were invited to complete an anonymous short post-session survey. Anyone who attended more than one session may have received multiple invitations to participate (these were not tracked), so that, it is not possible to calculate an accurate response rate. Participation was voluntary and the Human Ethics Research Committee at The University of Melbourne approved this study (ID: 1750816).

A convenience sample was recruited. A total of 213 individuals participated in the project but because of incomplete or missing data, the final sample consisted of 187 people aged 20–64 years (M=34.22, Mdn=33, SD=9.10), of whom 138 identified as female (73.8%), 48 as male (25.7%), and one who did not report their gender (0.5%). The majority (67.4%) had low levels of music experience and training, as rated independently (see below), while 27.3% and 5.3% of participants had moderate and high levels, respectively. Only 14 participants (7.5%) described themselves as active musicians. On average, the sample listened to 3 hr of music per day (SD=2.96, range=0–24 hr). The majority (63.2%) completed the survey with reference to their first experience of participating in a Listen Up session.

Procedure and materials

Information about the study was sent by email to individuals who had taken part in a Listen Up session. The email included a web-link to the participant information sheet. When participants had provided their consent, they were asked to complete a post-session survey in the form of a series of web pages hosted on the Qualtrics platform. The survey consisted of items and

measures designed to obtain participants' details and characterize their experiences of taking part in Listen Up.

First, participants were asked to report their age and gender. To assess their musical background and experience, they were asked how important they felt music was, using a 7-point Likert-type scale from 1 (*Not at all*) to 7 (*Extremely*). They stated whether they considered themselves to be an active musician (*yes/no*) and provided an open-text response to Krause et al.'s (2015) prompt on their music experience and training. As per Krause et al. (2015; see also North & Hargreaves, 1995), three raters assessed each participant's level of music training and education as low, medium, or high.

Participants also used a 7-point Likert-type scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*) to respond to 23 items from the music engagement test (MET; Greenberg & Rentfrow, 2015) (e.g., "Music makes me want to dance" and "I am able to vent my frustrations through music"). These items examined participants' cognitive, affective, physical, narrative, and social processes when listening to music. Scores for each of the five MET subscales were computed for each participant.

To characterize their experiences of Listen Up, participants reported whether it was the first time they had heard the music stimuli (yes/no), and the number of Listen Up sessions they had attended in total including the present session. Participants used a 7-point Likert-type scale from 1 (Very low) to 7 (Very high) to respond to simple statements concerning their stress, mood, and anxiety pre- and post-sessions (e.g., "your stress level at the beginning of Listen Up today" and "your stress level at the conclusion of Listen Up today").

Participants used a 7-point Likert-type scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*) to indicate their emotional responses to the Listen Up session. The 17 items included nine from Tröndle et al.'s (2014) scale, amended to address the music (e.g., [it] "pleased me" and "made me think") and eight from Krause et al.'s (2018) scale, as used in the work of Kiernan et al. (2022) (e.g., [it] "made me calm" and "made me tense").

The first author developed 16 items to probe the perceived outcomes of Listen Up sessions, in consultation with the Indigo Project, and piloted them prior to the full-scale data collection. Each item began "As a result of participating in Listen Up . . ." and continued, for example, "I found myself crying" and "I gained perspective." Participants responded to each item using a 7-point Likert-type scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

Finally, participants were asked to comment, in their own words, on their experiences of "mindfully paying attention to sound during Listen Up" and the "thoughts, reflections, contemplations, and/or feelings [you] experienced during Listen Up."

Data analysis

We used factor analyses to examine participants' (1) emotional responses to the session (RQ1) and (2) perceived outcomes of the session (RQ2). We used principal components analysis with promax rotation because our primary purpose was to identify and compute composite scores for the underlying factors. We computed scores for subsequent analyses by averaging the items that loaded onto each resulting factor.

We conducted multiple regression analyses to further examine participants' emotional responses to Listen Up (RQ1; α = .013) and their perceived outcomes of attending Listen Up (α = .017; RQ2). In these regressions, each of the factor scores derived by the principal components analyses served as the dependent variable, and we entered gender, age, session attendance, and each of the five MET subscale scores (social, physical, cognitive, narrative, and affective) as the independent variables. We used three paired-samples t-tests (α = .017) to calculate mean differences between pre- and post-stress, mood, and anxiety scores (RQ3).

We used a reflexive and recursive approach to thematic analysis to analyze the participants' free-text responses. Specifically, we followed Braun and Clarke's (2013, 2019) six-step procedure. We began by familiarizing ourselves with the data. We identified semantically similar responses across the data set to generate codes rather than deriving them from a theory. We then reviewed and clustered the codes to develop themes, considering semantic similarities and implicit concepts as appropriate. We refined and finalized the themes and sub-themes to best represent the data relative to the research questions. The first author led the analysis, and the second author helped to review and refine the themes and sub-themes, taking the role of a critical friend (Sparkes & Smith, 2014). We acknowledge that we knowingly brought our experiences and knowledge into the analysis process (Braun & Clarke, 2013; Hemming et al., 2021). Both authors had observed Listen Up sessions, and the first author also drew on her experience researching everyday music experiences and well-being.

Results and discussion

Emotional responses to the session

A four-factor solution explained 60.75% of the variance in participants' emotional responses to the session (see Table 1). One of the 17 items ("the music pleased me") was eliminated because it failed to meet the minimum criterion of having a primary factor loading of .4 or above. Participants' emotional responses to the music (RQ1) can be characterized by four dimensions: negative (e.g., "made me tense," "made me frustrated," "made me angry"), positive (e.g., "made me laugh," "made me joyful," "made me happy"), evocative and expressive (e.g., "made me feel a sense of awe," "made me surprised"), and sadness (e.g., "moved me to tears," "made me sad"). The structure of the factors indicates that participants' emotional experiences were both positively and negatively valanced. Moreover, the correlations between the dimensions (Table 1) indicate that participants' emotional experiences may have been characterized by more than one of these dimensions.

