

Use Of Group Sound Design as A Tool of Social Empowerment for Disabled Children to Counter the Novel Corona Virus Pandemic Induced Social Isolation in Japan

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Abstract

Group creation of music involves the processes of collective creativity and management of it, which in turn lead to practice of social skills. This is especially important for people with special needs in Japan due to the tendency of the Japanese society becoming protective of disabled people from the risks of the disease when contracting the novel corona virus (, hence making them socially isolated. This research paper explores how the process of creating music in groups generates novel social skills and what are the implications of them.

We conducted an experiment in form of a class of music design at a Junior High School for Special Needs aimed at students of the school. We had 8 participants - all with visual impairments and 6 with mental disabilities. The class consisted of practical music training;

dividing in groups to make and record music; the presentation of music and reception of feedback. The audio of the process was recorded in order to describe the findings.

Our findings contained moments of participants quickly acquiring and using skills such as giving compliments based on comparison, being able to accept musical mistakes and use the same mentality for non-musical mishaps. The combination of participants with mental disability and without showed overall high level of emotional intelligence with aspects not typically present in Japanese culture such as describing failure and asking for assistance.

Group musicianship allows disabled people to be able to explore and communicate in regard to situations and people unknown to them. These skills easily travel to different social situations as group musicianship is really more of a language rather than just a form of musical expression.

Keywords: music, art, education, disability, Japan

1. Introduction

Music is a well-tested solution to many health and educational issues. The American Music Therapy Association lists such merits as promoting wellness, managing stress, alleviating pain, expressing feelings, enhancing memory, improving communication and promoting physical rehabilitation. (American Music Therapy Association, 2005). This is true for people with and without both physical and mental predispositions. When discussing music therapy, it is usually divided into two categories - the “receptive”, which focuses on listening and “active”, which involves the patient using musical instruments. (Guetin, Portet, Picot, Pommè, Messaoudi & Djabelkir, et al., 2009). This definition of music therapy covers positive aspects that have been proven in science time and time again. It is also important to pay attention to the components of music therapy techniques listing such elements as writing song lyrics, writing the music for new songs and creating art by music which in our opinion should be listed as the third major category of music therapy, the *creation* of music. We believe that it is a very different process to solely playing an instrument and/or listening to music as it involves the process of collective creativity and the management of it, which in turn leads to practice of social skills.

This is especially important for people with special needs in Japan due to the tendency of the Japanese society becoming increasingly lonely and the extra protectiveness of disabled people from COVID-19. This research paper is an attempt to aid all parties involved, as both the cultural background and the COVID-19 restrictions have made the social separation between people with special needs and those without alarmingly present. Music is still a very unknown and undermined field in science similarly to how meditation had been, yet in recent years meditation has emerged as an extremely important topic in the fields of neural psychology and biology. It is essential to keep an open and a critical mindset in terms of the merits that music creation can bring, while being able to narrow down to only the most convincing and useful tools as they can be carefully tailored for different countries and cultures.

To make this experiment of a socially inclusive impact, we chose to do it in a middle school for children with visual impairment and visual impairment combined with mental disability. This context also gives us the important possibility to see how the connections between people with mental predispositions and people without them socially interact through creation.

1.1 Literature Review

1.1.1 Social Isolation caused damage characteristics, long term effects and testimonies of Japan's general society and people with disabilities (research in the U.S.)

The pandemic has caused a certain amount of anguish in all countries around the world, however, it is safe to say that the degree to which it has affected different places is not the same from place to place due to sociocultural reasons. It is important to search for reliable data and evidence suggesting any psychological adversity because of the pandemic at all and there *is* a significant amount of evidence supporting this question from different angles. Firstly, a research conducted in Japan labeled “Increase in Social Isolation during the COVID-19 Pandemic and Its Association with Mental Health: Findings from the JACSIS 2020 Study” states that before the pandemic the social isolation prevalence had been 21.2%, but in 2020 it had reached 27.9% (Murayama et al., 2020), which means it has increased by around a third of what the original number was. It could be argued that these numbers are outdated and are somewhat unimportant due to growth of a single digit percentile, but the truth is that as the so called *soft lockdown* had been present in Japan, it is really hard to tell what are the exact values for these figures. We could hypothesize that for younger, no comorbidity bearing adults the numbers are probably decreasing, but that is probably not the case for disabled people.

