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International Online Collaboration to Enhance Outcomes in Community-Based Rehabilitation Through Music:

The Online Music Leadership Program

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Abstract

In this 1.5 year action research pilot study, an interprofessional team of co-researchers studied the use of online intercultural collaboration to integrate music therapy-informed activities into community-based rehabilitation (CBR) with rural families in central India. Over four cycles of action and evaluation, Australian music therapy (MT) co-researchers and Indian CBR co-researchers studied the perceived impact of MT-informed activities in CBR for CBR facilitators and participating families, and the online communication strategies and MT information that were useful. The research team identified that the integration of MT-informed activities into CBR led to a perceived increase in family motivation and engagement in CBR, enhanced connection between CBR facilitators and families, and greater enjoyment and fun for all involved. Researchers also identified some foundational MT techniques that were useful and articulated some practical considerations for online intercultural collaboration. Importantly, the research team clarified the scope of information sharing that was useful in the context of online intercultural collaboration, and the need to prioritise local expertise and resources. Learning from this study may inform other online intercultural collaborations in both music therapy and international/community development.

Keywords: music therapy; community-based rehabilitation; intercultural collaboration; digital; skills-sharing; disability

Introduction

In this paper, we present learning from a pilot study researching an online knowledge sharing program between Indian community-based rehabilitation (CBR) facilitators and Australian music therapists. The knowledge sharing program was called the 'Online Music Leadership Program' and was part of an ongoing intercultural partnership between a national Indian healthcare network and a music therapy (MT) team at an Australian university. The partnership was initiated by the Australian MT team, but built upon an established relationship between the healthcare network and university. In this pilot, we studied the process and perceived impact of the Online Music Leadership Program within two grassroots partner organisations in rural Maharashtra, India, who use CBR to support children with disabilities¹ and their families. The potential for music therapy to supplement existing CBR activities was identified in early conversations between university and healthcare network partners, and two grassroots organisation partners were subsequently invited to participate in the pilot.

The focus of the Online Music Leadership Program was to explore ways to incorporate music therapy-informed activities into CBR work with children with disabilities and their families.² This online collaboration built on in-person peer-to-peer knowledge sharing undertaken during a one-month visit to rural Maharashtra by Australian MT students in 2019. During this visit, the MT students shared information and practical examples of MT and CBR facilitators shared information and practical examples about CBR and the Indian community healthcare context.

The Online Music Leadership Program strove to find sustainable ways to continue and build on this mutual exchange between Indian and Australian partners. CBR facilitators shared videos and comments about the music activities that they do with children as part of their CBR work, and music therapists offered encouragement, observations, questions and ideas for extension and adjustment to those activities. Videos, messages and audio files were shared, with due consent, using the online platform, WhatsApp, as it was accessible and familiar to all collaborators. WhatsApp was already used in similar programs by the participating organisations and considered sufficiently encrypted for privacy. Specific MT techniques that were shared in the process included vocal and instrumental improvisation, song adaptation, and MT improvisory techniques of matching, mirroring and musical turn-taking (Bruscia, 1987; Wigram, 2017). See Appendix for a lay summary for CBR facilitators of key skills shared, designed as a reference guide for CBR facilitators in the field.

Alongside this ongoing WhatsApp group dialogue, we undertook a participatory pilot research study to analyse the Online Music Leadership Program through action research. The intention of the research was to identify any MT information, MT methods and modes of online communication that were useful to participating CBR facilitators. We also analysed the potential value of MT-informed activities for the children and families involved. It was intended that learning from the pilot would enhance our ability to tailor online MT knowledge sharing between CBR facilitators and music therapists to be more relevant and accessible and to inform MT and/or CBR professionals interested in engaging in intercultural collaboration in the future.

Background

Community Based Rehabilitation

CBR was conceived by the World Health Organisation (WHO) in 1976 in recognition of a global need to facilitate better access to disability support for people with disabilities in under-resourced communities (De Groote, 2019). In response to changes in disability and

development discourses, the structure and focus of CBR has evolved significantly since then, shifting from a primary focus on medical rehabilitation to an inclusive, rights-based structure (De Groot, 2019). In a joint position paper in 2004, the International Labour Organization, UNESCO and the WHO (2004) defined CBR as “a strategy within general community development for the rehabilitation, equalization of opportunities and social inclusion of all people with disabilities” (p.2). Current CBR guidelines outline five key components of practice: Health, education, livelihood, social and empowerment (WHO, 2010). Research into CBR workforce capacity building identified a need for professional development and training opportunities for CBR facilitators (Naicker et al., 2019), and both international collaboration and telehealth strategies have been identified as potential strategies to facilitate this in CBR (Mitchell-Gillespie et al., 2020; Naicker et al., 2019).

An important critical review of CBR literature by Clarke, Barudin and Hunt (2016) examined the ethical considerations associated with CBR. They identified five key topics of ethical concern for consideration in CBR: Partnerships among stakeholders, respect for culture and local experience, empowerment, accountability and fairness in programme design. These critical considerations highlight the complexity and potential asymmetry in intercultural collaborations in CBR, and represent areas of ongoing reflection in this pilot study.

