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SHORTER COMMUNICATION

Music Listening Was an Emotional Resource and Social Surrogate for Older Adults During the COVID-19 Pandemic: A Qualitative Study

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Abstract

Loneliness and isolation worsen health and wellbeing have been exacerbated by COVID-19, and represent a significant concern for supporting older adults. Music listening has effects that could be particularly supportive during periods of isolation. The aim of this study is to examine older adults' music listening behaviour during the COVID-19 pandemic and explore music's social and emotional impact in this context. Semi-structured interviews enhanced with music-elicitation were carried out remotely between May and June 2021. Participants were self-selected, community-dwelling older adults residing in Northern Ireland ($N = 14$; 6 males; 60–83 years). Most were living with their spouse or family, all were of White ethnicity and had varying levels of education. Data were analysed using reflexive thematic analysis. Two main themes were identified: (1) Music as an emotional resource and (2) Music as a social surrogate. Older adults had a preference for using music to induce positive feelings, and used music for negative affect regulation and consolation. Music acted as a social surrogate providing company, and reminders of social relationships and experiences. Music listening was a valued behaviour during COVID-19. Findings have implications for how music listening might be used as an accessible, low-resource tool for supporting isolated older adults.

Keywords: music listening; stress; coping; wellbeing; mental health; loneliness; social isolation; COVID-19

Introduction

Social distancing restrictions to control the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) were first introduced in Northern Ireland in March 2020 and have significantly impacted social contact. Social connection and relationships are central to models of wellbeing (Ryff & Singer, 2008; Seligman, 2018), and reductions in wellbeing and high levels of loneliness have been observed during lockdowns in the UK and USA (Bu, Steptoe, & Fancourt, 2020; Groarke et al., 2020; Killgore, Cloonen, Taylor, & Dailey, 2020; Rosenberg, Luetke, Hensel, Kianersi, & Herbenick, 2020; Tull et al., 2020; Zacher & Rudolph, 2020). In Northern Ireland, where this study was carried out, the prevalence rates of loneliness are very high and 88% of people were concerned that loneliness had become a bigger issue since the pandemic began (AGLP, 2020). This is of public health significance as loneliness and social isolation are associated with worse health and wellbeing and increased mortality (Beutel et al., 2017; Cacioppo, Hawkley, & Thisted, 2010; Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015; Steptoe, Shankar, Demakakos, & Wardle, 2013; Theeke,

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2010). Unfortunately, loneliness is highly prevalent in older adulthood (Elovainio et al., 2017; Nyqvist, Cattán, Conradsson, Näsman, & Gustafsson, 2017; Victor & Yang, 2011), a life stage when managing multiple comorbidities is a major healthcare challenge (Lehnert et al., 2011; Nobili, Garattini, & Mannucci, 2011). Cognisant of the negative impact of loneliness and isolation on health and wellbeing, combined with the evolving needs of Northern Ireland's rapidly ageing population (NISRA, 2021) and a health service under increasing resourcing pressures (House of Commons Northern Ireland Affairs Committee, 2019), there is a growing impetus for solutions that support self-management of wellbeing across the lifespan.

Music listening is a common behaviour in everyday life, highly valued by people of all ages for its positive impact on wellbeing (Groarke & Hogan, 2016; Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008; Laukka, 2006). Music has effects that could be particularly supportive through periods of isolation. An emerging body of mostly quantitative work has explored the use of music during the COVID-19 crisis. A large international survey found that music listening was rated the most effective activity for maintaining wellbeing and the second most effective, after socialising, for creating a sense of togetherness (Granot et al., 2021). Music was selected as the best activity for coping with distress during the pandemic and was associated with lower symptoms of depression (Mas-Herrero et al., 2020), and higher life satisfaction among university students (Krause, Dimmock, Rebar, & Jackson, 2021). Another large survey found that more than half of respondents used music to cope during the pandemic, and that people listened to music for regulation when feeling negative emotions and as a surrogate for social interaction when feeling positive (Fink et al., 2021).