A paper exploring the topic “The Long-Term Impact of the COVID-19 Pandemic on Loneliness in People Living With Disability and Visual Impairment” has found that people with visual impairment disabilities experienced a larger degree of loneliness than people without VI. Loneliness levels remained somewhat stable for the non-disabled individuals; they did increase for disabled people, but reportedly to not really significant levels. (Heinze et al., 2021). The moment worth paying attention to is that the loneliness score for people with visual impairment surges to the same score as for people with more than one disability during the pandemic and their increase in loneliness levels is considerably higher. We can interpret this data in different ways, but the fact that visually impaired people have become as lonely as people with at least one disability makes us wonder if we should look at pandemic from a different point of view. We can possibly assume that induced or accelerated social isolation factor for visually impaired people is as difficult as having a multiple disabilities. This puts forward the questions of what are the measures of social nourishment and what could be the possible supplementation of it in Japanese special care institutions like schools for VI. Privacy tends to be safeguarded to a very high degree in Japan, especially when the situation concerns a disability within a family, therefore families with children who have VI and/or other conditions organize special school routines for their children, however, there is little chance for natural socialization exposure. We also would have to pay attention that the data of the research conducted by Heinze et al., 2021, was collected outside of Japan, which could indicate a less lonely picture as the privacy levels leading to limited social events could alter the parameter of loneliness.

1.1.2 Social skill boosting tool precedents for children (with and without special needs): success versus results biased by scientific wishfulness (PEERS & Group Music Education)

It is also very important to discuss the implementation of previous social skill enhancing systems in Japan - this specific research focuses on use of PEERS for children with autistic spectrum disorder in order to improve their socializing prospects. PEERS stands for the Program for the Education and Enrichment of Relational Skills (PEERS; Laugeson and Frankel 2010). The results were very convincing in terms of aiding social skill usage and improving the ability to make and sustain friendship. This study is also backed by a 3 month post experimental survey to see if the positive effects did sustain and they did, as reported. (Yamada et al., 2020). It is proof that culturally tailored methods can aid groups with social skill and context difficulty. There is also a different type of a tool presented in another study testing whether group music training for children without disabilities can improve prosocial skills. The study focused on 3-4th graders in a duration of 10 months with a control group - the study revealed a significant improvement of prosocial skills, but only for those children who had had a lack of prosocial skills prior to the start of the study. The improvement manifested itself through prosocial behavior and heightened levels of sympathy, also to the same degree in mandatory class situations as in self-selected choice (Schellenberg et al., 2015). The game changing importance of this research lies in the fact the authors have identified a pattern that previous research in the domains of creativity is often misleading due to creative and agreeable nature of the field of arts - it is easy to create an experiment designed to acquire specific results supporting or disproving a hypothesis. This is due to the fact that the ways of how a creative activity like music education is carried out can vary wildly in parameters like the amount of teachers, teaching methods, student interaction techniques etc. These moments are often undermined. Hence after analyzing previous outcomes discussing the same question with answers of a wide spectrum, this research focused on a deeper level of the nature of the activity - elements of pair teaching and learning music from one another. The research presented a method boosting prosocial skills mostly based on children teaching each other and being synchronous in their instrument play. Two things are the most tangible and important here: children with social skill trouble have clear improvement and that synchrony causes secretion of endorphins encouraging group bonding elements resulting in pro-social behavior of a group. Also the testing methods were very accurate in terms of survey based data collection methods and the presence of a control group.

1.1.3 Music as social tool for marginalized groups

When discussing the benefits of music when it comes to people with a lesser social impact on the environment around them, there is a study that has found musically creative activities such as composing, songwriting and rapping to improve the overall levels of happiness via experiencing socio-cultural inclusion (Dingle et al., 2021). This is definitely worth paying attention to as it points towards the fact that this kind of musicianship can

possibly be tested as tool for parts of the Japanese society to reintegrate by creativity. It is important, however, to keep in mind that these kind of tools are linked to the culture that they are aiding. Japan is definitely a culture that has the potential to adapt this idea, but in its own cultural comfort and out-of-comfort zones.