Music Therapy and the Indian Context

The use of music for health and healing stretches back thousands of years in India and is enshrined in ancient religious texts (Sundar, 2007). India’s rich and diverse musical culture is embedded into daily life (Hicks, 2020; Sundar, 2009), making music an accessible and familiar resource for health and wellbeing in CBR. The aim of the Online Music Leadership Program was for CBR facilitators to apply and adapt their musical resources to support children and families to achieve their CBR goals.

Music therapy is a global “research-based allied health profession in which music is used to actively support people as they aim to improve their health, functioning and well-being” (Australian Music Therapy Association, 2023)³. Through tailored MT activities, music therapists have worked together with participants with disabilities to enhance social connectedness and social interaction (Pavlicevic et al., 2014; Yang, 2016), build communication resources (Thompson & McFerran, 2015), and explore and express identity and emotions (Echard, 2019). MT is also used in rehabilitation to support fine and gross motor development (Bowles et al., 2019; Grau-Sánchez et al., 2020). These benefits align with health, social and empowerment components of the CBR matrix (WHO et al., 2010).

Around the world, MT is used in a variety of different ways in response to diverse cultural understandings of music, health and healthcare (Stige, 2016). Music therapy as an allied health profession is growing in India and a dynamic group of professionals with diverse experience and training are progressing the field (Hicks, 2020). The development of MT in India is able to draw on rich musical traditions and a long history of musical healing practices (Singh, 2021). Leading Indian music therapy professionals identified a need for research evidence and awareness raising to continue to advance MT in the country into the future (Hicks, 2020). The current clinical practices and community outreach programs (Sri Balaji Vidjapeeth, 2023) and music therapy training in India also adopt a salutogenic focus facilitating community health programs and training on community health (Chennai Music Therapy, 2022) by using Indian music healing resources for community self care programs.

Intercultural Collaboration: Considerations and Challenges

While there are a small number of local training programs in India producing a growing

number of music therapists (Hicks, 2020), there are currently not enough Indian music therapists to serve India's large and disparate population of citizens with disabilities. Individuals with disabilities living in rural and remote communities are particularly likely to have limited access to allied health services like MT (Devarakonda, 2016). The Online Music Leadership Program aimed to respond to this gap in access and address the rights of these individuals to both healthcare services and meaningful participation in arts and culture (United Nations, 2006).

CBR facilitators in this study were not being trained to be music therapists, but to incorporate activities based on MT principles into their work to enhance CBR outcomes. This type of practice is described by author 3 in this study, an experienced Indian music therapist, as "community self-care through music". The music therapists in the program had professional connections with Indian music therapists and more than three and half years' experience living and working in South Asia. However, there were no Indian music therapists working directly on the Online Music Leadership Program in the pilot stage. Ties with the Indian MT community are in place, and deepening these ties is a goal of the next stage of the program to ensure that the program complements the MT practice of professionals in the region. However, the MT input from Australian music therapists in the pilot was based primarily on Western training and practice models.

For this reason, the centering of Indian voices was a priority for the research team throughout this study, and the expertise and observations of Indian co-researchers was prioritised as the focus of group analysis conversations. However, we recognise that there are complex systemic and historical issues of power in intercultural collaboration. In this pilot, we strove to respond to arising practical and ethical challenges through transparency, engaging in ongoing critical scrutiny, reflexivity and group discussion (Hadley & Norris, 2016) at all stages of research. We were also open to the possibility that collaboration between partners from different cultural backgrounds could present unique opportunities for the sharing of power (Bolger, 2013). In our project, local CBR facilitators brought expertise in CBR, community culture and dynamics, personal music knowledge and skills, and essential relationships with children and families. International music therapists brought MT expertise and MT resources. Each of these knowledge bases was new and proved valuable to the other, forming a foundation for mutual exchange upon which to build.

Rather than avoid intercultural collaboration, in this program we strove to understand how to do it ethically and effectively. We placed an ongoing emphasis on participatory practice and sought to centralise the knowledge of grassroots collaborators in the way that we discussed, developed and disseminated ideas in this project. Some examples include: Using WhatsApp as our communication platform as this was a familiar and preferred by Indian collaborators; using videos from CBR work as a practical focus for group analysis discussions; co-authoring case examples with CBR facilitators (Bolger et al., 2023). Indian members of the collaboration were interested in incorporating music into existing CBR work and together we developed context-specific ideas and methods. These methods were practiced and developed with families in remote and rural contexts and ideas were shared about the therapeutic benefits of music for health and wellbeing.

Music Therapy in International Development Contexts

International development is a large and multi-faceted field into which MT practice is increasingly being integrated. In this section, we will use Bolger and McFerran's (2020) broad framing of international development music therapy as "programs and projects where music therapists travel internationally to countries and communities where music therapy is not yet well established to offer project-based music therapy input" (Summary of Findings section, paragraph 1). Recent growth in this area is captured in case

descriptions of intercultural projects from Africa (Gadberry, 2014; Navarro Wagner, 2015; Shrubsole, 2017; Winter, 2015), Asia (Bolger, 2012; Bolger & McFerran, 2013; Laing, 2015; Rickson, 2009; Schrader & Wendland, 2012), Eastern Europe (Harris, 2016; Quin, 2014), the Pacific (Willis et al., 2014), and the Middle East (Coombes, 2011; Coombes & Tombs-Katz, 2017) in the MT literature. While descriptions of projects are well documented in the discourse, there is a lack of research studying MT-specific projects in international development contexts. Research is needed to inform best practice in this area as it grows, and we seek to respond to this identified need in this pilot study.

