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Singing is what we do (together) - redefining 'together'.
A comparative study
Cantare è quello che facciamo (insieme).
Ma cosa significa "insieme"?
Uno studio comparativo europeo

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ABSTRACT

This article discusses the impact of the Covid-19 pandemic on singing with children in schools by providing a descriptive analysis of a comparative look at children's experiences of their singing habits and emotional well-being during the first Covid-19 lockdown. Covid-19 has (for now) established itself as a ubiquitous variable in our daily lives. This paper provides a descriptive analysis of a comparative study on the impact of Covid-19 lockdown (s) on children's singing habits and emotional well-being in Italy, Austria and Finland. A survey was conducted among children and adolescents aged 10-20 years from Austria, Finland, and Italy to determine how the Coronavirus lockdown has affected their daily lives and general well-being. In addition, age, gender, and emotional reaction to the change in singing habits before and after the Covid-19 lockdown were analysed. Until it is certain that rehearsals and communal singing can take place without health risks, alternative options should be explored to plan online teaching in the future effectively. It is hoped that this study, which is only a beginning, will stimulate further research on this topic and contribute to the development of systems and platforms where children can continue their educational and music educational growth by ensuring an uninterrupted singing experience.

La pandemia COVID-19 ha invaso il mondo: le arti hanno subito una durissima interruzione dovuta alle restrizioni. Questo stato ha portato ad un ripensamento radicale¹ dell'approccio pedagogico (Hiscott et al., 2020) in ogni campo, influenzando in modo indelebile la socialità, l'educazione e la co-

1 Per maggiori approfondimenti si veda: https://www.ism.org/images/files/ISM_UK-Music-Teachers-survey-report_Dec-2020_A4_ONLINE-2.pdf

municazione, chiamate a sperimentare nuovi canali di diffusione e nuove pratiche attinenti a diversi stati di vita mai esperiti in precedenza, come il lockdown (D'Amore, 2020). La musica e il canto, probabilmente il settore artistico maggiormente limitato (Brou et al., 2021) hanno subito un arresto quasi totale in tutta Europa a causa delle indicazioni di distanziamento e di mantenimento della mascherina. Tale condizione ha stimolato diffusamente studi e ricerche sulle nuove funzioni assunte dai linguaggi artistico-espressivi, che hanno portato ad approcci e posizioni diversificate derivanti da nuove prassi educativo musicali. La necessità di sviluppare gli aspetti culturali, socializzanti e del benessere legati alle pratiche artistiche ha costituito una vera e propria leva verso la costruzione di modelli educativo-formativi innovativi che hanno coinvolto i curricula della scuola ad ogni livello (Anderson, 2021, Calderón-Garrido & Gustems-Carnicer, 2021). Il presente contributo intende riportare gli esiti di una ricerca condotta da ricercatori di Finlandia, Austria e Italia che hanno investigato l'impatto delle limitazioni portate dal Covid-19 sul canto e sulla musica in prospettiva educativa, evidenziandone influenze sul benessere emotivo nei Paesi presi in esame. In relazione alle diverse età, le risultanze hanno evidenziato come la risposta emotiva abbia influenzato il cambiamento delle abitudini al canto e lo sviluppo di nuove pratiche del canto di "insieme", dato rafforzato dall'analisi comparativa. In tale prospettiva si aprono nuove piste di indagine volte ad identificare strategie didattiche e pedagogiche di valore nate dall'emergenza pandemica e che potrebbero mantenere una influenza significativa anche sul futuro sviluppo educativo delle prossime generazioni.

KEYWORDS

Singing with children, online singing, Covid-19, social isolation, well-being, lifelong learning.

Cantare con i bambini, canto online, Covid-19, isolamento sociale, benessere, Italia, Austria e Finlandia.

Introduction

Singing with children in an educational context usually takes the form of a face-to-face activity together. Covid-19 caused a break in the continuity of this educational process (ISM, 2020) and established itself (for the time being) as a ubiquitous variable in people's daily lives. All aspects of people's lives have been and continue to be affected by the impact of the epidemic. The Covid-19 lockdown forced children into social isolation, and a situation where making music and singing together in person was not possible. Online portals such as Microsoft Teams, Zoom, Slack, Google Meet, EduPage and others, became increasingly popular and the medium for rehearsals and teaching (Cayari, 2020). It was impossible to sing together in person for a long time, and there are still uncertainties about whether singing together indoors is possible without health risks (Kähler, 2020).

For this reason, most music educators and voice teachers took the opportunity to learn about new ways to plan and deliver online voice lessons effectively. The importance of online teaching in this time of crisis cannot be denied, and educators should ensure the most effective methods of online teaching and instruction should the situation repeat itself. The lessons learned from the Covid-19 pandemic in 2020 will force a new generation of laws, regulations, platforms and solutions

for future cases. Therefore, good preparation is vital if the singing community is ever forced to sing together online again.

Among the many music-making opportunities, the human voice is always readily available. Not only is there the availability and convenience aspect of always having one's musical instrument with one, but it is also widely acknowledged that singing has psychological and physiological benefits that affect one's overall well-being. Salminen (2020) also shows in her study that the effects of singing from a psychological and social perspective support the idea of singing in improving social inclusion. Therefore, children should be taught to sing throughout their school career and beyond. Early 20th-century Hungarian composer and educator Zoltán Kodály believed that music education could engage students spiritually, culturally, and emotionally. He also believed that singing should be the starting point for musical literacy, seen as a necessity rather than a luxury. The Kodály concept (n.d.)² starts from the basic assumption that the singing voice is nature's built-in musical instrument and that it is the innate right of every child to learn to express themselves musically through the singing voice. Hallam (2010) provides clear research evidence on the impact of active engagement with music on the intellectual, social and personal development of children and young people. The evidence of the impact of musical skills on language development, literacy, numeracy, intelligence measures, general achievement, creativity, fine motor coordination, concentration, self-confidence, emotional sensitivity, social skills, teamwork, self-discipline, and relaxation speaks for itself. Welch (2020) shows a growing research literature on the benefits of artistic engagement in promoting further progress in children, such as literacy and numeracy and their physical, psychological (including emotional) and social development.