This and the previously described situations bring us towards our research question - **What are the specific trainable techniques to boost socializing prospects for mentally and/or visually disabled children in post COVID-19 Japan?**

2. Methods

We conducted an experiment in form of a class on music design at a Junior High School for Special Needs aimed at voluntary students invited to take place. We had 8 participants - all with visual impairments and 6 with mental disabilities. The class consisted of the following steps:

1. Brief explanation of all the steps within the music class:

- **A quick self introduction from the organizers and participants (5 minutes)**
- **Practical training on the use of kalimba, synthesizers, small taiko drums and recording equipment (25 minutes):**

After introduction the participants were asked to participate in a very simplified warm up sequence: copying a clap rhythm. The goal was to move our bodies in order to feel relaxed and focused. **(5 minutes);**

Afterwards, the facilitators demonstrated a simple set up of an amplifier connected to a guitar “loop pedal” which was connected to a microphone recording the environment. Facilitators input some sounds by using clapping, the kalimba and capturing the natural environment. **(5 minutes)**

Next all the participants were presented one instrument at a time. After presenting an instrument with the help of a facilitator we let all the participants try to play it by themselves. **(15 minutes)**

- **Grouping, sound creation and recording (40 minutes)**

Next we set up the spaces for **creating** and **rehearsing** music. The spaces were located in the same room, but separated with a physical screen to be easy to access because of the vision disability of the students. Meanwhile the participants took a **10 minute break**.

The participants were divided in 2 groups (3 people and 3 people) accompanied by facilitators. One person at a time was asked to create a random sound pattern with any of the instruments presented, which then was “looped” by the facilitator. The participants were asked to record next layers of the composition by one of the actions of choice:

- 1) picking up one of the practiced instruments;
- 2) clapping a rhythm with their hands or feet;
- 3) singing;
- 4) talking;
- 5) pushing the record button to layer the environment ambience on top of the already created composition; (silence)

The whole process of this activity has no specific requirements to meet - our goal was to let the participants enjoy each other’s presence, try touching the musical instruments and be proactive in creating, listening and discussing sound. Even without ability or willingness to play the musical instruments, the participants were able to enjoy the process. Creative process was recorded with a microphone and a “loop” effect pedal connected to the amplifier in order to play the recorded sound from the instruments. The set up had the function to save all the generated material in order to share it later to one another. Another important moment to mention is that while one group was recording, the other was practicing instruments of their choice in another separate space and talking freely to the facilitators in order to make the participants more relaxed for the further steps within the experiment. **This activity should take up to 30 minutes.**

Presenting and listening to the created sounds. Expressing the feelings about the process by the author groups & the compliments about the heard sounds by the listener groups. (20 minutes)

Assemble together after all the music made (5 minutes);

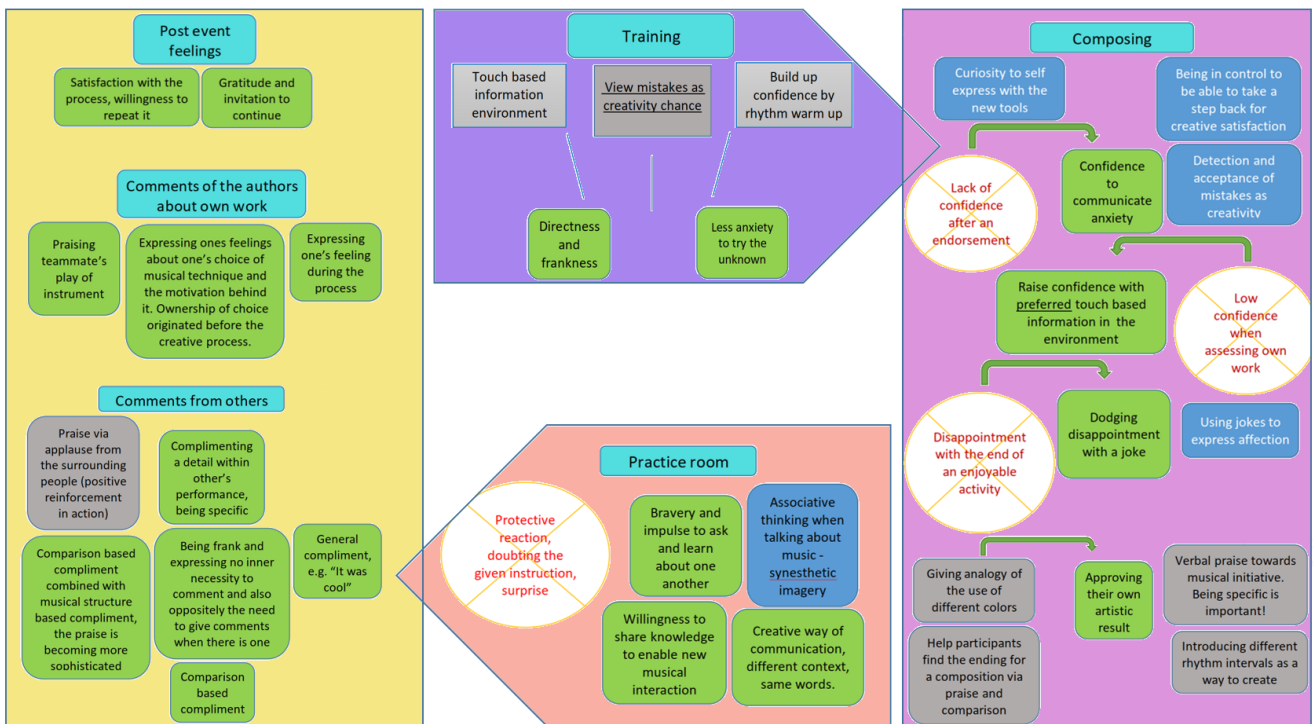
We listened to all of the created music from one group at a time with this specific group expressing how they had felt during the sound creation process if possible. Once finished, the facilitators complimented the music with the comments and associations that they had perceived from the music. Afterwards other group was asked to express what they had felt while they were listening to this music if possible. After all the groups were done, we cleaned up the space. (15 minutes)