Several case examples from the MT discourse highlight the importance of train-the-trainer and skills sharing practice models in international development MT projects, generally conducted via fixed-term consultative visits by international music therapists (Coombes, 2011; Coombes & Tombs-Katz, 2017; Margetts et al., 2013; Quin, 2014; Rickson, 2009; Schrader & Wendland, 2012). This consultative approach aligns with an emphasis on sustainability that is reported as a key theoretical priority for music therapists working in international development contexts (Bolger & McFerran, 2020). In this context, sustainability refers to an intention for MT activities and/or resources to remain in the community beyond the duration of a fixed-term intercultural project itself (Bolger & McFerran, 2013). This sustainable orientation aligns with international development practice more broadly. However, there are currently no publications documenting the success of skills-sharing models in fostering sustainable outcomes for communities in international development MT projects.

The project that is the focus of this study aligns with a sustainable orientation and extends upon skills sharing approaches currently described in the literature. In this study, consultative MT visits were a precursor to an ongoing web-based collaboration between Indian and Australian counterparts. This project was conceived and initiated prior to the onset of the Covid-19 pandemic. However, Covid-19 has increased the need for evidence-based online collaboration strategies in healthcare and in international development, broadening the potential audience for this study significantly.

Methods

We took a participatory approach in this pilot study, employing an action research design. The study was funded by an internal University early career research grant and the design was approved by the University's human ethics research board (Ethics ID: 1955897.1). We report there are no competing interests to declare in relation to this project. Our research team of seven co-researchers included five people from participating health care organisations in India made up of two CBR program coordinators, a CBR facilitator, a junior program officer and a lead researcher, as well as two MT academics from Australia. Co-researcher participation was voluntary. When co-researchers were invited to participate, they were provided with documentation about the study by a trusted colleague, and advised that their decision whether or not to participate in the research would not impact their employment or access to the Online Music Leadership Program.

This year and a half-long pilot emerged over four iterative cycles of action and evaluation. In accordance with action research design, observations and reflections from each cycle informed the planning and action of the subsequent cycle (Bradbury, 2015). Action in each cycle comprised of the ongoing CBR activities in rural Maharashtra and associated WhatsApp communication between the research team. Evaluation occurred at the conclusion of each cycle (approximately every three to four months) when the research team met on Zoom⁴ to analyse the learning from the cycle and decide how this would inform future action by the group. The analysis process took the form of a dynamic group discussion at the end of each cycle, which was documented by Zoom recording and also

by the first author using handwritten notes. The first author developed an analysis summary based on the recordings and group notes after each cycle of analysis to encapsulate the shared learning and subsequent plans. This was disseminated amongst the group for further input and to check for accuracy. Data from the study took the form of the Zoom recordings, group notes and summaries from analysis discussions and text messages from the WhatsApp group. Videos of CBR work were not included as data but were occasionally referred to as prompts for group discussion.

The following three research questions framed the pilot study and informed group analysis conversations:

1. What did participating CBR facilitators perceive as the impact of MT-informed skills sharing on their approach to practice and outcomes for their clients?
2. What (if any) types of information informed by MT were relevant and useful to participating CBR facilitators in rural India?
3. What (if any) online strategies for MT-informed skills sharing and support were relevant and useful to participating CBR facilitators in rural India?

In summary, the aim of this pilot was to (1) understand the perceived impact of MT-informed skills sharing for CBR facilitators and communities, and work toward a “model” for more effective and useful online knowledge sharing, informed by research learning about (2) what MT information was useful, and (3) what communication strategies were useful.

Action Research Cycles in this Study

Over the four cycles of action/reflection in this pilot, the research team studied these research questions from different perspectives, analysing different aspects of the Online Music Leadership Program. Learning from each cycle built progressively on learning of previous cycles towards the overall understanding presented in this paper. Table 1 summarises the focus and characteristics of each cycle in this study.

Table 1. Focus, characteristics and key questions of each action cycle.

Cycle	Focus	Questions considered	Characteristics
Cycle 1	Establishing a starting point and setting an intention for the program	What are we seeing as we begin this process together? What is broadly going on and what is it informed by? What are possible ways to proceed?	Initiating, offering, trying out
Cycle 2	Analysing the real-world experience and reception of the program	What is happening on the ground with communities? What different perspectives on this do different co-researchers offer? What does this tell us and how will we continue?	Engaging, experiencing, seeing possibilities
Cycle 3	Unpacking and refining the program content	What has been most useful and relevant information and strategies and how might this inform similar programs in the future?	Refining, identifying what’s working, building intentionality
Cycle 4	Applying a critical lens to the program	Given what we have learnt, how can we understand the relevance of this program and the limitations/boundaries of its scope?	Growing mutuality, reciprocity, articulation of roles/process

While the overarching research questions framed the pilot study, the foci presented in Table 1 emerged from our participatory research discussions and deepened and shaped the group’s analysis of these questions. The focus of each cycle provided a lens for us to study impact of the Online Music Leadership Program for participating community members and CBR facilitators and useful MT information and communication strategies. The synthesised learning from these progressive iterations of analysis for each research question is presented below.