What makes singing such a unique experience and an effective form of artistic expression? Singing is one of the oldest forms of expression, if not the oldest. Songs, which are among the oldest musical genres, primarily reinforce the intended meaning of the text by musically amplifying and enriching the emotional content of the written text. The beauty of singing is that it transcends cultures and traditions. Different cultures have different musical traditions and are characterised by their singing style and combination of musical elements. Nevertheless, the essence of singing remains the same, whether in different cultures or even in different stylistic eras, namely, to convey feelings and emotions (Coutinho et al., 2019). Using music and songs to communicate emotions can be a valuable tool to help children understand their feelings. Adachi and Trehub (1998) show that children can express emotions through song. Welch (2005, p. 249) speaks of a "symbiotic interweaving of singing and emotion" and summarises the contribution of Gabriellsson and Örnkloo (2002), who point out that children "become more expert [with age] at recognising and expressing intended emotion in singing as well as speaking". Songs expressing joy, sadness, loneliness, worship and many other emotions are found in almost all musical cultures. Songs express personal feelings and have the power to express common feelings of a wider community - they can unite people by evoking a shared expression of emotions, feelings, opinions, and beliefs. Songs and the medium of a song are the vehicles to convey such messages. Beethoven's "Ode to Joy" brought the message of human rights and brotherhood to 19th-century audiences, and it was not until 1972 that it was adopted as a European anthem by the Council of Europe³. We have seen in the past how fa-

2 <https://kodalmusicinstitute.org/about-kodaly-music-institute>

3 <https://www.coe.int/en/web/about-us/the-european-anthem>

mous artists have used songs to unite people for humanistic reasons and to save lives or raise the level of social responsibility in global fundraising campaigns. Singing seems to be a universal language of emotions and is a very accessible form of artistic expression (Shankman et al., 2019). It also offers musically inexperienced people a way to express feelings and benefit from the interpersonal and intrapersonal communication that singing provides (Welch, 2005). Choral singing, in particular, has positive effects on social, emotional, physical and cognitive domains (Livesey et al., 2012). The national lockdowns during the Covid-19 pandemic changed access to choral singing, limiting and hence reducing the access to these benefits.

Singing also has the power to give people – both singers and listeners – access to a long-lasting and deepening spiritual experience. Since the beginning of time, people have used singing to express their feelings and accompany emotional, solemn occasions such as worship in church. Singing religiously inspired songs not only creates a special connection to God but also to each other (Atkins & Schubert, 2014). Songs are even thought to have transcendent powers (Tafone, 2020). Ethnographic and anthropological studies (Seeger, 2004) have shown that songs have been used in the past to evoke a specific response from nature (rain songs) or on a spiritual level (a song to protect against danger). Reimer (2009) refers to “the power of music to change the reality of human experience and the way humans live” (p. 43). He goes on to discuss this power as it has the possibility to penetrate to the roots of human existence: “[H]umans are conscious of their individual and collective existence in a world both including them and transcending them, on which they are dependent for life and meaning and to which they contribute life and meaning”.

Singing can be seen as one of the valuable forms of lifelong learning, as it fits perfectly with the criteria established by Dozza (2017) for what can be considered lifelong: It is “a natural and social process that is built from the first days and weeks of life, and even before, and extends throughout the life course into old age”. Lifelong learning begins in the womb and ends at the end of life. During the Covid-19 pandemic, parents became the primary educators at home and had to take on new roles normally assigned to teachers. However, this presented an excellent opportunity for both the caregivers and the children. Sulistiono and Nudiati (2021) point out that these conditions are consistent with the concept of lifelong learning, according to which (1) the learning that individuals receive does not come from their minds but the distribution of daily information; (2) individual learning is not a matter of mental processes, but what is embedded in individual practice is material, social and semiotic; and (3) information is disseminated as lifelong education and embedded in different practices so that learning has a different meaning for each individual. The role of families during Covid-19 in supporting children in their new (online) learning environment can also be seen as a positive aspect, in the sense that learning took place in a new social environment, with new material and with different outcomes, which places the onus on the learner (and their support system) to ensure the effectiveness of the learning process - a skill that can undoubtedly be seen as a positive asset for lifelong learning. Some of these skills applied to the participants’ singing experiences during the Covid-19 lockdown sparked a renewed interest that may lead to a lifelong interest and passion for singing and making music together.

1. Literature overview

1.1 Engaging virtually

Since the outbreak of the Covid-19 pandemic in the early 2020s, life has changed dramatically, as it was known in all sectors of society. The usual forms of education and socialisation were abruptly disrupted, and alternative forms of education, socialisation, and leisure came to the fore. Social distancing was introduced in many parts of the world as a preventive measure against the ongoing threat of the Covid-19 pandemic. Due to the lack of physical togetherness, many regular aspects of musical activities fell away altogether or changed significantly. The necessary shift to virtual learning, socialisation and leisure activities is not new to the Covid-19 pandemic. As early as 2000, Stiles (2000) pointed out the importance of creating engaging learning experiences for learners and the need for educators to recognise that learning is a social process and the importance of creating effective learning environments that facilitate the active acquisition of subject-specific and general subject knowledge.

Dillenbourg et al. (2002) argue that a virtual learning environment is an explicitly represented and specifically designed information space, a social space where pedagogical interactions occur in the environment and spaces become places. A space/place in which students are not only active but also actors: they co-construct the virtual space. Dillenbourg et al. (2002) also note that virtual learning environments are not limited to distance education but can be combined with traditional classroom activities by integrating heterogeneous technologies and different pedagogical approaches. As they have been cautiously used since the first lockdown in the early 2020s, virtual environments were primarily limited to the virtual (online) realm but have now evolved into hybrid environments where virtual environments overlap with physical environments. Britain and Liber (2004) reported on the development of e-learning as the subject of various sponsored strategic initiatives to promote e-learning to improve the quality of educational provision and empower learners. However, governments around the world have been gently forced to adapt, develop or refine e-learning strategies by the social isolation that has followed government-imposed restrictions.

According to Kavuma (2003), virtual learning environments enable electronic learning suitable for modern society and liberate learning in terms of instructional ideals. Kavuma's research findings suggest that virtual learning environments can enhance learners' learning experiences, but whether the virtual learning environment's ability to improve student learning outcomes is inconclusive. However, Barker and Gossman's (2013) study showed that a virtual learning environment improves learning and motivation to learn, as reported by student participants.