There is a large body of research and meta-analytic evidence demonstrating music's positive impact on negative affect regulation (de Witte, Spruit, van Hooren, Moonen, & Stams, 2019; Finn & Fancourt, 2018; Panteleva, Ceschi, Glowinski, Courvoisier, & Grandjean, 2018). Music is frequently used by listeners to reach emotional goals and this is a highly valued function of music across the lifespan (Groarke & Hogan, 2016, 2018; Randall & Rickard, 2017). When dealing with loss or when experiencing distress, stress, or sadness listeners often seek solace in music listening (Garrido & Schubert, 2011; Hanser, ter Bogt, Van del Tol, Mark, & Vingerhoets, 2016; Taruffi & Koelsch, 2014; ter Bogt, Vieno, Doornwaard, Pastore, & van den Eijnden, 2017; Van den Tol & Edwards, 2015). Relative to other self-regulatory behaviours, music was ranked the most important for consolation (Hanser et al., 2016; ter Bogt et al., 2017). Listeners use music for a variety of social functions including social connection, bonding, developing and maintaining social networks, and identity expression (Hargreaves & North, 1999; Miranda & Claes, 2009). Social functions of music have been positively associated with wellbeing among younger and older adults (Groarke & Hogan, 2018; Laukka, 2006). Some argue that music's emotional impact may underlie these social effects (Juslin, 2021), and Papinczak, Dingle, Stoyanov, Hides, and Zelenko (2015) found that among young people, music influenced higher social wellbeing through the combined effects of relationship building, immersion in emotions, and modifying cognitions and emotions.

Loneliness reduction is a common reason for music listening among older people (Groarke & Hogan, 2016). An experimental study by Schäfer, Saarikallio, and Eerola (2020) found that participant-selected music reduced loneliness and improved mood. Music also increased empathy, suggesting that listening to music activates social cognition. Social surrogacy is a potential mechanism through which music may support peoples' need for connection in the absence of social contact. If direct social interaction is not possible, individuals may resort to social surrogates as a temporary substitute (Gardner, Pickett, & Knowles, 2005), such as TV programmes (Derrick, Gabriel, & Hugenberg, 2009), books (Gabriel & Young, 2011), and music (Lee, Andrade, & Palmer, 2013; Schäfer et al., 2020). Social surrogacy operates in three main ways. First, Gabriel and Young (2011) assert that surrogates offer affiliation with symbolic groups thereby providing a temporary feeling of belonging. Parasocial relationships are another form that social surrogates can take. This is the one-sided relationship an individual develops with a celebrity, fictional character (Young, Gabriel, & Hollar, 2013), podcaster (Tobin & Guadagno, 2022), or musician (Krause, North, & Heritage, 2018; Kurtin, O'Brien, Roy, & Dam, 2019). Finally, people experience social surrogacy through reminders of existing relationships

(Derrick, Keefer, & Troisi, 2019). Reminiscence is also a common and important function of music for older adults (Groarke & Hogan, 2016, 2018). Cheung *et al.* (2013) found that personally relevant music can induce nostalgia, and that this increases self-esteem and optimism by promoting social connectedness. An exploratory study comparing music listening, watching TV, and reading fiction found that all three activities act as social surrogates, but that social surrogacy via reminiscence of past experiences and relationships was unique to music listening (Schäfer & Eerola, 2020).

The COVID-19 pandemic and disease control restrictions have brought about significant change in social interaction, increased loneliness, and reduced wellbeing. Quantitative research has evidenced a positive impact of music listening in the COVID-19 pandemic. However, there is a need to build on this body of evidence with in-depth qualitative work to better understand how music listening is used to mitigate the impact of social distancing regulations. This study aims to examine older adults' music listening behaviour during the COVID-19 pandemic and explore music's social and emotional impact in this context. To the authors' knowledge, this is the first study to focus exclusively on older adults' music listening behaviour during the COVID-19 crisis, and the first qualitative investigation of social surrogacy through music listening.