Results and Discussion

Action research prioritises the development of both practical and theoretical knowledge (Bradbury, 2015). For each research question in this pilot, we identified practical learning that we used to develop and refine the program’s relevance and usefulness to participants. We also identified broader, conceptual learning related to each research question. This broader learning emerged over the multiple iterations of analysis, offering valuable insight into the negotiation of our intercultural partnership in this study. For each research question, key data points from group analysis are presented in a summary table and then research learning is presented and discussed in relation to relevant literature.

Q1: What was the perceived impact of the Online Music Leadership Program?

In Table 2, we present the key data points about the perceived impact of the Online Music Leadership Program (research question 1) that arose from group discussions of all four action cycles in this pilot.

Table 2. Summary of key data points about program impact from all action cycles.

Perceived impact of the Online Music Leadership Program		
Cycle	Group evaluation	Group planning
Cycle 1: Starting point	There is a general willingness to do music by CBR facilitators and community members; There is an observation that it is fun to do music.	Potentially look at music for self-care due to onset of pandemic. <i>(This did not emerge as a priority in subsequent cycles)</i>
Cycle 2: Real-world experience	Music activities were effective in holistically addressing functional, social and emotional goals for children; more interest and participation in CBR by family members and children; more joy and fun in sessions; more bonding and connection between CBR facilitators and children/families.	Continue with the WhatsApp group as this reportedly provided positive outcomes CBR facilitators and communities
Cycle 3: Refining program content	Music is a fun and familiar part of Indian culture, so people are not shy or nervous to participate; many people use music in everyday life in India but this program helped CBR facilitators learn how to use music intentionally to progress therapeutic goals; using music resulted in more active engagement in CBR rather than passive engagement by families.	Continue the WhatsApp group; work towards knowledge sharing workshop for other CBR facilitators
Cycle 4: Applying a critical lens	Music enhanced relationships in CBR; it connected to the personhood of the different people involved and allowed them to connect on a human level; music made it easier for CBR facilitators to ‘reach’ the children and families.	Continue the WhatsApp group; work towards sustainability

In our group analysis discussions, CBR co-researchers identified several areas where the inclusion of MT-informed music activities in CBR resulted in positive impact for children, families and CBR facilitators. Importantly, CBR facilitators found that they could use MT-informed music activities to effectively address children's therapeutic goals in this pilot. An example of the use of music to address physical functioning is described by a CBR co-researcher below.⁵

(If) the child has small grip problem, then we give the shaker to hold and play. I am giving physiotherapy through music. I am developing his grip to hold the object. When I have achieved that goal, when that child is able to hold the small shaker, then slowly I will increase. I will give bigger (shaker) second, then bigger. Then afterwards I will give the big round instrument – the ocean drum – that he is holding with both hands. And he is trying. Then I have achieved the goal that the child is able to hold the object. (Sr. Viviyana – CBR program coordinator.)

At the beginning of this pilot, there was a clear focus on physical functioning in the CBR work, reflected in the example above. Through our group analysis, we identified that CBR facilitators were able to address physical, social, and emotional goals for children simultaneously through the music activities introduced in the Online Music Leadership Program. Physical, interpersonal, and expressive elements of music interactions were discussed in the WhatsApp group, highlighting new areas of need that could be addressed in CBR through music. This holistic perspective was an extension of existing CBR work in this pilot, that had focused primarily on functional development goals. This broadening to a holistic focus aligns with holistic understandings of health and care that are a cornerstone of the CBR framework (WHO, 2010) and reflects international conventions on the rights of people with disabilities globally (United Nations, 2006).

Alongside holistically addressing developmental goals, CBR facilitators identified several ways that inclusion of MT-informed activities made their jobs easier and more embedded into the communities they visited. Specifically, we learnt that music activities contributed to increased engagement, connection and enjoyment for the parties involved in CBR in this pilot. These three domains of impact were reported consistently by CBR co-researchers in our group analysis discussions, with increasing depth and clarity about these domains emerging over the course of the 1.5 year-long pilot. The overall learning for each of these domains is presented here. Given the focus on perceived impact by CBR facilitators in this section, quotes from co-researchers who worked directly with communities are included.

Changes in engagement in CBR. CBR facilitators reported positive changes in both the level and nature of engagement in CBR, both by children, family members, and the community more broadly. The use of music activities and instruments in CBR was described as inviting and interesting to the children, motivating them to participate in challenging CBR tasks more willingly and for longer periods of time.

Children are very much enjoying. Otherwise, we were finding it difficult to get their response because children cry when they get pain. They cry, but when we give music to play they forget and they forgive their difficulties and they just enjoy to shake the shaker, beat the drums, sing and dance, and when music is on automatically they try to do their body movements. (Sr. Viviyana – CBR program coordinator.)

CBR co-researchers also described an increase in active engagement in CBR tasks, with increased initiation and leadership by children and families, where previously passive engagement was more common.

What's interesting about (using instruments) is you're not asking to stretch (children's) fingers, but they just do it with the instruments, and I think (there) is more benefit when the children do this than when it's passive and passive movements. For children, the movement exercise is better when they do it themselves. (Raju – CBR program coordinator.)