Due to the exponentially rapid development of online technologies and the increasing dependence and access of children and adolescents to the Internet, a paradigm shift is taking place in the way students use the Internet as part of their daily lives (Prensky, 2001; Cakirpaloglu et al., 2020). The considerable time spent on social media platforms contributes to new spaces and opportunities for young people to form identities and build and maintain relationships (Rice & Barman-Adhikari, 2014; Way & Malvini Redden, 2017). In recent years, one cannot afford to overlook the paradigm shift from formal learning to informal learning platforms. Learners born in 1982 or later are referred to as Millennials, are considered adept at using technology and, according to Prensky (2001) and Selwyn (2012), rely on using technology as part of their learning profile, which often leaves them frus-

trated and unfocused when technology and digital platforms are not accessible to them when learning. Thang and Ng (2020) show that social networking sites are becoming increasingly popular as a learning tool nowadays and that informal learning via social networks is accepted as normal and the rule rather than the exception among young people. Although their study showed that suburban and rural students seem to use social networking sites for informal learning more often than urban students, the results are conclusive enough to suggest that social networking sites are an essential source of knowledge acquisition for young people. These sites are sources of learning, but they also represent digital neighbourhoods where young people understand and maintain their identities (Brough et al., 2020).

As seen from the above, the Internet or the virtual world as a learning platform is nothing new per se for young people.

1.2 Virtual singing

Pre-Covid-19 research on virtual singing exists, but not to the extent and intensity of some recent work, as will be seen later. Libeaux et al. (2007) investigated the virtual singing environment as an alternative to unsatisfactory acoustic conditions. The results of the study showed a satisfactory realism of the simulation in terms of the singers' subjective evaluation of the choral sound and confirmed their ability to sing along with the virtual singers. However, the study did not consider the loss of social and emotional benefits of singing in such a virtual environment. While the study by Libeaux et al. (2007) deliberately did not examine the health and well-being benefits of singing in groups in a virtual choir environment, the study by Daffern et al. (2019) described a specific system that allows users to participate in a group singing activity in a 360-degree virtual reality and hear themselves singing alongside the other singers in the recorded environment. The paper does not necessarily provide conclusive evidence for the use of virtual recordings as satisfying environments to promote health and well-being. It merely shows a promising way for the specific tool to explore the health and well-being benefits, mainly to guide the social interactions associated with actual group singing.

Haupt (2003) embarked on a pioneering project recording Thomas Tallis' *Spem in Alium*. For the technology available to Haupt in 2003, the product was admirable but can be described as highly digital and electronically manipulated, not reflecting the concept of Virtual Choirs as it is known today and as introduced by Eric Whitacre in 2011. The Virtual Choir concept as used by Whitacre⁴ came about when he heard a recording of one of his fans singing all the vocal parts of one of his choral works. The Virtual Choir concept involves people from all over the world collaborating and singing the same composition in sync to create a unified sonic product. Carvalho and Goodyear (2014) have studied the Whitacre Virtual Choir projects and found them compelling examples of what can be achieved through dedicated collaboration in informal learning networks. Carvalho and Goodyear also mention the intensity of the emotional experiences that the Virtual Choir's final products evoke, both for the participating choir members and for those who listen to them.

Circle and Hoppmann (2010) reported on an online choral class at a multi-cam-

4 <https://ericwhitacre.com/the-virtual-choir>

pus American university to reach more students and allow more students to participate in a choir who may never have done so before or enjoy singing. The authors talked about the necessary structure for such an endeavour, student accountability and faculty adaptability as necessary aspects for the success of what was considered new and groundbreaking in 2010.

When singing together in the same physical space, certain natural acoustical factors play a crucial role in the final sound of the choir. The final composite choral sound elements are determined by precision, vowel formation, intonation, and room acoustics, among other factors. Jers and Ternström (2005) conducted an intonation analysis of a multi-channel choral recording with regard to intonation, synchronisation and the extent to which the singers in a vocal group agree with each other. The study aimed to find objective measures that could help define the so-called “chorus effect” (the combined sound of many sources that are similar but uncorrelated at the level of the waveform of the sound). Parncutt and McPherson (2002) define the chorus effect or ensemble effect as that character of sound that prevents one from hearing exactly how many voices are singing in unison. The minimum is three voices, which is different from singing in one or two voices. Therefore, the chorus effect is influenced by factors such as intonation and the characteristics of the individual voices (vibrato, timbre). Jers and Ternström’s (2005) study shows some expected effects of intonation dispersion and an unexpected juxtaposition of vibrato.

1.3 Covid-19 related singing

The literature on how the Covid-19 lockdown and the subsequent lack of regular singing habits affected children is growing (Cabedo-Mas, 2020; Coibion et al., 2020; Corvo & De Caro, 2020; Dey, 2021; Fink et al., 2021; Giordano et al., 2020; Granot et al., 2021; Krause et al., 2019; Martínez-Castilla et al., 2021; Mas-Herrero et al., 2020; Pettinger, 2021; Porshi, 2020; Razai et al., 2020; Theorell et al., 2020; Torales et al. 2020; van der Sandt & Coppi, 2021). In a literature review on the effects of Covid-19 on the musician and return to singing, Vance et al. (2021) reviewed the leading literature on the following aspects: Effects on the voice, aerosol and droplet transmission, singing and musical instruments and the spread of Covid-19, psychosocial effects, effects on patients with a vocal prosthesis, voice and speech therapy, treatments and return to singing and playing instruments. In addition to the recommendation to have virtual rehearsals or performances to reduce potential transmission when singing and playing instruments, the main conclusion of the literature review by Vance et al. (2021) is that wearing masks, instrument covers, smaller choirs, performing outdoors, good ventilation with social distance, shorter rehearsals, regular cleaning of frequently touched surfaces and hand washing, avoiding contact with others and temperature shielding are the measures that should be taken to regulate the effects of Covid-19.

Some research on the direct impact of the Covid-19 pandemic on singing and the emergence of virtual choirs as an alternative to singing has already seen the light of day, such as the experiences of professional singing teachers during the Covid-19 period (Primov-Fever et al., 2020). Theorell et al. (2020) conducted a study with Scandinavian choral singers and asked them the question, “What do you miss most as a choral singer?” Each participant was asked to rate the importance of different elements related to the experience of choral singing. Their study shows that the social aspect of choral singing carries more weight than the other com-

ponents in the perception of loss during the changes in choral singers' routines in response to the Covid-19 pandemic and that singers were affected aesthetically, emotionally and physically. Martinec's (2020) study echoes Sandén's (2020) findings in that today's technologies cannot replace the necessary human connections and subtle interactions in face-to-face rehearsals, especially the magic that occurs when singers breathe together, feel together, and share a profound aesthetic experience, person-to-person in a group. In a recent study of choral singers' and conductors' experiences during the Covid-19 pandemic in the UK, Daffern et al. (2021) concluded that "the possibilities of technology have clarified the potential access it could provide to group singing experiences in more normal times. However, the limitations imposed by current virtual choral models, which cannot provide the shared experience of singing together, have highlighted the recognition of the importance of face-to-face group singing to perceived well-being, with the connectedness and social capital formed in the process of singing together central to the benefits of this experience".