For the results to be easily comprehensible, we voice recorded the whole process and then created a map of all the situations that had occurred during the experiment.

3. Results & Discussion

Figure 1: Scheme of activity categories, input and output actions within the experiment

Cyan: Name of section, **Grey:** Techniques employed by facilitators, **Green:** Positive reaction to encountered situations, **Circles:** Negative reaction to encountered situations, **Blue:** Newly learned, employed skill



All participants: present musical experience

All of the children had substantial musical experience because of the ongoing music classes present in their weekly study routines, however, the levels were different and perhaps this circumstance was what brought the balance which resulted in the growth of self-confidence and the abilities to communicate with each other.

Figure 2: High level of prior musical skills



All participants: confidence boost after training

The training process was facilitated in a way to let the participants enjoy musical, dialogue and cooperative situations as easily as possible. After the training phase they were very direct and frank in their comments related to the ongoing process and were not shy to laugh loudly or express confusion. The participants were introduced to the concept of mistakes being a chance for creativity and a real-life example was necessary to convey this idea as easily as possible. That was done during the demonstration of environmental sound recording by staging an accidental recording of a verbal text on top of an existing instrumental loop. This was presented as a humorous, positive moment and the participants took in this idea well.

Figure 3: Training activity enjoyed and done with vigour



Group #1: conscious about mistakes, willingness to try the less known, anxiety communicated, joking to substitute disappointment

The sound creation process (composing) contained observations focused on direct feedback situations caused by the the taught skills during the training phase. The participants were divided into two groups. In the first group, the participants were not only very eager to record sounds using the instruments that they had not known of prior to the workshop, but they also had generated agency in terms of being able to undo a layer of recording as shown during the training phase. At the same time the participants were able to understand which accidental moments they had wanted to keep - those were mostly the moments containing vocal quirks, identically to how we had demonstrated to them at the beginning. There were naturally situations of lack of confidence, but the participants were able to communicate their anxiety, which is not possible to test whether it is related to what the participants had learned during their training phase. Interestingly that there was a participant who was using joking as a way to substitute the emotion of disappointment as soon as the music creation part was finished - he was also successfully using this method to express his joy with the facilitator presence. Very possibly this was partially caused by the tone set by the facilitation, but further testing or observation would be required to find out the extent of truth for this moment.