Family and community engagement also reportedly increased through the inclusion of music in CBR sessions in this pilot. This appeared to offer new pathways for children with disabilities to connect with their families and communities, and avenues for CBR facilitators to build their relationships with the communities they serve. This is important not only to raise awareness and understanding of CBR, but also as one way to build knowledge and understanding about disability in rural communities in India, where social stigma and isolation remain a complex ongoing challenge for people with disabilities (Kayama et al., 2019).

We got ideas from you and the training which we had, so from that time onwards we could see that involvement of families and family members, even others that surround the children. When we go and play some musical instruments they are also getting interested. They started to think 'what is happening here?' and then they would come and see that oh, this is so nice, then that atmosphere is becoming just a fun time, it's not just (that) we come and we are doing something. Previously no one was recognising us, they would say that fellow, that CBR worker, they come here and they do this therapy, that's it. But when we're playing instruments, then the crowd and all other members and family members they are coming, and they're sitting with the children and CBR worker because instruments are there. They are taking part and they're also involving themselves, and they began to play the instruments. This is from the outside and family side we see that involvement... (Raju – CBR program coordinator.)

Increased connection between CBR facilitators, children and families. Data from the group analysis identified that the music activities afforded an opportunity to deepen the connection between CBR facilitators and those they visited. CBR co-researchers described the introduction of music into CBR as positively changing their relationships with children and families, leading to both greater enjoyment of their work and stronger bonds with the people they visited. This learning suggests that the inclusion of MT-informed activity in CBR enhanced the therapeutic relationship between CBR facilitators and CBR participants in this pilot, which is associated with positive treatment outcomes in rehabilitation (Hall et al., 2010).

When (CBR facilitators) are doing therapy it's become so easy to approach the children through music therapy, because normal therapy we will go and we will use some words; we only used to talk with them but we didn't have any activity. But here, playing instruments and giving therapy, there are some differences... When we are playing (music), children are so much interested in cooperating with CBR workers. Before playing and the involvement of music therapy, simply children would submit themselves and they would be quiet. We see involvement and response from the children, more interest in music therapy. We could see CBR workers also enjoying, and it is making their therapy so easy to approach the children, as well as children also so happy to respond to CBR workers through music therapy. (Raju – CBR program coordinator.)

Increased enjoyment in CBR work. Another narrative that emerged repeatedly in group analysis discussions was the joy and fun associated with bringing music into CBR work, for all involved. In the cultural context of this pilot study, music was a familiar and favoured way of relating, and the introduction of instruments and music into CBR work prompted curiosity and interest.

(Children) feel very happy to play the music, so music is the instrument that we can (use to) develop their needs. (Sr. Viviyana – CBR program coordinator.)

Whilst joy and fun are not always seen as primary goals of intercultural projects, these features may have significant real-world implications. If children are having fun in their therapy, it is reasonable to expect that they are more likely to be motivated to persist with challenging tasks, and that family members are more likely to support children to practice therapy exercise between CBR visits. This likelihood was borne out in the reporting from CBR co-researchers in group analysis discussions in this pilot. Further, music-based interactions were described as a new source of joy and fun for CBR facilitators, which research has described as beneficial to overall job performance (Plester & Hutchison, 2016).

What children were unable to do before, we are now able to make them do. And the children are giving us joy. (Kavita – CBR facilitator.)⁶

Q2: What music therapy information was useful?

In Table 3, we present the key data points pertaining to information about MT (research question 2) that arose from group discussions of all four action cycles in this pilot.

Table 3. Summary of key data points about MT information from all action cycles.

Analysing MT information over time		
Cycle	Group evaluation	Group planning
Cycle 1: Starting point	Open and broad; linking observations to existing CBR goals – generally functional SMART goals based on physio/OT/speech goals.	Potential to broaden into music for leadership and independence; following the child; music for social interaction/relationship building.
Cycle 2: Real-world experience	Group identified that CBR facilitators were able to successfully bring MT-informed interactive music activities into their work to address functional, social and emotional goals.	WhatsApp group to continue with current activities and explore new areas further in group discussion; music therapists to share relevant video examples of MT from around the world.
Cycle 3: Refining program content	CBR facilitators identified some simple, foundational music activities as useful in their work: Using and adapting songs; instrumental and vocal improvisation; use of technology. They noted that their use of music activity was intentional and tailored to the child's development and needs over time, and was informed by some foundational MT theory introduced in the program.	Music therapists to use this learning to prepare a plan for a CBR online music knowledge sharing module for other CBR facilitators as a way to share research learning forward in an applied way.
Cycle 4: Applying a critical lens	Group identified that MT input encouraged CBR facilitators to bring their music resources into CBR practice, which they had not done before; the program created a link between music as a health resource and CBR practice.	Incorporate this refined understanding of MT's role into any future knowledge sharing with CBR facilitators.

Looking at this data from group analysis discussions, we identified several foundational MT-based concepts (Davis et al., 2008) that were used and effectively integrated into CBR sessions by facilitators. Specific uses of music that emerged as helpful and relevant to CBR work in this pilot were the use and strategic adaption of songs, MT-informed improvisation techniques on instruments and voice, and some use of music technology in the form of music-based phone applications and recorded music. CBR facilitators used these music strategies to support interpersonal interaction, independence, leadership, and to prompt and motivate movement and/or engagement with children and families.