The multiple regression analyses concerning the negative and positive factors were statistically non-significant, F(8, 161) = 1.053, p = .399, $R^2 = .050$ and F(8, 162) = 1.839, p = .073, $R^2 = .083$, respectively. Experiencing positive and negative emotions was not determined by age or gender, or style of music engagement, but an emotional experience commonly felt by all who participated in a Listen Up session. As shown in Table 2, the models concerning the evocative and expressive factor, and the sadness factor were statistically significant, F(8, 160) = 6.358, p < .001, $R^2 = .241$, and F(8, 162) = 3.009, p = .004, $R^2 = .129$, respectively. Participants with an affective style of music engagement were more likely to experience emotional responses characterized as evocative and expressive, and sadness. In addition, a cognitive style of engagement was positively associated with evocative and expressive emotional experiences. Furthermore, those who had attended more than one Listen Up session were more likely to experience sadness.

Perceived session outcomes

The principal components analysis with promax rotation used to examine the factors underlying participants' perceived session outcomes (RQ2) resulted in a three-factor solution explaining 61% of the variance (see Table 3). Three of the 16 items were eliminated because they failed to meet the minimum criterion of having a primary factor loading of .5 or above and only loaded on one factor (i.e., "I was aware of my feelings," "I gained perspective," and "I had space to process/explore thoughts/emotions").

Table 1. Loadings for principal components analysis with promax rotation of the emotional response items.

Item: "The music "	Factor 1	Factor 2	Factor 3	Factor 4
pleased me				
made me laugh		.503		
made me bored	.438		499	
surprised me			.617	
made me tense	.734			
made me joyful		.759		
made me think			.631	
made me frustrated	.779			
made me calm		.582		
made me feel a sense of awe			.622	
moved me to tears				.759
made me angry	.488			
made me peaceful		.676		
made me sad				.804
made me happy		.886		
made me anxious	.747			
frightened me	.528			
Eigenvalue	4.495	3.120	1.540	1.172
Percentage of variance	26.439	18.351	9.061	6.893
Cronbach's alpha	.785	.793	.647	.770
Correlation with Factor 2	395			
Correlation with Factor 3	171	.465		
Correlation with Factor 4	.243	.117	.390	

Note. Factor 1 = negative, Factor 2 = positive, Factor 3 = evocative and expressive, Factor 4 = sadness; values < .4 were suppressed.

As shown in Table 3, the perceived outcomes of participating in a Listen Up session can be characterized by three dimensions: emotionally challenged (e.g., "I felt emotionally uncomfortable," "I found myself crying"), therapeutic (e.g., "I felt a sense of healing," "I found myself at peace"), and physically uncomfortable (e.g., "I was aware of physical pain," "I felt physically uncomfortable"). As with the emotional responses, these factors indicate both positively and negatively valenced outcomes for participants. Again, the outcomes they perceived were varied and complex.

The multiple regression analyses concerning the emotionally challenged and therapeutic factors were statistically significant, F(8, 160) = 5.328, p < .001, $R^2 = .210$ and F(8, 163) = 3.726, p < .001, $R^2 = .155$, respectively. See Table 4 for all relevant regression output values. The overall model concerning the physical discomfort factor was statistically non-significant, F(8, 163) = 1.868, p = .068, $R^2 = .084$.

The results show that younger people were significantly more likely to have found their experiences both emotionally challenging and therapeutic, perhaps because it was unusual for them to focus on listening to music as opposed to hearing it as an accompaniment to another activity. It is not surprising that an affective style of music engagement was positively associated with the therapeutic as well as the emotionally challenged factor, probably because

 Table 2.
 Multiple regression analyses predicting the evocative and expressive, and sadness factor scores.

Variable	Evocative	Evocative and expressive factor			Sadness factor	ıctor		
	В	95% CI	β	<i>t-</i> value	В	95% CI	β	t-value
Constant	4.394	[3.541, 5.247]		10.173***	3.358	[.775, 5.941]		2.567*
Age	900	[016, .004]	091	-1.263	025	[055, .005]	128	-1.667
Gender	079	[286, .127]	055	758	492	[-1.120, .136]	120	-1.546
Session status	.106	[089, .300]	.082	1.072	.593	[.004, 1.181]	.162	1.989*
Cognitive MET score	.018	[.000, .035]	.173	1.978*	.030	[023, .084]	.105	1.115
Affective MET score	.036	[.005, .067]	.253	2.277*	.100	[.007, .194]	.252	2.129*
Physical MET score	.001	[027, .029]	005	0.065	076	[160,007]	153	-1.816
Narrative MET score	003	[025, .019]	027	-0.257	027	[096, .042]	087	776
Social MET score	.020	[007, .047]	.134	1.442	003	[085, .080]	007	065

MET: music engagement test Note: Session status: had experienced one session coded 1, experienced > 1 session coded 2; gender: female coded 1, male coded 2. $^{\text{stet}}p < .001; ^{\text{stet}}p < .001; ^{\text{stet}}p < .001;$

Table 3. Promax-rotated solution for the principal components analysis of the perceived outcomes.