During the current Covid-19 crisis, research has already demonstrated the benefits of music in enhancing well-being. As reported in a study by Corvo and De Caro (2020) and van der Sandt and Coppi (2021), Italians responded immediately and spontaneously to counter loneliness and distress with song and music. In a cross-cultural study where respondents were from eleven different countries, music was found to be more or equally effective in achieving different goals of well-being compared to other strategies (hobbies, physical activity, information seeking, reading, eating/cooking, productive activities, mindfulness, watching movies) (Granot et al., 2021). Pettinger (2021) reported that singing is a creative outlet for coping and a creative response to the Covid-19 crisis. In Spain, a survey showed that adults of different ages listened more to music during a lockdown, which positively affected their perceived well-being (Cabedo-Mas et al., 2021). Giordano et al. (2020) reported the effects of listening to music on the emotional well-being of Italian hospital staff by reducing feelings of anxiety, sadness and worry.

Similarly, a survey study conducted in Australia by Krause et al. (2021) found a positive relationship between music listening and life satisfaction. A cross-cultural study (USA, Italy and Spain) found that music (both listening and playing) was the most chosen coping activity during the pandemic (Mas-Herrero et al., 2020). In another cross-cultural study conducted among six nations from three continents, more than half of the respondents reported using music as a coping activity. Individuals who experienced increased negative emotions used music for solitary emotion regulation, while individuals who experienced increased positive emotions used music as a proxy for social interaction (Fink et al., 2021). Several studies, such as Fink et al. (2021), emphasise the importance of real-time musical responses to social crises and individual adaptations of musical behaviour to meet socio-emotional needs.

1.4 Benefits of singing together

In addition to the social benefits of singing, it is believed and proven to be a wholesome, good experience that promotes mental health and well-being (Balsnes, 2018; Charlotte, 2020; Clift, 2012; Clift & Morrison, 2011; Clift et al., 2010; Cohen, 2009; Fancourt & Steptoe, 2019; Gabrielsson, 2011; Gick, 2011; Grape et al., 2002; Grape et al., 2009; Grape et al., 2010; Judd & Pooley, 2014; Kirsh et al., 2013;

Kreutz, 2014; Livesey et al., 2012; Maury & Rickard, 2020; Mellor, 2013; Olsson et al., 2013; Schladt et al., 2017; Skingley et al., 2018; Stacy et al., 2002; Stensæth, 2018; Stewart & Lonsdale, 2016; Theorell, 2014; Vaillancourt et al., 2018; Williams et al., 2018; Willingham, 2021). Several areas are researched on how participation in a communal activity affects human well-being. In a study of the mental health and community well-being benefits of group singing in Australia, the authors highlighted that the “individual mental health benefits associated with singing in groups include increased levels of social connectedness, increased sense of belonging, physical and emotional benefits, and reduced personal stress” (Gridley et al., 2011). Norton (2015) indicates that the benefits associated with group singing, such as positive affect or mood, controlled deep breathing, social support, social cooperation and coordination, cognitive stimulation, and which require regular engagement and practise, as reported in a study by Clift and Hancox (2010), could just as easily result from other group activities. However, group singing can activate physiological processes not addressed by participation in only social groups. Sanal and Gorsev (2014) investigated the psychological and physiological effects of singing by quantifying the effects of choral singing on singers’ emotional state and anxiety levels. They concluded by finding that singing positively impacted psychological indicators of effect and anxiety. Their study could not convincingly demonstrate the positive physiological effects only due to the study’s limitations. The results of the study on the effect of music on human stress response by Thoma et al. (2013) may help to understand the positive effects of music on the human body. Kreutz et al. (2004) studied the effects of choral singing on secretory immunoglobulin A, cortisol, and emotional state. As with all other studies, the outcome was favourable in favour of singing, as the results suggest that choral singing positively affects both emotional affect and immune defence. Pearce et al. (2016) believe that in addition to the physical and psychological processes that link singing to improved health and well-being, the social aspects of group singing are also likely to play a vital role in health and well-being outcomes.

1.5 Music and emotions

The relationship between music and the mind leads to a brief consideration of the individual sphere of emotion, an indispensable part of being human. Emotions are one of the most pervasive aspects of human existence and are associated with virtually every aspect of human behaviour-action, perception, memory, learning and decision-making (Sloboda & Juslin 2001). However, the answer to what emotions are is as evasive today (Pawłowska, 2020) as it was in 1884 when William James (1884) first posed the question. Fehr and Russell (1984, p. 464) claim that “everyone knows what an emotion is until asked to give a definition”. Another reason is the “disruptive” role attributed to emotions as motivators of human behaviour. Although the way emotions are viewed has changed considerably over time, one of the prevailing views has been that rationality can be hijacked by the pirates of emotion (Cacioppo & Gardner, 1999). Emotions can be seen as a simple concept with a scientific construct that includes both a body of tacit and explicit knowledge. Pawłowska (2020) claims that emotions are natural and spontaneous properties of human beings because they remain in the sphere of individual experience. To date, there is no clear indication of what they are, when they arise, what they depend on and how they are dealt with. Therefore, one should look into the sociology of emotions and how social conditions play a role in the emer-

gence of emotions, dynamics, timing and emotionality in the individual and interactional, community and organisational dimensions (Pawłowska, 2020, p.9). Emotions are studied by several scientific disciplines, psychology, social psychology, micro-sociology and cultural anthropology.

Measuring the emotions of children and adolescents can be a controversial topic, as Delplanque and Sander (2021) claim that reliable methods for measuring emotions are risky in terms of scientific validity. Mauss and Robinson (2010) state that “while various explicit and implicit measures of emotion are currently available, there is still no generally accepted method to measure a person’s affective state” since emotions are subjective and differ from culture to culture. Geethanjali et al. (2017) claim that “[E]motion is a subjective and conscious occurrence which is illustrated mainly through psychophysiological expressions and biological reactions”. Schindler et al. (2017) point out that despite the long-standing interest in emotions, there is a lack of assessment tools that capture the broad spectrum of emotions. Concerning the current study, it may be interesting to consider the success of Toet and van Erp (2019) in exploring an “EMojiGrid” as an instrument to assess experienced and perceived emotions. The validity and reliability of their study compared to other methods could be a useful affective self-report instrument to assess both experienced and perceived image-related emotions.