Method

Design

Semi-structured, music-enhanced interviews were carried out using video-conferencing software to study older adults' music listening behaviour during the COVID-19 pandemic. Ethical approval was provided by the Research Ethics Committee in the Faculty of Engineering and Physical Sciences at Queen's University Belfast (REF: EPS 21_93). This research is reported in line with the consolidated criteria for reporting qualitative research (COREQ) checklist (Tong, Sainsbury, & Craig, 2007).

Participants and Recruitment

Community-dwelling adults aged over 65 and residing in Northern Ireland were eligible to participate. Participants were recruited through opportunity sampling. Participants were invited to take part in a study of music listening behaviour during the COVID-19 pandemic. A call for participants was shared on social media, in community groups, and through the researchers' networks. Contact details of prospective participants were passed on to the researchers by the community groups, or participants could contact the research team directly. Participants were approached via telephone and provided with an outline of the study. Interested participants were emailed a link to the full participant information sheet explaining the study aims, what would be involved in participating, and that they would be asked to select a piece of music to listen to during the interview. Interested participants could provide informed consent and complete a demographic questionnaire online. All participants who were approached agreed to participate. There were no incentives for participating. Fourteen participants were interviewed. This sample size was deemed sufficient based on the model of information power and consideration of the study's aim, sample specificity, and analytic strategy (Braun & Clarke, 2019b; Malterud, Siersma, & Guassora, 2016).

Interviews

The interview topic guide was developed by JG and NM to elicit in-depth accounts of participants' music listening behaviour during the COVID-19 pandemic. The topic guide provided a flexible framework for the interviews (Supplementary Material). Data were collected between the second and third wave of COVID-19 infections (May–June 2021), a time in which COVID-19 restrictions in Northern Ireland were beginning to be relaxed, with the reopening of non-essential retail in late April and indoor hospitality in late May. The interviews were conducted remotely using video-conferencing software (*i.e.*, Zoom). No one else was present during the interview. Prior to beginning the interview, the participants were reminded of their right to withdraw at any point during the study and that their data

would remain confidential. Participants were then invited to play their chosen piece of music which both the participant and interviewer listened to together. The use of music created a shared experience between interviewer and participant to build rapport and help participants open up and acted as an elicitation tool to encourage detailed insights on the impact of music listening during the COVID-19 pandemic. The average interview duration was 34.49 min.

Methodological Approach and Reflexivity

Reflexive thematic analysis is not exclusive to one epistemological stance (Braun & Clarke, 2006, 2019a). In the current study, thematic analysis was conducted using the essentialist or realist approach. This is a semantic-level analysis that looks for explicit meanings in data, and involves reporting the experiences, meaning, and reality of participants. Participant responses are treated as a true reflection of their thoughts and experiences. The interviewer (NM) was a female postgraduate student with training in qualitative interviewing and analysis. The participants were unknown to the interviewer. The realist approach acknowledges the active role of the researcher and how their own beliefs potentially influence both the research process and findings. To account for this, the interviewer tried to remain neutral and aware of their views and reactions throughout. Furthermore, the analysis followed an inductive approach grounded in the data and was carried out by multiple researchers working collaboratively. No members of the research team were older adults but all had experienced COVID-19 restrictions in Northern Ireland.

Data Analysis

Interviews were audio-recorded and transcribed. Transcripts were imported into NVivo 12 to facilitate analysis. Following the 6-stage procedure outlined by Braun and Clarke (2006, 2019a), the lead researcher (JG) and the interviewer (NM) familiarised themselves with the data and agreed upon the initial codes. Transcripts were coded to identify units of meaning of relevance to the study's aim and were organised into preliminary themes by the lead researcher (JG). In order to draw upon the combined insights of those closest to the data (NM, JG) and those with a wider perspective, members of the team with extensive qualitative expertise and topic knowledge (PMP, LGW) coded two transcripts each in relation to the themes identified. Themes were reviewed and refined by all members of the research team.