The way these techniques were used in CBR was informed by some foundational MT principles about interpersonal music making, provided and supported by music therapist co-researchers. These principles were then incorporated by CBR facilitators in ways that drew on their own musical resources and preferences, as well as their CBR skills and knowledge. Through the ongoing group discussion on WhatsApp, CBR facilitators and music therapists shared information about how and why to strategically apply these techniques to their CBR work.

The specific MT concepts and music activities that were taken up by CBR facilitators remained quite consistent, while confidence and facility in using them deepened over the course of the pilot. It is not clear specifically why these techniques were favoured, although it is likely that both contextual factors and features of the music techniques played a role. This is an area for further study.

Over time it became evident that CBR facilitators were developing their skills in these MT techniques, and adjusting and building on them progressively in response to the needs of children and families and MT collaborator input. The understanding of MT techniques and subsequent tailoring of music activities by CBR facilitators resulted in positive impacts for children and families, even though the training was relatively brief and ongoing support from music therapists was delivered remotely. This suggests that the online collaboration structure used in the Online Music Leadership Project sufficiently supported both the sharing and tailoring of specific, therapeutically useful music activities and ideas in this pilot. This is important, as the ability to integrate and adjust knowledge responsively by non-music therapists has been identified as a challenge in MT skills sharing projects (McFerran et al., 2016; Rickson & Twyford, 2011).

Defining collaborator roles and project scope. Understanding the MT strategies that were helpful and the way they were used in this pilot highlighted the knowledge and resources that both music therapists and CBR facilitators brought and applied to this collaboration. Specifically, music therapists brought MT theory, training, and practice experience, and offered MT ideas, observations, and suggestions. CBR facilitators brought CBR theory, training, and practice experience, knowledge of the context and culture of the program, relationships with local communities, and their personal music skills, interests, and capabilities.

After analysing the way music was used by CBR facilitators in this pilot, the research team recognised that the building blocks for the therapeutic use of music in CBR existed already in the communities involved. Another way of conceiving this may be that the context for the CBR work became a frame that determined what MT-informed input was useful. The research team identified the role of the music therapists in the Online Music Leadership Program as to support CBR facilitators to make connections between their existing music resources and their CBR work, through practical information and ideas sharing. As such, the music therapists' role was to foster intentionality in the use of music by CBR facilitators through the sharing of basic MT theory, music activities and techniques, and ideas for extension. The importance of intentionality to ensure the healthy use of music as a health and wellbeing resource is increasingly emphasised in MT research (McFerran & Saarikallio, 2014; McFerran et al., 2018). This has not yet been explored in

international development projects. This pilot highlights a key potential role that music therapists may play in supporting this intentionality in CBR.

The research team identified that the role of the CBR facilitators was to integrate MT ideas with their CBR goals and their own resources, and to progress music activities in response to the needs of those they worked with. This role definition emerged out of the participatory process. It placed CBR facilitators as the primary actors in the project, centering their expertise, experience and resources as the focus for the collaborative work, with music therapists in a supporting role. This meant that the knowledge and resources of those doing grassroots fieldwork framed the scope of the collaboration in this study. This framing makes practical sense as it bases the collaboration around the skills and resources of community-based fieldworkers. It is also potentially helpful for people engaging in intercultural partnerships who seek to apply decolonising principles to their work (Land, 2015), as was the case in this study.

Q3: What communication strategies were useful?

In Table 4, we present the key data points about communication strategies (research question 3) that arose from group discussions of all four action cycles in this pilot.

Table 4. Summary of key data points about communication strategies from all action cycles.

Analysing communication strategies over time		
Cycle	Group evaluation	Group planning
Cycle 1: Starting point	Keeping language and ideas simple is useful. Current strategies: Online discussion of WhatsApp videos; encouragement of engagement; some song sharing.	Continue current communication, plus: Share personal music reflections/messages to build relationships; share YouTube clips.
Cycle 2: Real-world experience	WhatsApp communication is fine; timely feedback is helpful. Specific areas for improved intercultural communication: Clarity of lyrics/language on audio recordings; CBR facilitator communication if things unclear/questions arise. Also noted: Potential to developed tailored music activities together via WhatsApp.	Music therapists to text song lyrics for audio recordings and provide timely video feedback. CBR facilitators to ask for help and ideas as needed. Team to try out the co-development of a music activity for the Indian context via WhatsApp.
Cycle 3: Refining program content	Our online communication strategies are working effectively. Videoing plays integrated and motivating role in sessions – is not a separate monitoring activity; flexibility in the timing, level and regularity of participation in important to the program, particularly in unpredictable times (such as a pandemic).	Future CBR music training based on our learning could include a combination of: Practical demonstrations and examples, theory presentations, video examples, group discussion and practice; clarity and simplicity and awareness of language and cultural barrier are important.
Cycle 4: Applying a critical lens	The ongoing online WhatsApp discussion supported CBR facilitators to make connections between music activities and children’s needs; we could learn from one another’s posts and ideas.	The connection to musical community from the WhatsApp group is valuable and we need to find ways to continue it; development of a Facebook group for people to stay connected is a possibility.

Looking at the practical knowledge evidenced in this data, several areas of learning emerged from group analysis discussions in this study. In fact, these analysis discussions themselves emerged as an important online communication forum. Rather than being two distinct, concurrent entities, we found that the Online Music Leadership Program and the participatory research process were interconnected in this pilot. The process of meeting periodically over Zoom for analysis discussions became a critical and embedded feature of our group communication, rather than a ‘bonus’ activity for the sole purpose of progressing our research. Had we not been researching the Online Music Leadership Program, it is unlikely we would have met online regularly to speak frankly and constructively about the program and how it was going. Not only did these conversations allow us to understand and refine the program, they also became an important platform for building our relationship and cultivating a collaborative dynamic within the group.