Viewed as a social phenomenon, the Covid-19 pandemic directly impacted people’s emotional well-being. Music and song in coping and navigating emotions can be viewed through a psychological approach - how and why people experience emotional responses to music and how and why individuals experience music as an expression of emotion. Vuilleumier (2014) notes that “research in psychology has often emphasised a different kind of aesthetic emotions elicited by music, beyond basic emotions such as joy, sadness, and fear, or dichotomous distinctions between pleasant and unpleasant emotions”. Vuilleumier (2014) continues by identifying “music-specific” emotions: joy, sadness, tension (fear or anxiety), wonder, nostalgia, tenderness, power, peacefulness and transcendence. This notion that the processes of emotion emergence in the arts may differ from everyday emotions is supported by Kawakami et al. (2014). At first glance, musical emotions are emotions related to the aesthetic value of music or the emotions that are evoked and expressed through music. How one reacts to music and how music can influence one’s emotional state, i.e. musically evoked affective reactions, is strongly correlated with the emotional arousal of music (Goupil & Aucouturier, 2019).

Singing is a musical activity that evokes strong emotional responses. Kreutz et al. (2012) suggest that singing can evoke strong activations in subcortical regions associated with emotional processing. Morton and Trehub (2007) claim that songs are essential across ages and cultures because of their social and emotional regulation. From the moment infants are lulled or stimulated with appropriate songs to the activities and games of preschoolers and school children accompanied by sounds through songs. Songs play an essential role in regulating emotions, as Sloboda and Juslin (2001) noted, and songs also promote and enrich identity and group solidarity. Songs are also used in certain rites of passage (Lertzman, 2002; de Cácia Oenning da Silva, 2006), used for political purposes (Suodenjoki, 2019), and songs provide a socially acceptable means of expressing strong feelings (Ziv, 2019).

Songs are obviously a means of conveying basic emotions, and as Vuilleumier (2014) claims, even “music-specific” emotions. The physical properties of music lead to a specific individual response to the experience of music and the emo-

tional processing of music. In summary, Lundqvist et al. (2009) found that the emotion triggered in the individual is the same as the emotion expressed in the music, and this is also consistent with the idea that music can trigger emotions through a process of emotional contagion. For example, a smile is contagious - singing songs with inspiring and uplifting lyrics cannot help but heighten and influence one's emotions.

Music and its means of communication and how people use music to support their understanding and interpretation of social issues are also found in anthropological and ethnomusicological studies. "Music represents an important aspect of the identity of both individuals and groups and is an inevitable part of daily life impregnated with cultural codes that are part of the symbolic system of our society" (Staji, 2018, p. 291). As an indispensable part of societies, music and musical sounds are also seen as inextricably linked to the communities that produce them (Cottrell & Impey, 2018, p. 525). Not only is music an integral part of people's leisure time (Hallam et al., 2017), but the therapeutic value of music should also be noted-musical sounds have a profound effect on morale, personality and the cultivation of human emotions due to their affective and emotional charge (Hosseini & Hosseini, 2018).

2. Method and sample description

This study was conducted in collaboration with the Free University of Bozen/Bolzano (Italy), the Mozarteum University (Austria), the University of Jyväskylä (Finland), and De Montfort University (United Kingdom) and approved by the ethics committees of the respective universities. The quantitative research was conducted in an online questionnaire, followed by data analysis. The questions were ordered and grouped according to the emotional and social well-being of the participants as well as their singing habits. Children and young people aged 10-20 from Austria, Finland and Italy were asked how the first Covid-19 lockdown affected their daily lives and general well-being. Due to the lockdown and the resulting physical isolation, an online survey proved to be a reliable and easy-to-use instrument. The sample (Riva et al., 2004) was strictly controlled, and the questionnaire was constructed to ensure reliability by including enough multiple factors and a high enough number of options to measure the variables accurately.

All researcher institutions followed the required ethical approval procedures, and informed consent rules were followed. The study required participants to give informed consent to use their data. Steps were taken to ensure that participants willingly participated in the study with their knowledge and consent. Necessary steps were taken to obtain consent from underage participants. The survey was designed to avoid psychological distress or anxiety or other harm or negative consequences beyond what participants normally experience in their lives outside of research. Participants did not receive any financial incentives for their participation.

2.1 Sample description

The population for this study is defined as all children and adolescents between the ages of 10 and 20 who actively sing, whether as soloists, choral singers or participants in regular music classes, with an average age of 15.13 years. There were

636 participants in total, 163 Austrian, 141 Finnish and 332 Italian. When selecting the sample, care was taken to include as many environments as possible where children might sing. Most of the Austrian participants came from school choirs, most of the Finnish participants sang in the context of school music lessons, while the Italian participants came mainly from choirs outside school. The results show that they sing, for example, in their rooms or with game consoles, YouTube, Spotify.

It is also noteworthy that a significant number of the participants do not sing in a choir (neither in school nor in a choir outside school). However, among non-choir singers (n=169), there was a healthy distribution of other singing activities: 16.57% took singing voice lessons, 32.54% participated in singing at religious ceremonies, 47.93% usually sang at music lessons, 28.40% participated in family singing, and 81.07% indicated that they usually sang alone.

2.2 Research tools

In the present study, a conventional questionnaire was used. Its possible weaknesses are acknowledged: they are challenging to put into words. The description of emotions can be considered ambiguous, as the association between words and feelings is also subjectively influenced by the cultural and social environment of the participants. In this study, care was taken to translate the questionnaires carefully to capture the intended meaning in different cultures and languages, but it must be said that differences in intensity, context and other semantics between cultures may be lost in translation (Toet & van Erp, 2019). The use of a Likert scale in the questionnaire seems to have its pitfalls in a cross-cultural study. The response style of the Italian and Austrian participants seems to differ from that of the Finnish participants. This could be due to cultural differences between the respondent groups. Therefore, without further studies or in-depth clarifications, a cautious interpretation of the data is warranted. The current study might have the same shortcomings or limitations as the study by Pisano et al. (2020), considering that “the outcomes of potentially distressing situations, even in case of natural disasters (Alvarez & Hunt, 2005), are co-determined by the interaction of several factors including the parents’ psychological response to the pandemic, which influences the children’s reaction; mental and physical well-being of parents and children before the event; quality of interactions between parents and children before enduring the pandemic and, lastly, resilience, in coping with adversities”.