Findings and Discussion

Fourteen older adults were interviewed. As shown in Table 1, the sample was varied in terms of gender and education level, however, all of the participants were of White ethnicity.

Thematic Analysis

Two main themes and four subthemes were identified through analysis of the interview transcripts.

Music as an emotional resource

Music was described as 'important', 'part of life', and 'a need'. Some participants could not imagine a life without music, and that such a life would be incomplete, one without fun or pleasure. Most participants described changes in music listening behaviour, noticing that they '*went more to it...than before*' (P9), perhaps indicating an increased need for music as a support in the pandemic. A quantitative survey conducted in Israel found that music listening duration and uses of music increased slightly during stay at home restrictions (Ziv & Hollander-Shabtai, 2021). It was interesting however, that many commented on the changing role of music across their lifespan or noted differences between generations. Participants described music as being more important for identity expression

Table 1 Participant Characteristics and Music Selections

ID	Age	Gender	Ethnicity	Highest level of education	Living Situation	Song Choice	Year	Genre
1	67	Male	White	Undergraduate Degree	With spouse	Shiny Happy People by R.E.M	1991	Rock
2	71	Male	White	Post-secondary general education	With spouse	The Last Man on Earth by Wolf Alice	2021	Alternative/ Indie
3	65	Female	White	Upper Secondary	With spouse and family	He Will Hold Me Fast by Keith & Kristyn Getty	2016	Christian
4	65	Male	White	Lower Secondary	With spouse and family	Bridge Over Troubled Water by Simon & Garfunkel	1970	Folk
5	65	Male	White	Lower Secondary	With spouse	Oh, Pretty Woman by Roy Orbison	1964	Rock
6	74	Female	White	Undergraduate Degree	With family	Yellow Bird by The Sapphires	1959	Pop
7	74	Female	White	Lower Secondary	Alone	Pretty Little Girl from Omagh by Hugo Duncan	1987	Country & Western
8	73	Female	White	Lower Secondary	With spouse	Dock of the Bay by Otis Redding	1968	Soul
9	73	Male	White	Primary School	With spouse	Proud Mary by Tina Turner	1971	Soul
10	78	Female	White	Upper Secondary	With spouse	Rocket Man by Elton John	1972	Rock
11	67	Female	White	Lower Secondary	Alone	Sweet Caroline by Neil Diamond	1969	Soft Rock
12	83	Male	White	Primary School	With spouse	He'll Have to Go by Jim Reeves	1959	Country
13	82	Female	White	Lower Secondary	With spouse	It's a Long Way to Tipperary by John McCormack	1915	Pop
14	76	Female	White	Lower Secondary	Alone	Jealous of the Angels by Donna Taggart	2013	Christian

in their youth, ‘growing up as a teenager it was more...of a identifying with others’ (P4) and that for their generation music was more of a social activity, ‘I was born in an era where big bands and dance halls were on the go, where I would have went and big groups would have been there....kids today miss that’ (P5). Such changes are consistent with the socio-emotional selectivity theory (Carstensen, 1995), which states that there are three motivations underlying age-related changes in social interaction: emotion regulation, identity formation, and developing new social networks. Ageing brings about a shift in social goals and focuses attention on emotion regulation, and this may be reflected in older adults’ use of music for emotional functions.