Item: As a result of participating in Listen Up	Factor 1	Factor 2	Factor 3
I was aware of my feelings			
I was aware of emotional pain	.734		
I was aware of physical pain			.721
I felt emotionally uncomfortable	.671		
I felt physically uncomfortable			.778
I found myself crying	.569		
I felt a sense of healing		.678	
I found myself smiling		.652	
I found myself at peace		.901	
I felt overwhelmed	.537		
I felt calm and relaxed		.722	
I felt a greater connection to myself		.695	
I felt vulnerable	.813		
I gained perspective			
I felt challenged	.760		
I had space to process/explore thoughts/emotions			
Eigen value	5.313	2.897	1.654
Percentage of variance	33.204	18.107	10.335
Cronbach's alpha	.821	.830	.688
Correlation with Factor 2	.310		
Correlation with Factor 3	.144	195	

Note. Factor I = emotionally challenged, Factor 2 = therapeutic, Factor 3 = physically uncomfortable; values < .5 were suppressed.

common therapeutic goals loaded onto this factor (i.e., healing, gaining peace and perspective, having a greater connection to oneself).

Self-reported outcomes for mental health

As indicated in Table 5, the pattern of results from the paired-samples *t*-tests was such that, at the end of the session, people reported being less stressed, less anxious, and in a better mood (RQ3). It appears that participation in Listen Up sessions may improve individuals' mental health as well as affecting their emotions and reflections.

Characterizing participants' experiences via their free-text responses

Ten higher-order themes were derived from a first thematic analysis of participants' comments on their experiences of mindfully paying attention to sound during the Listen Up session. The themes pertinent to the results of the quantitative analyses reported above are shown in Table 6 together with relevant sub-themes and indicative quotations (please see Table 1 in the Supplemental Materials for further themes and quotations). One such theme concerned participants' efforts to pay attention mindfully to sound; some participants reported finding it difficult, and others were pleasantly surprised to find it easy. While some participants distinguished between the two types of sound to which they were exposed in the session (i.e., the facilitator's guidance and the music), the majority of responses referred to one or more

Table 4. Multiple regression analysis predicting the emotionally challenged and therapeutic factor scores.

Variable	Emotional	onally challenged factor			Therapeutic factor	tic factor		
	В	95% CI	β	<i>t-</i> value	В	95% CI	β	<i>t</i> -value
Constant	4.099	[2.273, 5.925]		4.433***	4.028	[2.569, 5.487]		5.450***
Age	030	[051,008]	203	-2.764**	018	[035,001]	156	-2.076*
Gender	449	[899, .002]	146	-1.968	071	[424, .283]	030	394
Session status	.322	[097, .740]	.119	1.518	033	[365, .298]	016	199
Cognitive MET score	.010	[028, .048]	.046	.510	.012	[018, .042]	.075	.811
Affective MET score	890.	[.002, .134]	.230	2.026	890.	[.016, .121]	.299	2.566**
Physical MET score	088	[148,029]	239	-2.935	017	[064, .030]	058	705
Narrative MET score	.011	[037, .060]	.050	.473	020	[058, .018]	112	-1.026
Social MET score	.030	[029, .088]	260.	1.009	.031	[015, .077]	.130	1.330

Note: Session status: had experienced one session coded 1, experienced > 1 session coded 2; gender: female coded 1, male coded 2. $*^{***}p < .001; *^{**}p < .001; *^{*}p < .001;$ MET: music engagement test

Variable	Pre-session $M(SD)$	Post-session $M(SD)$	<i>t-</i> value
Stress	4.36 (1.16)	2.34 (1.32)	17.46***
Anxiety	4.27 (1.54)	2.38 (1.36)	14.72***
Mood	4.57 (1.35)	5.79 (1.18)	-11.51***

Table 5. Means and standard deviations of pre-post mood, stress, and anxiety scores.

outcomes of listening mindfully, such as evoked emotions and memories; levels of arousal and consciousness; and physical responses, including visual experiences and physical sensations. In some responses, participants compared the focused way in which they listened during the Listen Up session with their usual way of listening. They attributed the differences between them to the intentionality of the Listen Up activity, the involvement of other people, and/or the music itself, which deepened their meditative experience. Overall, it would seem that focused listening requires much more than being exposed to aural stimuli; it is the act of listening intentionally that affords individuals the opportunity to reflect meaningfully on memories, and experience induced emotions and changes to their physical and cognitive arousal. We would suggest that our participants reported SEM, as defined by Gabrielsson (2011), and that, accordingly, participating in Listen Up could bring about feelings of transcendence and transformation.

These suggestions are supported by the findings of our second thematic analysis. Eight higher-order themes were derived from participants' comments on the thoughts, reflections, contemplations, and/or feelings [they] experienced during Listen Up. The themes pertinent to the results of the quantitative analyses reported above are shown in Table 7 together with relevant sub-themes and indicative quotations (please see Table 2 in the Supplemental Materials for further themes and quotations). Although the premise of Listen Up may seem quite simple ("mindfully paying attention to sound"), participating in a focused-listening activity seemed to have quite complex consequences. Thus, while one higher-order theme did pertain to focused listening, it did not account for the majority of participants' responses; other higher-order themes pertained to focus on other elements (the body, visual experience, and meditation), connection, feelings, arousal, and self-reflection. It is clear from the sub-themes that participants felt they had used the Listen Up session to process often intense and challenging feelings as well as memories and relationships, and to consider future goals.

Our analysis of the free-text responses to both open questions characterizes our participants' experiences as dynamic and complex in nature, and suggests that focused listening to music involves more than simply enjoying it. Complementing the results of our quantitative analyses, the findings of our qualitative analyses reveal the juxtaposition of positive and negative emotions, and positive and negative memories and self-reflections. Even when the Listen Up activity elicited feelings of vulnerability, challenge, and/or other negative emotions, participants typically judged their experiences as positive and/or having a resolution. Participants did not just report reductions in stress and anxiety, and improvements in mood. They also engaged in reflection and introspection, often leading to catharsis, as evidenced by the following free-text responses:

I had a HUGE cry in the middle (thank you). I have a lot of painful things going on in my life. It allowed me to be with the pain I'm feeling, including the anger at the things that have been happening \dots So nice to release it.