Question 5 and question 8 of the questionnaire specifically addressed participants’ emotions during the Covid-19 social isolation (lockdown) and how they felt when they could not sing with the people they usually sing with. “During the Covid-19 social isolation (lockdown) I felt:..”, and “Not being able to sing with other singers made me feel..”. After studying different views on the definition of emotions (Frijda, 2007a; Frijda, 2007b; Mayer, 2020; Oatley, 2007; Pawłowska, 2020; Payne, 1989; Reizenzein, 2007; Scherer, 2005), the following emotions were selected: happy, afraid, calm, sad, afraid, angry and agitated as emotions that participants were asked about. These emotions are based on the primary human emotions identified by Panksepp (Montag & Panksepp, 2017) and intercultural concepts, according to Helfrich (2018). Therefore, it can be assumed that the Covid-19 is an emotional event that evokes individual emotional responses that are linked to and influenced by social and cultural influences (Mayer, 2020). The

literature generally assumes that the chosen emotions are present in the emotional spectrum of most cultural groups (Scherer et al., 1986).

3. Findings and Discussion

This article reports on children and young people’s perceptions of emotional well-being and their experiences of their singing habits and emotional well-being during the first Covid 19 lockdown. This discussion takes place against the backdrop of the participants’ emotions.

The impact of the Covid-19 pandemic on the global population is currently being assessed and investigated in numerous studies around the world. Public debate on the issue is becoming more widespread, and the media (Kwai & Peltier, 2021; Savage, 2020) is reporting on the long-term impact on people’s well-being - potentially helping to exacerbate the psychological impact on people. Houston and First (2021) show in their study that those who experienced the most media coverage of the pandemic had more stress and depression.

The results shown here may not be statistically significant, although efforts were made to make the sample as large as possible. However, the data offers an exciting insight into the current situation and motivates further, more thorough research. It is hoped that the results will provide food for thought for families to better care for their children and for educators to find better methods of singing with children.

a. Basic Emotions

Figure 1 shows that most participants from all three countries felt a sense of calm during social isolation, followed by a sense of sadness and then agitation. There is a slight standard deviation from the mean in all three cases.

	Country	Mean	N	Std. Deviation
<i>During the COVID-19 social isolation I felt happy.</i>	<i>Austria</i>	2.85	163.00	.92
	<i>Finland</i>	3.11	141.00	1.05
	<i>Italy</i>	2.53	332.00	1.12
<i>During the COVID-19 social isolation I felt afraid.</i>	<i>Austria</i>	1.90	163.00	1.01
	<i>Finland</i>	2.29	141.00	1.05
	<i>Italy</i>	2.49	332.00	1.26
<i>During the COVID-19 social isolation I felt calm.</i>	<i>Austria</i>	3.43	163.00	1.07
	<i>Finland</i>	3.50	141.00	.98
	<i>Italy</i>	3.08	332.00	1.21
<i>During the COVID-19 social isolation I felt sad.</i>	<i>Austria</i>	2.95	163.00	1.29
	<i>Finland</i>	3.09	141.00	1.14
	<i>Italy</i>	3.08	332.00	1.33

<i>During the COVID-19 social isolation I felt angry.</i>	<i>Austria</i>	2.71	163.00	1.29
	<i>Finland</i>	2.51	141.00	1.17
	<i>Italy</i>	2.56	332.00	1.30
<i>During the COVID-19 social isolation I felt agitated.</i>	<i>Austria</i>	2.98	163.00	1.38
	<i>Finland</i>	3.04	141.00	1.17
	<i>Italy</i>	2.93	332.00	1.28

Table 1: Emotions

Interestingly, most participants felt calm during social isolation in all three countries, with a convincingly low standard deviation from the mean. Exactly how participants interpreted feeling calm is unclear. In general, it is assumed that being calm means being free from agitation or negative disturbance - i.e. a positive rather than a negative emotional state.

b. Emotions – gender differences

Participants also had to indicate their gender as part of the demographic data in the questionnaire. Gender identity generally refers to how a person feels and whom they see themselves as regarding their gender. There are many possible gender identities, three of which were listed in the questionnaire: male, female and other.

Of the participants, the majority were female (73,11%), male singers made up 25,47% of the sample, and a total of 9 singers reported being of a different gender. In the gender distribution, it can be seen that there are fewer male singers than female singers in all three countries. Although the purpose here is not to discuss or answer why there are fewer male singers than female singers, it should be noted that this is a popular topic for research world-wide. For now, suffice it to say that the authors agree with Freer's (2007) view that research-based teaching methods need to be sought that positively impact the experiences of all students, especially boys. Adolescent boys need to be asked what they like and dislike about singing. Their responses could be an occasion to examine what music educators do, how they do it and why – another possible research topic arising from this study.

In this study, the complexity of dealing with cross-gender identification of children and young people was not considered. As the term "other" is rather vague when it comes to understanding one's gender characteristics, gender diversity among children and adolescents has been increasingly reported in recent years (Flores et al., 2016), and that both gender identity and gender expression result from a combination of biological and psychosocial factors (Turban & Ehrensaft, 2018), the issue of gender expression in children's and adolescents' singing activities is not part of this study. Due to the low occurrence of "other" cases, the data are not considered significant. It should be noted that according to Spagnolo et al. (2020), updated and disaggregated data are needed to truly understand the extent to which sex and gender influence the health outcomes of the Covid-19 pandemic.

The data show that gender differences in emotion scores are significantly

higher among male participants for only two emotions, “happy” and “calm”. This correlates with Chaplin and Aldao (2013) findings, who showed in their study of gender differences and moderators of differences in emotion expression from childhood to adolescence that girls show more internalising emotions such as sadness and anxiety.

Emotions - gender differences.

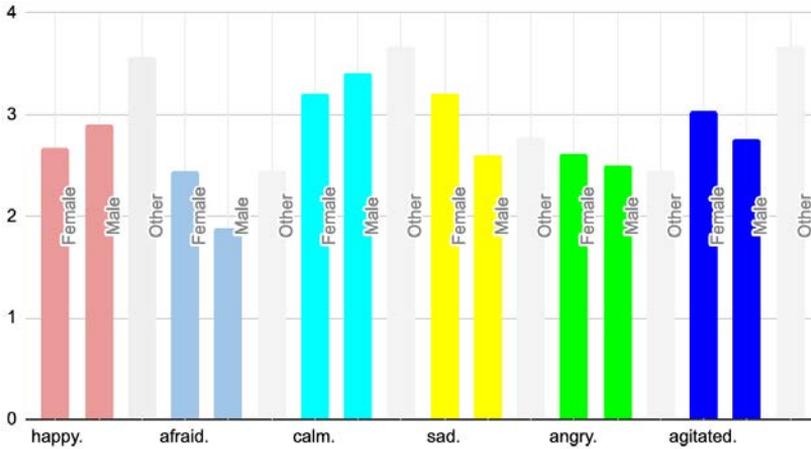


Figure 1: Emotions – gender differences

c. Socialisation and companionship

When participants were asked if they miss spending time with their friends or with their fellow singers, the responses tended to be “I often miss spending time”. The Likert scale responses were as follows:

1= I always missed...
2 = I often missed...
3 = I sometimes missed...
4 = I rarely missed...
5 = I never missed...