Preference for using music to induce positive feelings. Participants discussed music offering a range of positive feelings like, ‘pleasure’, ‘fun’, ‘entertainment’, ‘enjoyment’, ‘intrigue’, ‘happiness’, and ‘satisfaction’. Participants’ music selections (see Table 1) and interview responses reveal a preference for positively valenced ‘upbeat music’ (P5) that elicited positive emotions, ‘it does make you feel that bit happier because it’s upbeat’ (P11). While a great many participants described having broad musical tastes, there was a notable dislike for ‘depressing’ or ‘sad’ music, ‘The one thing I don’t like is country and western...I find it depressing..., it’s just “bum bum bum bum” [sings]...depressing, and the words, oh my, you’d be depressed after listening to it’ (P11). Others focused on disliked ‘modern’ genres, such as rap and punk rock, that were deemed ‘aggressive’, ‘loud’, or ‘crude’. Overall, there was a preference for music from ‘our era’ (P9), consistent with quantitative findings of a musical reminiscence bump in adulthood (Jakubowski, Eerola, Tillmann, Perrin, & Heine, 2020; Krumhansl, 2017). Older adults’ selective preference for musical stimuli that evoked positive affective states and memories is consistent with findings of a positivity bias in memory and attention in older adulthood (Mather & Carstensen, 2005). Musical preferences and dislikes are an important aspect of music listening behaviour and fulfil important emotional and social functions, such as emotion regulation, identity expression, and group cohesion. These findings support the idea that there can be social reasons for musical preferences that reflect out-group age-based biases (Ackermann & Merrill, 2022).

Music for regulation and consolation. Participants spoke at length about using music for arousal regulation to ‘calm down and unwind’ (P3) and ‘to help you relax’ (P1), with many highlighting music as an aid to sleep. They also described a mood-repairing effect of music. Music ‘calms your fears’ (P4), ‘cheers you up’ (P7), and ‘makes you feel better’ (P10). Although participants did not report significant distress or sadness during the pandemic, they did highlight a consoling effect of music listening. The participants spoke of music as ‘soothing’, ‘comforting’, and ‘reassurance’, ‘it’s very comforting, it makes me feel that I’ve really nothing to worry about no matter what happens’ (P3). Participants outlined some contextual and musical factors surrounding this use of music. They described it as something to do ‘when I would be on my own’ (P4). While listening to music with other people increases the emotional impact of music (Juslin et al., 2008; Liljeström, Juslin, & Västfjäll, 2013), listening to music for consolation is primarily a solitary activity (Hanser et al., 2016). Features of the music such as the lyrics and identifying with the song’s narrative were seen as sources of reassurance and resilience, ‘Sweet Caroline Neil Diamond...seems quite fitting for now, “holding hands, reaching out”’ (P11). Seeking consolation through listening to spiritual and religious music was also emphasised, ‘it’s reassuring that...you hear some of the hymns that talk about the journey of life and the struggles and the rewards that come after it, you know it does lift you’ (P4). Religion is a well-established source of consolation (Ferraro & Kelley-Moore, 2000), and previous research has found that identification with and feeling understood by an artist or their lyrics can regulate negative feelings by providing solace and comfort (Saarikallio, 2011).

Music as a social surrogate

Music was seen as a proxy or surrogate for social activity that could ‘fill in the gaps’ (P4) created by the COVID-19 restrictions. Respondents described using music ‘to keep busy’ as they ‘weren’t getting out visiting’ (P12) within the context of negative social impacts of COVID-19 restrictions. Participants

reported missing in-person interactions, group music-making, and live music experiences. However, many described adaptations that mitigated these social losses, emphasising the availability of social support in different forms, and by engaging coping strategies such as downward social comparison, ‘*God love anybody that lived on their own, you know there’s always somebody worse [off] than you are*’ (P9), and listening to music ‘*I maybe do listen to music a bit more because I’m not really going out, like in the evenings maybe instead of going to the pub I do sit in and listen to music*’ (P5). One participant noted that listening to music in isolation helped by reflecting the universality of loneliness, ‘*if I’m feeling lonely that I’m not the only one that’s feeling that way*’ (P4). Overall, in the context of COVID restrictions, music listening seemed to provide a substitute for socialising, rather than offering a sense of belonging or togetherness as in previous research (Gabriel & Young, 2011; Granot *et al.*, 2021; Schäfer & Eerola, 2020).