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Table 6. ⊺	

Higher-order theme	Sub-theme	Indicative quotation
Guidance	Positive Negative	"having guidance during the session helped to stop the mind wander, and bring attention back to the music" "the voice over took me out of the experience though. I would have preferred to listen to the music without the commentary as I felt I would have gone deeper into it"
Level of arousal	Energized Colming/cologing	"although I had been concerned I'd fall asleep as I have a very busy job and had done long hours—I actually felt so energized and happy that I wanted to get up and dance!!" "It was a column association to the count to the count."
Difficulty	Calming/relaxing Challenging Easy Beauty in simple activity	"it was a calming experience to be present to the sound" "challenging but worthwhile" "surprisingly easy to stay focused and enhanced enjoyment of music" "it made me realize how I take simple pleasures for granted, and how much beauty can be found in taking part in a seemingly simple activity"
Shared (communal) experience		"I regularly mindfully pay attention to sound, but there was something different doing it in a communal setting with this degree of intentionality"
Consciousness/ focus	Shifting consciousness Attuned/focused/present Focused meditation	"I felt very in tune with subtle changes in the music, toward the middle I was unaware of whether I was awake or asleep" "Compared to how I listen to music outside of Listen Up. I found myself able to fully engage with all the elements individually which made me appreciate them more collaboratively" "listening and focusing solely on the music allowed me to have a deep meditation that I've never experienced before"
Emotional	Evoking strong emotions Processing emotions Emotional journey Enjoyment	"it's amazing how quickly music gave me access to my emotions, within seconds I had accessed a memory that had me crying." "mindfully paying attention to sound allowed me to get more attended to my thoughts and emotions." it was an emotional journey for me." "So good. Find it easier than normal meditation. Feel like I'm in a music bubble during it."
Inducing memories Visual experience		"I found it therapeutic to pay attention to sound, it raised some difficult memories, feelings, and emotions but allowed me to explore these" "had some pleasant sensory-like day dreams"; "visualized mountains and lakes a lot";"
Music	Intensity of the music Immersed in the sound Heightened/enhanced listening	"at the beginning, it took me a while to turn off the noise in my head but eventually found myself focusing only on the sounds. I felt a really deep connection to the music. It was really intense" "It was quite amazing to lay and do nothing but listen. The vibrations of the bass and sounds of music increased my mindfulness" "I felt like my hearing sense was heightened, as if I could hear better" "The more I listened, the more layers and depth I heard"
Physical -	Body awareness Physically uncomfortable	"Your ears adapt throughout the experience for example a song with a bass drum like a heartbeat—during this song my mind focused to my own heart, my breathing and then changed the direction of my thoughts" "whilst I enjoyed the music, I felt uncomfortable I was paying attention mindfully to how I felt at the time"

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Higher-order theme	Sub-theme 1	Sub-theme 2	Indicative quotation
Focused on the music/sound			"I was focused on the music and enjoyed the intricacies and space of making time for this sole purpose"
Focused on the			"I felt like I should feel something greater. Then I realised I was. I felt physically affected. I felt waves of
priysical/vouy			MOVEMENT OVER HIS DOMY "Wind right of the transmission of the conjugate of the majored by boundaries at the and met as much
r ocusea on une visual experience			Vivid visualisations, that were moving sequences Lieu overloyed by happiness at the end—not so much because of the visuals (they were all quite moody)—but because of the overall feeling of swimming in the music
			and the experience
Focused on the act of meditation	Engaging in meditation		"I don't often meditate, and haven't managed to fully grasp the concept of it, but I found that I could recognise my thoughts as separate to who I am \dots I didn't have to listen to them"
	Many thoughts		"I was unable to stop my thoughts of my day so this made me realise I need to participate in meditation to calm
			my mind more"
Connection	To people/nature		"Felt a strong sense of connection"
	A desire to be alone		"I felt that I wanted to be alone and not care about things so much"
Feelings	Emotionally challenging		"Took me through a lot of emotions and was emotionally challenging"
	Processing emotions		"Made me sit with emotions that I avoided"
	Compos of cottofortion		"Tirre assessment of all and the form of the first file of the control of the first of an inclinate and annitable and had a breeze
	Sense of satisfaction		i Just remember teeling great atterwards, iike the space i leit bathed in warmtn and sunlight, and had a nuge smile on my face"
	Specifically identified	Gratitude	"a feeling of gratitude, joy and peace with my life"
	emotion	Vulnerable	"I felt very open. Vulnerable"
		Overwhelmed	"overwhelmed"
		Irritation/frustration	"Profound irritation"
		Happy	"I felt relaxed and happy to be able to close my eyes and listen to new music"
Arousal	Rested/sleepy		"Exiting I felt little—just rested"
	Calm, relaxed		"I felt extremely relaxed"
Self-reflection	Memories	Painful memories	"I saw my past, happy and dark memories. It was like watching my entire-length life"
		Childhood memories	"Had flashes of memory was taken back to my childhood home and was talking to younger me"
	People/relationships		"I reflected a lot on family and loved ones wanting to feel love for myself and gratitude for others"
	Current events		``I just thought about absolutely everything I think. Mainly current events/issues that are going on in my life. I
			have been suffering a lot from anxiety of late so I think that I needed to allow the thoughts to be processed"
	Future-focused empowerment	nent	"I felt empowered about [and] focused on the future. I felt like I was ready to take a big step forward and embrace a new path in my life"
	Self-realizations		"I learnt one thing about myself that makes total sense and I never knew until then"

Peace, rest, pain, sadness, loss, hope, wonder, reflection, calm. Mainly calm, at the end, feeling more grounded to myself and the present and less overwhelmed by neurotic thoughts of recent, painful experiences. More at peace with myself and positive/hopeful about the present moment.