Table 2: Likert scale

The frequency of missing time spent with friends also tended towards ‘often’, in contrast to fellow singers (Table 3 and Table 4). When the scores were combined and reduced to just three, namely ‘always/often’ and ‘sometimes’ and thirdly ‘rarely/never’, participants’ always/often’ missed spending time with their friends, as well as with their fellow choir members. Brooks et al. (2020) and Jiao et al. (2020) assert that the mental health of children quarantined due to Covid-19 is challenging due to the loss of regular company. As with the emotional experience of being in social isolation, female participants showed the highest score on the emotional experience of not singing with their fellow singers.

<i>Value Label</i>	<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cum Percent</i>
Always	1	183	28.77	28.77	28.77
Often	2	331	52.04	52.04	80.82
Sometimes	3	107	16.82	16.82	97.64
Rarely	4	11	1.73	1.73	99.37
Never	5	4	.63	.63	100.00
<i>Total</i>		636	100.0	100.0	

Table 3: “Missing spent time with friends”

<i>Value Label</i>	<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cum Percent</i>
	0	4	.63	.63	.63
Always	1	116	18.24	18.24	18.87
Often	2	250	39.31	39.31	58.18
Sometimes	3	156	24.53	24.53	82.70
Rarely	4	63	9.91	9.91	92.61
Never	5	47	7.39	7.39	100.00
<i>Total</i>		636	100.0	100.0	

Table 4: “Missing spent time with fellow singers”

In a study by Shorer and Leibovich (2020) on young children’s emotional adjustment during the onset of Covid-19, their emotional adjustment during stressful events is shown to be highly dependent on parents’ emotional state and parental emotion regulation and playfulness. Their study showed that parental emotion regulation fully mediates the relationship between stress exposure and children’s stress responses. These findings highlight the importance of parental emotional competence in children’s emotional adjustment during stressful times. The results suggest that children were mainly calm during the social isolation (lockdown) and generally sad because they could not sing along with their friends - this can be interpreted more as a positive outcome and could also be due to the regulatory role that parents and/or caregivers played in emotionally coping with the effects of the Covid-19 lockdown. Phelps and Sperry (2020) contend that children depend on their parents or caregivers to determine how they respond during a crisis. Researchers have found that children who have experienced trauma tend to have higher levels of psychological well-being when the adults in their lives are available to reassure them and help them with their overwhelmed emotions (Mowder et al., 2006).

d. Singing habits during lockdown

The work of Buheji et al. (2020) offers insights into the impact of the Covid-19 outbreak on children’s mental and physical health and the need for a concrete framework to help them overcome the difficult and uncertain times of the pandemic. Such a framework could include an unwavering reliance on the child’s singing in-

frastructure, including the possibility of a well-organised and skilled online/virtual singing environment. As expected, the data show that most participants either sang less than before or stopped singing altogether during the lockdown (Table 5).

<i>Value Label</i>	<i>Value</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cum Percent</i>
	0	2	.31	.31	.31
I sung more than before.	1	95	14.94	14.94	15.25
I sung as much as before.	2	152	23.90	23.90	39.15
I sung less than before.	3	361	56.76	56.76	95.91
I stopped singing.	4	26	4.09	4.09	
<i>Total</i>		636	100.0	100.0	100.00

Table 5: Singing during social isolation as compared to before

Hopefully, if this study is repeated in the future when the international community is faced with a similar situation, the results will be different. “During the Covid-19 outbreak and possible future epidemics, there needs to be a simple but robust framework to help children and their parents be resilient and overcome the challenges and instabilities that would most likely arise from lockdown” (Buheji et al., 2020).

Of the type of online singing that participants were able to take part in, 15.5% took part in “virtual singing (virtual recordings)”, 4.5% were part of a “group”, 7.6% sang as part of their school choir, 12.8% sang in an “extracurricular out-of-school choir”, 7.4% sang at religious ceremonies, 2.6% of participants sang during “school lessons”, 9.4% sang with their “family”, and 26.3% reported that they sang “alone”.

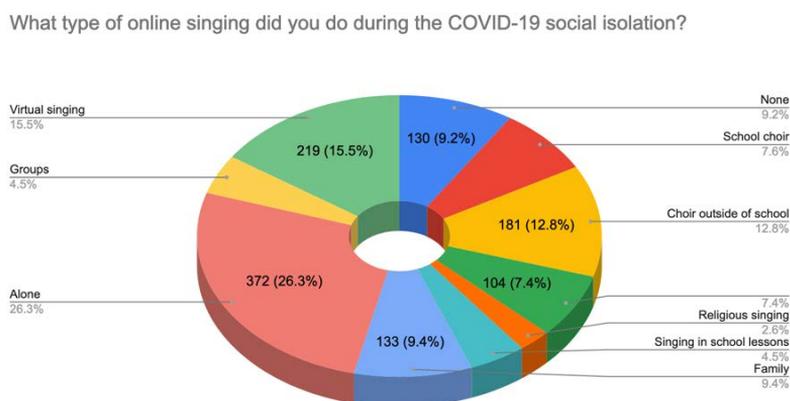


Figure 2: Type of singing during social isolation

In a study by Choi et al. (2020) on the value of the arts as an educational strategy and coping mechanism during the Covid 19 pandemic, the authors argue that creative experiences are essential for psychosocial development and well-being and that these activities help children develop skills and coping strategies such as cre-

activity, resilience and problem solving, especially during prolonged traumatic experiences. Unfortunately, the reasons for the non-participation of the 9.2% of respondents in singing activities are unknown. They could be unpredictable or unavoidable reasons, but securing and funding appropriate educational and recreational infrastructure to engage children when they are confined at home constructively should be a priority for all governments.