Music as company. The majority of participants described listening to music when they were alone because it ‘*makes you feel like you have a bit of company*’ (P12). This effect of music was highlighted as particularly important following bereavement, ‘*after my husband died there would have been something on in every room*’ (P11). Research suggests that music listening can be perceived as a virtual social interaction (Lippman & Greenwood, 2012; Wallmark *et al.*, 2018). Although participants did describe music as company, their responses do not go as far as to suggest parasocial relationships with musical artists were formed (Kurtin *et al.*, 2019). Instead, participant accounts imply that the feeling of company comes from having ‘*some sound in the house... a bit of background noise*’ (P10), and that music ‘*takes away the quietness of the house*’ (P3). Previous studies have found that young adults use background music for a feeling of company when alone (Groarke & Hogan, 2016; Mas-Herrero, Marco-Pallares, Lorenzo-Seva, Zatorre, & Rodriguez-Fornells, 2013). In a study of older adults’ music listening behaviour, ‘to get company/background music’ was the fourth most common motive for listening to music. This listening strategy was associated with low environmental mastery (Laukka, 2006). Music as company may have been a particularly useful strategy during the pandemic, when listeners had little agency and limited ability to regulate the outside world. Participants found that background music as company would ‘*relax you a bit*’ (P10) and that it is ‘*always a comfort in the background*’ (P4). It is noteworthy that both Laukka (2006) and Mas-Herrero *et al.* (2013) assigned music as company an affect regulatory function, as opposed to a social function.

Music for remembering social experiences. Music listening was described like a form of mental time-travel, with participants revisiting past selves ‘*it takes me right away back to when I was fifteen*’ (P4), or periods of time ‘*another one of REM’s “Losing My Religion” always brings back the first time I was in the States, ‘86 ‘87...and that was being played everywhere*’ (P1). People spoke about music as a way of reconnecting with the self, ‘*it brings you back*’ (P9). Others described pieces of music that reminded them of experiences with certain friends and family members, ‘*I remember dancing with [daughter] in the family room to it and neighbours walking past thinking we’re mad*’ (P1). Music-evoked memories of past relationships and shared musical experiences may foster a feeling of connection with those who are not physically present (Schäfer & Eerola, 2020). Music listening brought back memories that were typically, ‘happy’, ‘good’, or ‘pleasant’. One exception was music-evoked memories of close persons or ‘*old acquaintances that are gone*’ (P9), which could make one ‘*quite sad*’ (P14). Jakubowski and Ghosh (2021) found that music-evoked autobiographical memories are frequent in everyday life, and that older adults’ memories are more vivid and associated with more positive emotions. This corresponds with research outside of music psychology demonstrating biases in remembering the past positively, which can support emotion regulation and the maintenance of a positive self-image (D’Argembeau & Van der Linden, 2007; Mather & Carstensen, 2005), ‘*Different aspects of life you relate bits of music to...it comes back to you in a flash...pleasant times*’ (P4).

Strengths and Limitations

Limitations of this study include the use of opportunity sampling. Participants were White older adults living in Northern Ireland with access to the internet and the ability to use digital methods of communication. Internet use is lower among older adults and is related to systemic inequalities such as socio-economic status (Hülür & Macdonald, 2020). Future investigations should examine music use among digitally excluded and marginalised groups who may have been more impacted by COVID-19 restrictions. That being said, these findings are novel, describing for the first time older adults' music listening behaviour in the pandemic and exploring music as a social surrogate using rigorous qualitative methods. The use of music-enhanced interviews is another strength of the study. Music's relational nature provides a route to associated thoughts, feelings, memories, and experiences (Anderson, 2004; Keightley & Pickering, 2006). This is exploited by music-elicitation, triggering discussion and leading to more in-depth personal accounts (Allett, 2010).