Useful options for online information sharing. The WhatsApp group primarily used videos of fieldwork and group messaging for our knowledge sharing and discussion. This was supplemented by brief audio messages – commonly sharing a song excerpt or music technique – and occasionally by video case examples and song sharing using online platforms like YouTube. The group reflected that our communication on WhatsApp was effective, and the group structure offered the additional benefit to participants of learning from one another’s contributions and responses. Drawing on our experience of shared online learning, we reflected on possible future online knowledge sharing with CBR facilitators. We identified that a combination of practical demonstrations, in-person and video examples, introductory theoretical information, and time for group discussion and practice would be useful.

Strategies for enhancing intercultural communication. The group communicated primarily in English on WhatsApp and Zoom. This was the language most shared between the research team but was not the first language of most Indian collaborators, who made this accommodation to enable the participation of Australian co-researchers. Throughout the Online Music Leadership Program and concurrent research process, Indian co-researchers provided translation between English and Marathi for CBR facilitators and music therapists when necessary. Language was not an insurmountable barrier in this program, where most collaborators had basic English comprehension and several had fluency. But it was an ongoing practical consideration in this pilot and reflected broader cultural and linguistic differences within our group. At a linguistic level, we strove for language and ideas communicated in the group to be clear and simple. The group brainstormed practical strategies to support this, such as text messaging any lyrics or instructions offered in audio messages to enhance comprehension.

We also strove to develop a group culture that was conducive to meaningful participation for all collaborators. This included providing timely feedback to fieldwork videos and allowing for flexible ways of participating in the group. There were no ‘rules’ governing how frequently or deeply people contributed to the Online Music Leadership Program. People negotiated their own participation level over time, and group members reflected that this was a positive feature of the program. This flexibility allowed for the fact all collaborators were navigating individual personal and professional pressures that could impact on their involvement, including, in the case of this pilot, a global pandemic. Given the cultural differences amongst group members and the fact that we were collaborating online across a great distance, this flexible approach seemed to be realistic and reasonable, as was reflected in the research data.

Relationship building for effective intercultural communication. Empowered, mutually invested relationships are essential to collaboration in community music projects (Bolger

et al., 2018) and an important foundation for effective communication between collaborators. This is particularly complex when collaborators are working at a distance from one another and do not share common culture and first language (Anderson et al., 2012). In analysing the process of working together in this study, it became clear that our process of building relationships was entwined with our process of developing communication pathways. This entwined process was one of ongoing negotiation; negotiation of expectations and boundaries between different collaborators with different ideas, roles and agendas.

The process of negotiating expectations and boundaries in this pilot was at times explicit and at times implicit. Explicit negotiations included discussions about the frequency and timing of messages, preferences around formats for information sharing, information shared about expected disruptions or changes to communication, to name a few. These were shared overtly through the various communication avenues available to collaborators, including Zoom discussions, WhatsApp messages or email.

Implicit negotiations refer to boundaries that were implied through a lack of responsiveness or a redirecting of focus, which were interpreted as a subtly communicated boundary. These presented as a consistent lack of response to a particular suggestion, question or offering of content made to the group, or the reframing of a message/discussion point towards a different focus. This kind of implicit negotiation became one of the communication strategies we used to define the scope and focus of our project. Given the intercultural and distanced nature of the relationship we were building, as well as the multiple layers of potential power imbalance between collaborators, this 'unspoken' approach to boundary setting offered an important option for tacit communication within the group. We viewed this as a potential way for collaborators to assert agency and resist power within the project, aligned with Scrine's (2021) notion of resistance in MT.

Our relationship as a group and the establishment of communication strategies that worked for us was developed through the experiential, reflexive process of negotiating expectations and boundaries together. In other words, engaging responsively with both explicit and implicit communication strategies was an act of relationship building that strengthened our collaboration. This involved striving to listen to the silence as well as to the noise in group communications, not assuming that a communication gone unanswered was always due to miscommunication or incomprehension, and respecting the right of all collaborators to set boundaries in the relationship we built. There is a recognised need for greater, more engaged listening to the contributions and perspectives of grassroots workers in international development (Anderson et al., 2012), but processes for listening and reflexivity are still under-examined in international development (Moreno et al., 2020). Not only will the understanding of the negotiation of expectations and boundaries gained in this pilot inform future collaborations within the Online Music Leadership Program, but learning may also be useful to inform effective communication in intercultural online music collaborations more broadly than this study.

Conclusion

The overall aim of this study was to better understand how to undertake effective and ethical online collaboration between cultures for the purposes of MT-informed knowledge sharing, and to identify any perceived positive impacts of such a collaboration. Group analysis of the online collaborative process provided useful insight into the roles of different collaborators in such intercultural work, and the processes of relationship building through the negotiation of expectations and boundaries by collaborators. Interestingly, the importance of dynamic relationship negotiation found in this study is

consistent with existing MT research studying in-person processes of community-based collaboration (Bolger, 2015).