General discussion

In the present research, we used Listen Up as a case study to consider the experience of focused music listening against the backdrop of modern, everyday life where most listening accompanies other activities. Our guiding research questions asked, in particular, about emotional responses to the Listen Up activity and its perceived outcomes for participants, including its potential benefits for their mental health. First, it is not surprising that participants experienced enjoyment, stress reduction, and relaxation, because these are commonly reported outcomes of music and mindfulness interventions (e.g., Baylan et al., 2018; Diaz, 2013).

Yet both the results of our quantitative analyses and the findings of our qualitative analyses indicate that focused listening involves more than simply engaging with and enjoying music. Participants' emotional responses were complex, as revealed by the four underlying factors consisting of combinations of emotions that we characterized as negative, positive, evocative and expressive, and sadness. We interpreted their free-text responses as indicating that they commonly experienced catharsis. As Cox(2016) argues, in contexts where we remain silent while listening, we amplify the element of receptivity: we agree to adopt the role of a quiet, attentive listener, and this act of giving up a measure of power offers a particular kind of affective reward. (p. 196)

Participants in Listen Up took part in an activity that involved listening to music not as they typically did in everyday life, as an accompaniment to other activities, but intentionally, focusing on the music itself, with the help of the facilitator's guidance. This produced strong emotional responses reported by participants in a way described by Cox(2016) as "affective [i.e.,] including emotions, moods, desires, and urges, as well as the feelings of exertions, balance, alertness, warmth, and other sensory experiences" (p. 177).

Moreover, people with a more strongly affective style of music engagement were more likely to report evocative and expressive and sad emotional experiences. This aligns with previous findings that emotion regulation is the primary reason for listening to music (Schäfer et al., 2013) and that an affective style is positively associated with listening to music to cope with everyday stressors (Krause et al., 2023). The affective style of music engagement is also characterized by "emotional processes involved with cathartic and expressive engagement" (Greenberg & Rentfrow, 2015, n.p.), which may be why people with this style of music engagement reported better therapeutic outcomes in the present study.

Participants also reported engaging in meaningful reflection and introspection leading to catharsis, as well as reduced stress and anxiety and improved mood. They reported physical discomfort and tears; psychological outcomes, such as the experience of intense and complex feelings and memories; and reflecting on their selves, their relationships, and the past and future. We suggest that Listen Up is a vehicle for peak listening or SEM, given that our participants' responses reflect the wide range of personal and social consequences of music described by (Gabrielsson, 2011), including intense feelings, emotions that are conflicting and both positively and negatively valenced, self-confidence, relationships, and community. Our participants' free-text responses, in particular, echo the feelings of transformation and transcendence often reported in SEM research (Gabrielsson et al., 2016), and Green's (2016) finding that peak listening experiences can lead to epiphanies. The focused-listening experience offered by Listen Up, unlike typical everyday listening, could thus provide an opportunity to experience peak listening or SEM.

Implications, limitations, and future directions

In the present study, we have extended previous research identifying the benefits of listening to music, which is a cheap and effective way of reducing both psychological and physiological stress (de Witte et al., 2020). In particular, people who use music for self-regulation may find they can manage their own well-being by learning to use focused music listening techniques to complement their usual, everyday listening practices. Health practitioners, such as psychologists and music therapists, can draw on these findings when helping clients to improve their health and well-being using non-pharmacological strategies. Our findings have practical applications, as they add to the growing body of evidence that focused music listening can be used as a therapeutic tool. It would be worth exploring how it could be included as a component of existing interventions to improve mental health, medical, or otherwise, especially those that involve mindfulness practices. Future researchers could also ask participants to reflect on their Listen Up session experiences using longitudinal or ecological momentary assessment methodologies. These methodologies would enable consideration of the roles of both participants' individual characteristics and those specific to a particular session.

The present study was limited, first, in that, Listen Up is a single focused-listening activity conducted as a group session with oral guidance from a specific facilitator; it would not be possible to generalize the findings to other focused-listening activities, guided or otherwise. These should be explored in future research. Second, although some participants had attended several Listen Up sessions, they were only asked to respond with reference to one; it would be worth investigating its potential as a multi-session intervention. Third, for a better understanding of the effects of focused music listening, in general, Listen Up could be compared with another focused-listening intervention, such as GIM, which involves a music therapist (McKinney & Honig, 2017; Shum, 2020), and individual, personal, everyday listening. Fourth, future researchers should try to disentangle the roles of music and guidance to explain their respective contributions to the effects of Listen Up. Fifth, to help clinicians who wish to offer similar opportunities for focused listening, researchers should investigate potential ways of structuring them, and choices of music.

While the findings of the present study provide evidence for the benefits of focused music listening, it is important to note that music listening is not always positively associated with well-being. People do not always engage in healthy listening practices (e.g., Saarikallio et al., 2015) and listening to music can affect mood negatively even when the listener's intention was to improve it (e.g., McFerran & Saarikallio, 2014). Mental health organizations should consider carefully, therefore, how they promote and conduct focused-listening interventions, such as Listen Up. This is another reason for examining the music used in such interventions (Baltazar et al., 2019), and listeners' preferences and intentions; it will also help clarify the benefits of focused music listening.