Conclusion

This study aimed to explore older adults' music listening behaviour during the COVID-19 pandemic. Findings suggest that music can be conceptualised as a behavioural resource for managing emotions and as a surrogate for social interaction, supporting quantitative research on the use of music during COVID-19 (Fink et al., 2021; Granot et al., 2021; Krause et al., 2021; Mas-Herrero et al., 2020). In accordance with pre-pandemic research, older adults emphasised music's emotional impact, describing music as a source of consolation, comfort, and positive emotions, as well as a tool for regulating arousal and negative affect (de Witte et al., 2019; Groarke & Hogan, 2016; Saarikallio, 2011). There was also evidence of music acting as a social surrogate by offering company (Lee et al., 2013; Schäfer et al., 2020) and reminders of people and previous social experiences (Derrick et al., 2019; Schäfer & Eerola, 2020).

The themes identified around music listening and social surrogacy do not fully map on to the three main forms of social surrogacy outlined in the introduction (i.e., affiliation and belonging, parasocial relationships, and reminiscence). In the current study, music listening offered a substitute activity for social interaction but not a feeling of belonging, and provided company but did not appear to facilitate parasocial relationships. These findings may highlight important distinctions between the nature of music listening relative to other activities that offer social surrogacy. Studies of radio/podcast listening (Krause, 2020; Schlütz & Hedder, 2021; Tobin & Guadagno, 2022) have afforded a particular salience to the presenters' communication style, the speaking voice, and the 'talkback' element. While some suggest music is a form of communication (Schäfer, Sedlmeier, Städtler, & Huron, 2013), it is certainly more abstract than speech, and this may be an important factor for the development of parasocial relationships. Similarly, narratives in TV/movies and books are thought to provide the mechanism for assimilation leading to a sense of belonging (Derrick et al., 2009; Gabriel & Young, 2011). Although people do have narrative responses to abstract stimuli such as music, they tend to be individually and culturally specific (Margulis, Wong, Simchy-Gross, & McAuley, 2019), which may undermine collective assimilation. However, findings of the current study are consistent with research demonstrating that social surrogates operate by eliciting memories of social relationships and experiences (Derrick et al., 2019), and it is proposed that relative to other activities this form of social surrogacy takes primacy in music listening (Schäfer & Eerola, 2020).

In the current study, older adults' music listening behaviours were strongly aligned with findings of studies carried out prior to the pandemic (Groarke & Hogan, 2016; Hays & Minichiello, 2005; Laukka, 2006). This may be connected to the sentiment expressed by participants that the pandemic had a limited impact on their wellbeing. Similarly, large surveys suggest that the wellbeing of older adults was largely unaffected during COVID-19 restrictions (Röhr, Reininghaus, & Riedel-Heller, 2020), and that younger people were more at risk for loneliness (Groarke et al., 2020). Some studies have found that loneliness, distress, and wellbeing have remained stable (Bu et al., 2020; Luchetti et al.,

2020; Wang *et al.*, 2020), whereas others have reported a worsening of outcomes from pre- to post-pandemic (Krendl & Perry, 2020; van Tilburg, Steinmetz, Stolte, van der Roest, & de Vries, 2020). That being said, the COVID-19 pandemic may have exacerbated the problem of loneliness and isolation for certain populations at increased risk for poor mental health outcomes (Iob, Steptoe, & Fancourt, 2020; Salerno, Williams, & Gattamorta, 2020; Wright, Steptoe, & Fancourt, 2020). Future research should examine the impact of music listening among those vulnerable populations who are the most impacted by isolation and loneliness.

Findings have implications for how music might be used as an accessible, low-resource tool for supporting isolated older adults. Specifically, these findings indicate that listening to self-chosen music offers emotion regulation, company, and a means of remembering social relationships when direct social contact is restricted. Greater understanding of effective self-management practices such as music listening may have practical relevance for those working in aged care services or for informing preparedness and response for future pandemics.

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