Group analysis also identified that MT-informed music activities brought new holistic and community-building dimensions into the CBR work in this pilot. The music activities offered CBR facilitators additional ways to address the needs of children with disabilities in their work, supporting integrated practice and active engagement. In addition, it appeared that people's existing cultural and personal associations with music created a bridge to CBR work in this pilot. The way music was used and received varied between communities and individuals in this study, likely due to these existing musical associations. Despite this variation, the resulting descriptions of connection, enjoyment and joy appeared to be commonly described by all CBR co-researchers in our analysis discussions. The introduction of MT-informed activities into CBR work in this pilot appeared to give people a familiar avenue through which to engage with CBR practice and facilitators, and to give children, their families, and their communities a way to engage meaningfully with one another.

We recommend that future studies expand the Online Music Leadership Program into CBR programs across India and into different countries, to further understand the way musical resources interface with CBR in different contexts, and whether the perceived impacts identified in this study may have broader implications for CBR globally. This study also did not include the voices of children with disabilities or their families in the research team, a limitation common in disability-focused research in music therapy (Murphy & McFerran, 2017). While this was beyond the scope of this pilot study, this limitation is being addressed in a new study that is currently underway. Another important area for future research is sustainability. This pilot involved ongoing contact between collaborators as part of a continuing partnership. Future research is required to study how sustainability may be achieved in the case of a fixed-term collaborative project. Future research could also examine the use of other digital and social media platforms for online collaboration.

The learning in this pilot is specific to the context and intercultural dynamics of this study, which involved partnership between Australian music therapists and CBR facilitators based in remote and rural communities in central India. While we do not propose that this learning is generalisable, information from this pilot nonetheless provides promising and potentially instructive insight into processes of intercultural online collaboration and the potential role of MT-informed activities in CBR. The online focus of this collaboration has gained even more relevance due to the Covid-19 pandemic. In post-pandemic international development practice, intercultural collaborations will likely rely more heavily on online communication, and there is a need to ensure these processes are effective and ethical.

Finally, we want to emphasise the significance and effectiveness of music as a tool and a focus in this project. In this study, local musical knowledge, skills and resources emerged as an essential element of our intercultural collaboration in the Online Music Leadership Program, and an important way to centre local knowledge and capacity. Not only did this local knowledge determine the way CBR facilitators engaged with MT-informed strategies, it supported the engagement of children with disabilities, their families, and the wider community in CBR, and became the vehicle for increased community connection. CBR is a global WHO, UNESCO and ILO program with internationally standardised guidelines (WHO et al., 2010). The inclusion of MT-informed activity through a program like the Online Music Leadership Program may provide unique, music-based opportunities to ground CBR in the community contexts within which it is being practiced.

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Dr. Lucy Bolger has been a music therapy practitioner and scholar since graduating from the University of Melbourne in 2004. She has worked with people across the lifespan in community and institutional settings, in Australia, Bangladesh and India. Lucy has particular interest and expertise in collaborative processes in music therapy, sustainability-oriented practice, participatory music work with communities and young people, and international development work in music therapy. She is also interested in equity and access to music therapy, and how innovative approaches can support music participation for those in remote and rural communities. These interests continue to inform her practice, research and teaching, and are underpinned by a belief that all people should have access to music as a resource for health and wellbeing.

Dr. Sameer Valsangkar has a master's in Public Health from USA, and an MD in Community Medicine from India. He has been working in research and public health development since 15 years. He has designed, operationalized and implemented public health projects in close collaboration with the government in several regions in India. He has conducted and directed a variety of research in occupational health, maternal and child health, HIV/AIDS, quality of life studies, nutrition and has published in several indexed international and national journals of repute.

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Dr. Melissa Murphy is a music therapy practitioner, supervisor, educator and researcher. She has worked in mental health, aged and palliative care, but her primary interest lies in the disability sector. Melissa currently works with both children and adults with disability in the education system, community settings and in private practice drawing on her skills as a clinical music therapist, GIM practitioner and community music therapist. She is the founder of MusicSpace, a community music hub for people living in the greater Geelong and Surf coast regions in Victoria, Australia. Philosophically informed by critical and ecological theory, MusicSpace aims to foster personal and group creativity, as well as social and musical connections within the local community. She is the former National Disability Insurance Scheme (NDIS) representative and Disability Advisor for the Australian Music Therapy Association and music therapy representative for the working group of Allied Health Professions Australia.

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¹ We use person-first language in this article to reflect the norm of the Indian healthcare discourse at the time of writing, and the preferences of Indian project partners. We respectfully acknowledge that individuals within the disabled community have varying preferences regarding person- and identity-first language use.

² A video depicting real-world application of the program can be viewed at:

https://www.youtube.com/watch?v=OYH_WYegH54

³ We have used the Australian definition of music therapy as Australian music therapists were involved in this project.

⁴ We originally planned for a combination of Zoom-based and in-person meetings (to be held in India). However, due to the Covid-19 pandemic, the design was modified and all analysis conducted online. Such adjustments align with the emergent, responsive design of action research (Bradbury, 2015) and did not limit our ability to progress the research.

⁵ Direct quotes from the data by CBR co-researchers are included in this section only. Question one emphasises the perception of CBR facilitators and we therefore seek to centralise these co-researcher voices in this section.

⁶ Quote translated from Hindi.