Finally, we have shown that the experience of focused listening can provide the opportunity not only to attend mindfully to music but also to engage meaningfully with introspection eliciting thoughts and emotions. Our findings suggest that—as music-based therapies promote therapeutic engagement (McFerran et al., 2018), especially for people who are ambivalent or resistant to seeking treatment (de l'Etoile, 2002)—participating in a focused-listening session may be a good first experience of therapy. It would thus be well worth finding out whether, and if so how, intentions to (continue to) seek support for health and well-being are influenced by participating in Listen Up and similar interventions. This would help both individuals and health practitioners to make the best use of music listening to support health and well-being.

Acknowledgements

The authors express sincere gratitude to the participants who participated in this research, William Scott who worked on the project as a Research Assistant, and to participants of the International Symposium on Performance Science 2019 conference for their early feedback on this project.

Author contributions

A.E.K. collaboratively developed the idea for the study with M.H. and R.L. A.E.K. gained ethical approval and conducted participant recruitment. A.E.K. oversaw data collection and conducted the qualitative data analysis; M.P. conducted quantitative data analysis, with input from A.E.K. A.E.K. and M.P. collaborated to draft the manuscript. All authors approved the final version of the manuscript.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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Supplemental material

Supplemental material for this article is available online.

Note

A Spotify playlist with an assortment of tracks typically used in Listen Up can be accessed at https://open.spotify.com/playlist/5fjKPrgfQ9pMXYbUWUX0eP?si=91b12a61597543ab&pt=39fbb2e1be a64f70af9ed25bfde3dcf0

References

- Adiasto, K., Beckers, D. G. J., van Hooff, M. L. M., Roelofs, K., & Geurts, S. A. E. (2022). Music listening and stress recovery in healthy individuals: A systematic review with meta-analysis of experimental studies. *PLOS ONE*, *17*(6), e0270031. https://doi.org/10.1371/journal.pone.0270031
- Alqatari, S., Kelly, L., Fitzpatrick, K., Cheung, P., & Moss, H. (2022). Mindful music—A pilot study of the effects of mindfulness-based music on staff members of the University of Limerick. *Music and Medicine*, 14(2), 115–124.
- Baltazar, M., Västfjäll, D., Asutay, E., Koppel, L., & Saarikallio, S. (2019). Is it me or the music? Stress reduction and the role of regulation strategies and music. *Music & Science*, *Volume*, *2*, 1–16. https://doi.org/10.1177/2059204319844161
- Baylan, S., McGinlay, M., MacDonald, M., Easto, J., Cullen, B., Haig, C., Mercer, S. W., Murray, H., Quinn, T. J., Stott, D., Broomfield, N. M., Stiles, C., & Evans, J. J. (2018). Participants' experiences of music, mindful music, and audiobook listening interventions for people recovering from stroke. *Annals of the New York Academy of Sciences*, 1423, 349–359. https://doi.org/10.1111/nyas.13618
- Beck, B. D., Hansen, A. M., & Gold, C. (2015). Coping with work-related stress through guided imagery and music (GIM): Randomized controlled trial. *Journal of Music Therapy*, 52(3), 323–352. https://doi.org/10.1093/jmt/thv011
- Bonny, H. (2001). Music psychotherapy: Guided imagery and music. *Voices: A World Forum for Music Therapy*, 10(3), 568. https://doi.org/https://doi.org/10.15845/voices.v10i3.568
- Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. SAGE.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806
- Burns, D. S. (2001). The effect of the bonny method of guided imagery and music on the mood and life quality of cancer patients. *Journal of Music Therapy*, 38(1), 51–65. https://doi.org/https://doi.org/10.1093/jmt/38.1.51

Cox, A. (2016). Music and embodied cognition: Listening, moving, feeling, and thinking. Indiana University Press.