The silver lining to the situation of non-online singers is that the majority of participants in all three countries sang online on a scale from “sometimes” to “regularly”. However, Finland had the highest percentage of participants who did not sing online (Austria - 17.18%, Italy - 18.37%, Finland - 59.57%). This result could be since Finland experienced a much shorter and less severe lockdown than Italy and Austria.

e. Feelings about singing online

Of those who participated in some form of online singing, 42% were neither satisfied nor dissatisfied with online singing, 31% reported being dissatisfied with online singing, and 27% reported being satisfied with online singing. Virtual online singing should not be seen as a substitute for live performances or live rehearsals. Instead, role-players should consider the various educational benefits of online singing and consider it an alternative to not singing. The results of this study are consistent with Martinec’s (2020) study that online singing still has a long way to go in development before it is accepted and seen as equal to traditional singing; the majority of participants perceived online singing as “much worse” than traditional face-to-face singing.⁵ (Figure 3).

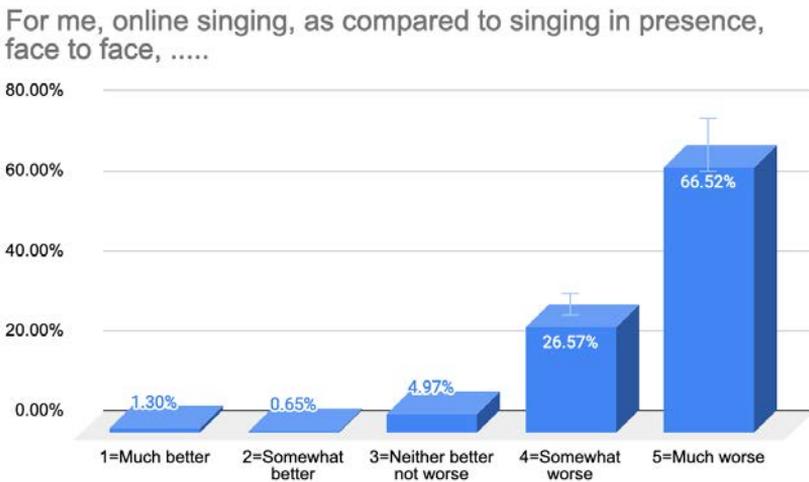


Figure 3: Online singing compared to singing in presence

As online technologies develop at an exponential rate and dependence on and access to the Internet increases for children and young people, a paradigm shift

5 Likert scale: Much better, somewhat better, neither better nor worse, somewhat worse, much worse

is taking place in the way students use the Internet as part of their daily lives (Prensky, 2001; Cakirpaloglu et al., 2020). However, most participants indicated that they “sometimes” enjoy singing online, with the following highest percentage of participants not enjoying it at all⁶. This is even though Thang and Ng (2020) show that social networking sites are becoming increasingly popular as a learning tool nowadays and that informal learning via social networking sites is accepted as normal and the rule rather than the exception among young people. The Internet and being online are not only sources for learning, but they also represent digital neighbourhoods where young people understand and cultivate their identities (Brough et al., 2020).

The data shows that children also still sense the value and perhaps the magic of physically making music and singing together in the same space, not only for the sonic experience but also for the social experience. One Austrian participant aptly remarked: *Es ist einfach nicht dasselbe* - it is just not the same!

The last question of the questionnaire was open-ended⁷. The results obtained from the responses to this question from all three countries are consistent with the study by Theorell et al. (2020), which shows that the social aspect of singing together strongly influences singers’ perception of the benefits of singing. It can be concluded that today’s technologies cannot replace the integral human connections and subtle interactions that occur in face-to-face rehearsals, especially the magic that occurs when singers breathe together, feel together and create a deep human-to-human aesthetic experience in the group.

4. Limitations and future research

This study has some limitations that may affect the context and interpretation of the results and data analysis. First, although efforts were made to ensure cohesion yet diversity in the sample and broad distribution, the demographic of respondents was limited to children and adolescents who have access to the Internet and have the technology and ability to participate in an online survey.

Therefore, although the aim was to explore how the lockdown affected children and young people’s emotional well-being and singing habits, there is likely to be a disproportionately large sample containing more participants who sang online than others. The gender distribution of the sample is also more skewed towards female participants. This could reflect the general engagement of children in group singing in all three countries. The high proportion of female participants could also indicate differences in perceptions of the value of the experience, which again would be a topic for further research.

A cross-national study of this kind cannot, by its very nature, provide an in-depth longitudinal study of the experiences of children and young people who participate in online singing; further studies with additional samples to triangulate with the data set of the current study would be very valuable. In addition, it would be interesting to investigate the longer-term engagement of participants in online singing models once the limitations caused by Covid-19 are removed, and the technology improves.

Wolf (2020) refers to three different models of vocal pedagogy in working with children. This aspect could be further explored to arrive at a model of vocal ped-

6 Likert scale: Never, Rarely, Sometimes, Often, On a regular basis

7 “Can you summarise your experiences/feelings while singing online in social isolation (lockdown, quarantine) in a few sentences?”

agogy for successful singing with children online. Schaumberger (2020) discusses the job description and the skills and competences of children's and youth choir conductors. Based on the writings of Schaumberger (2020), it might be useful to initiate research to develop another skill for choir directors - the ability to work skillfully and successfully in an online environment with singing children.

If children could sing together, tune their voices against other voices, and coordinate their vocal efforts into a shared sound experience, then the results of the study might be different; online and virtual singing experiences could almost certainly increase, and more positive effects could be observed. Developments in technology would also provide the opportunity to systematically study the effects of sharing a physical and acoustic space on the represented experience of group singing.

5. Conclusion

Although online singing has been a lifeline for many singers during the global Covid-19 lockdown, the possibilities of technology have highlighted the potential access to singing experiences in more normal times that it could provide. However, the limitations imposed by current online singing options, which cannot provide the shared experience of being physically together, have highlighted the importance of physical togetherness to perceived well-being, with connectedness and emotional well-being at the heart of the benefits of this experience. Therefore, future developments in technologies for online singing need to capture something of the essence of physical togetherness and singing as a shared experience. As technological advances continue to accelerate, virtual communal singing can become a reality soon. However, according to Daffern et al. (2021), this needs to be developed "hand-in-hand with a better understanding of what makes singing together so unique, highly valued and ultimately 'magic'".

The findings of this study on children's singing habits and emotional experiences during lockdown present a unique perspective on why singing, together and alone, is such a fragile but unique and meaningful experience for many. Co-existence and co-creation through singing need to be further explored to understand the impact of their absence on children and young people's well-being and convincingly re-create the benefits of in-person singing activities.

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