- de l'Etoile, S. K. (2002). The effectiveness of music therapy in group psychotherapy for adults with mental illness. *The Arts in Psychotherapy*, 29(2), 69–78. https://doi.org/https://doi.org/10.1016/s0197-4556(02)00139-9
- de Witte, M., Pinho, A. d. S., Stams, G.-J., Moonen, X., Bos, A. E. R., & van Hooren, S. (2020). Music therapy for stress reduction: A systematic review and meta-analysis. *Health Psychology Review*, 16, 134–159. https://doi.org/10.1080/17437199.2020.1846580
- Diaz, F. M. (2013). Mindfulness, attention, and flow during music listening: An empirical investigation. *Psychology of Music*, 41(1), 42–58. https://doi.org/10.1177/0305735611415144
- Dingle, G. A., Sharman, L. S., Bauer, Z., Beckman, E., Broughton, M., Bunzli, E., Davidson, R., Draper, G., Fairley, S., Farrell, C., Flynn, L. M., Gomersall, S., Hong, M., Larwood, J., Lee, C., Lee, J., Nitschinsk, L., Peluso, N., Reedman, S. E., & Wright, O. R. L. (2021). How do music activities affect health and well-being? A scoping review of studies examining psychosocial mechanisms. Frontiers in Psychology, 12, 713818. https://doi.org/10.3389/fpsyg.2021.713818
- Elvers, P., Fischinger, T., & Steffens, J. (2018). Music listening as self-enhancement: Effects of empowering music on momentary explicit and implicit self-esteem. *Psychology of Music*, 46(3), 307–325. https://doi.org/10.1177/30575617707354
- Gabrielsson, A. (2010). Strong experiences with music. In P. N. Juslin & J. A. Sloboda (Eds.), *Handbook of music and emotion: Theory, research, applications* (pp. 547–574). Oxford University Press.
- Gabrielsson, A. (2011). Strong experiences with music: Music is much more than just music (R. Bradbury, Trans.). Oxford University Press. https://doi.org/https://doi.org/10.1093/acprof: oso/9780199695225.001.0001
- Gabrielsson, A., Whaley, J., & Sloboda, J. A. (2016). Peak experiences in music. In S. Hallam, I. Cross, & M. Thaut (Eds.), Oxford handbook of music psychology (2nd ed., pp. 745–758). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198722946.013.44
- Gabrielsson, A., & Wik, S. L. (2003). Strong experiences related to music: A descriptive system. Musicae Scientiae, 7(2), 157–217.
- Galanakis, M., Stalikas, A., Kallia, H., Karagianni, C., & Karela, C. (2009). Gender differences in experiencing occupational stress: The role of age, education and marital status. *Stress & Health: Journal of the International Society for the Investigation of Stress*, 25, 397–404. https://doi.org/10.1002/smi.1248
- Graham, R. (2010). A cognitive-attentional perspective on the psychological benefits of listening. *Music And Medicine*, 2(3), 167–173. https://doi.org/10.1177/1943862110372522
- Greb, F., Schlotz, W., & Steffens, J. (2018). Personal and situational influences on the functions of music listening. *Psychology of Music*, 46(6), 763–794. https://doi.org/10.1177/3057561772483
- Green, B. (2016). 'I always remember that moment': Peak music experiences as epiphanies. *Sociology*, 50(2), 333–348. https://doi.org/https://doi.org/10.1177/0038038514565835
- Greenberg, D. M., & Rentfrow, P. J. (2015). Rules of engagement: The structure of musical engagement and its personality underpinnings. Proceedings of the Ninth Triennial Conference of the European Society for the Cognitive Sciences of Music, Manchester, UK.
- Grocke, D. (2010). An overview of research in the Bonny Method of Guided Imagery and Music. *Voices*, 10(3), 1651. https://voices.no/index.php/voices/article/view/1886/1651
- Harney, C., Johnson, J., Bailes, F., & Havelka, J. (2023). Is music listening an effective intervention for reducing anxiety? A systematic review and meta-analysis of controlled studies. *Musicae Scientiae*, 27(2), 278–298. https://doi.org/10.1177/10298649211046979
- Hemming, L., Pratt, D., Bhatti, P., Shaw, J., & Haddock, G. (2021). Involving an individual with lived-experience in a co-analysis of qualitative data. *Health Expectations*, 24, 766–775. https://doi.org/https://doi.org/10.1111/hex.13188
- Hernandez-Ruiz, E., Dvorak, A. L., & Weingarten, K. (2021). Music stimuli in mindfulness meditation: Comparison of musician and non-musician responses. *Psychology of Music*, 49(4), 855–871. https://doi.org/10.1177/0305735620901338
- Howlin, C., Stapleton, A., & Rooney, B. (2022). Tune out pain: Agency and active engagement predict decreases in pain intensity after music listening. PLOS ONE, 17(8), e0271329. https://doi.org/ https://doi.org/10.1371/journal.pone.0271329

- Jerling, P., & Heyns, M. (2020). Exploring Guided Imagery and Music as a well-being intervention: A systematic literature review. Nordic Journal of Music Therapy, 29, 371–390. https://doi.org/10.1080/08098131.2020.1737185
- Kiernan, F., Krause, A. E., & Davidson, J. W. (2022). The impact of biographical information about a composer on emotional responses to their music. *Musicae Scientiae*, 26(3), 558–584. https://doi. org/10.1177/1029864920988883
- Krause, A. E., Davidson, J. W., & North, A. C. (2018). Musical activity and well-being: A new quantitative measurement instrument. *Music Perception*, 35(4), 454–474. https://doi.org/10.1525/MP/2018.35.4.454
- Krause, A. E., Dimmock, J., Rebar, A. L., & Jackson, B. (2021). Music listening predicted improved life satisfaction in university students during early stages of the COVID-19 pandemic. *Frontiers in Psychology*, 11, 631033. https://doi.org/10.3389/fpsyg.2020.631033
- Krause, A. E., & North, A. C. (2017). Pleasure, arousal, dominance, and judgments about music in every-day life. *Psychology of Music*, 45(3), 355–374. https://doi.org/10.1177/0305735616664214
- Krause, A. E., North, A. C., & Hewitt, L. Y. (2014). Music selection behaviors in everyday listening. *Journal of Broadcasting and Electronic Media*, 58(2), 306–323. https://doi.org/10.1080/08838151.2014.9 06437
- Krause, A. E., North, A. C., & Hewitt, L. Y. (2015). Music-listening in everyday life: Devices and choice. *Psychology of Music*, 43(2), 155–170. https://doi.org/10.1177/0305735613496860
- Krause, A. E., North, A. C., & Hewitt, L. Y. (2016). The role of location in everyday experiences of music. *Psychology of Popular Media Culture*, 5(3), 232–257. https://doi.org/10.1037/ppm0000059
- Krause, A. E., Scott, W. G., Flynn, S., Foong, B., Goh, K., Wake, S., Miller, D., & Garvey, D. (2023). Listening to music to cope with everyday stressors. *Musicae Scientae*, 27(1), 176–192. https://doi.org/10.1177/10298649211030318
- Lesiuk, T. (2016). The development of a Mindfulness-Based Music Therapy (MBMT) program for women receiving adjuvant chemotherapy for breast cancer. *Healthcare*, 4(3), 53. https://doi.org/https://doi.org/10.3390/healthcare4030053
- Liu, X., Liu, Y., Shi, H., Li, L., & Zheng, M. (2021). Regulation of mindfulness-based music listening on negative emotions related to COVID-19: An ERP study. *International Journal of Environmental Research and Public Health*, 18(13). https://doi.org/10.3390/ijerph18137063
- McCrary, J. M., Altenmueller, E., Kretschmer, C., & Scholz, D. S. (2022). Association of music interventions with health-related quality of life a systematic review and meta-analysis. *JAMA Network Open*, 5(3), e223236. https://doi.org/10.1001/jamanetworkopen.2022.3236
- McFerran, K. S., Hense, C., Koike, A., & Rickwood, D. (2018). Intentional music use to reduce psychological distress in adolescents accessing primary mental health care. *Clinical Child Psychology and Psychiatry*, 23(4), 567–581. https://doi.org/10.1177/1359104518767231
- McFerran, K. S., & Saarikallio, S. (2014). Depending on music to feel better: Being conscious of responsibility when appropriating the power of music. *The Arts in Psychotherapy*, 41, 89–97. https://doi.org/10.1016/j.aip.2013.11.007
- McKinney, C. H., & Honig, T. J. (2017). Health outcomes of a series of Bonny Method of Guided Imagery and music sessions: A systematic review. *Journal of Music Therapy*, 54(1), 1–34. https://doi.org/10.1093/jmt/thw016
- Miranda, D., & Claes, M. (2009). Music listening, coping, peer affiliation and depression in adolescence. *Psychology of Music*, 37(2), 215–233. https://doi.org/10.1177/0305735608097245
- Nill, A., & Geipel, A. (2010). Sharing and owning of musical works: Copyright protection from a societal perspective. *Journal of Macromarketing*, 30(1), 33–49. https://doi.org/10.1177/0276146709352217
- North, A. C., & Hargreaves, D. J. (1995). Subjective complexity, familiarity, and liking for popular music. *Psychomusicology*, 14, 77–93.
- North, A. C., Hargreaves, D. J., & Hargreaves, J. J. (2004). Uses of music in everyday life. *Music Perception*, 22(1), 41–77. https://doi.org/10.1525/mp.2004.22.1.41
- Raglio, A. (2021). More music, more health! *Journal of Public Health*, 43(4), 742–744. https://doi.org/10.1093/pubmed/fdaa123

Randall, W. M., Rickard, N. S., & Vella-Brodrick, D. A. (2014). Emotional outcomes of regulation strategies used during personal music listening: A mobile experience sampling study. *Musicae Scientiae*, 18(3), 275–291. https://doi.org/10.1177/1029864914536430

- Rudstam, G., Elofsson, U. O. E., Söndergaard, H. P., Bonde, L. O., & Beck, B. D. (2022). Trauma-focused group music and imagery with women suffering from PTSD/complex PTSD: A randomized controlled study. *European Journal of Trauma & Dissociation*, 6(3), 100277. https://doi.org/https://doi.org/10.1016/j.ejtd.2022.100277
- Saarikallio, S., Gold, C., & McFerran, K. (2015). Development and validation of the Healthy-Unhealthy Music Scale. *Child and Adolescent Mental Health*, 20(4), 210–217. https://doi.org/10.1111/camh.12109
- Saarikallio, S., Nieminen, S., & Brattico, E. (2013). Affective reactions to musical stimuli reflect emotional use of music in everyday life. *Musicae Scientiae*, 17(1), 27–39. https://doi.org/10.1177/1029864912462381
- Schäfer, T., Sedlmeier, P., Städtler, C., & Huron, D. (2013). The psychological functions of music listening. Frontiers in Psychology, 4, 311. https://doi.org/10.3389/fpsyg.2013.00511
- Shifriss, R., Bodner, E., & Palgi, Y. (2014). When you're down and troubled: Views on the regulatory power of music. *Psychology of Music*, 43, 793–807. https://doi.org/10.1177/0305735614540360
- Shum, W. W. A. (2020). Use of GIM to nurture self-compassion in a mental health nurse: A case study. *Nordic Journal of Music Therapy*, 29, 476–495. https://doi.org/10.1080/08098131.2020.1793806
- Sloboda, J. A., Lamont, A., & Greasley, A. E. (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). Oxford University Press.
- Sorensen, S., Steindl, S. R., Dingle, G. A., & Garcia, A. (2018). Comparing the effects of Loving-Kindness Meditation (LKM), Music and LKM plus music on psychological well-being. *The Journal of Psychology*, 153(3), 267–287. https://doi.org/https://doi.org/10.1080/00223980.2018.1516610
- Sparkes, A. C., & Smith, B. (2014). Qualitative research methods in sport, exercise and health: From process to product. Routledge. https://doi.org/https://doi.org/10.4324/9780203852187
- Tröndle, M., Greenwood, S., Kirchberg, V., & Tschacher, W. (2014). An integrative and comprehensive methodology for studying aesthetic experience in the field: Merging movement tracking, physiology, and psychological data. *Environment and Behavior*, 46(1), 102–135. https://doi.org/10.1177/0013916512453839
- Vidas, D., Larwood, J. L., Nelson, N. L., & Dingle, G. A. (2021). Music listening as a strategy for managing COVID-19 stress in first-year university students. *Frontiers in Psychology*, 12, 647065. https://doi. org/10.3389/fpsyg.2021.647065
- Vidas, D., Nelson, N. L., & Dingle, G. A. (2022). Music listening as a coping resource in domestic and international university students. *Psychology of Music*, 50(6), 1816–1836. https://doi.org/10.1177/03057356211066964
- Welsh, C. (2017, March 24). The Indigo Project make mindfulness matter through music. *The Sydney Morning Herald*. https://www.smh.com.au/entertainment/music/the-indigo-project-make-mindfulness-matter-through-music-20170322-gv3k53.html