Group #2: synesthetic thinking to find the ending in composition and to approve, continuous use of praise as support, express the feeling of difficulty to get support - different from adults

During this phase the children were handed the methods of trying to view the layers of sounds they are working on as colors (synesthetic way of thinking), intuitively finding a

finishing point within their compositions. The method of synesthetic thinking when used by a participant was followed by an approval of their own work. All of these processes were supported by praise in moments when confidence was lacking or. Positive comparison was also used to let them know that their made composition resembles something a finished piece. One of the facilitation moments included an encouragement to record a sound as they had been doing great during the training phase, however, the participant clearly had stated that they do not feel confident enough to do so. The point which matters here in our opinion is that the participant was able to express difficulty, therefore being able to receive support, which is very different to how a group of Japanese grownups without any mental or physical predispositions would react. The observation leads to the idea that this kind of creative work can be easily done with audiences that do not practice the general Japanese way of thinking when it comes to concealing personal weakness or individuality in public. Perhaps more reserved participants would be able to go a few steps further than usually and the participants with fewer chances to socialize with people that they have not known before would allow them to decrease their sense of loneliness. This is an idea that naturally should have to be further explored in the next experiment of this kind as the the isolation policies around the world have been eased. This situations teach us that perhaps findings during times of loneliness we have to potential ability to learn new forms of being together.

Figure 4: Using praise and colors as metaphor to facilitate and teach sound composition



Comparison as tool facilitate - repeated use of comparison to characterize the same situation leads in later context led to depth of the situation discussed

The next subject that we find important to discuss is the use of comparison to facilitate - specifically, let the participants gather confidence to start and finish their work and also allow them to use the same model of thinking and opinion expression to empower and praise their peers. A participant within this experiment was using a comparison “this sounds like a festival”

directed at another participant's made music, which was different from how it had happened during the work with adults. They were generally verbally quite reserved, but more technically focused. The absence of the comparison within the process is probably one of the factors that kept the adults feeling more ambiguous and lacking confidence in the product of the process. The children were able to be very specific and were able to do so in the real time, which made it possibly the most impactful, at least in as short run. This comparison by the specific participant was used both during the composition phase and the comment phase. Interestingly, the participant was using more specific details accompanied to this comparison during the second time he had used the comparison - he said that the drumming of another participant had sounded like a festival and that he had enjoyed that this feeling had changed to a different one eventually. The comparison method proves to be very powerful as that is the only type of comment that comes up repeatedly separately during musicianship and discussion as the participants giving and receiving this kind of question found this type to be the most encouraging and memorable. Further research exploring this phenomena on larger groups with controlled environment as it may bear very powerful psychologically positive effects on self-esteem, team building and mental well-being of the disabled children.

Mentally disabled together with the participants who are not

The class was working very fluid in terms of communication and social functions. The children without mental disability were more specific with their comments containing compliments for other participants. All of the participants had had already a very solid relationship, therefore, it seemed to us that the disabled participants had built up very good social cues of how to act and when. The children seemed to joke with each other at moments of transition or any difficulty during the class - the disabled ones had different magnitudes of how often and how they would speak due to different conditions they had, but they all seemed to react in their own ways to all situations that occurred. It is very important to state that all the children were very polite and friendly with a healthy interest about getting to know the guest facilitators. They built rapport very quickly and made us feel relaxed and entertained - these observations speak of high emotional intelligence in all participants.

Figure 5: Mentally disabled children very sophisticated in their cooperation when working with any participants



Conclusion

The children with disabilities all had an easier time perceiving musical directions and advice than adults tend to do as they were already highly musically inclined due to their musical training at school. Possible success explanations: no prejudice and extra shyness due to having an open style of communication within their schools and families. This is important as paradoxically the disabled people do not have a large socializing possibilities other than their school, yet they are not as exposed to Japanese collectivism focused ideas and that makes their group music creation process full of joy and positive feedback. This indicates that doing a combined class focusing on both disabled and people with no predisposition could be socially and mentally very productive as they could balance out some music presentation evoked social anxiety experienced by people with no predispositions. This research has shown that people without disabilities can acquire just as much benefit from social effects of group musicianship as the ones with. (Dingle et al., 2021). It is important as both of these parts of the Japanese society could benefit - the disabled could build an increased social presence outside their usual circles and the people with no predisposition could adopt some of the positive behaviors from the disabled people and make friends.

The limitations within this research are the small amount of participants, whose social and educational background was difficult to further explore due to the privacy culture that surrounds them. In order to tailor more specific methods for specific disability cases, future research must be conducted on a larger scale in the future in cooperation with Japanese educational policy makers.

Group musicianship is a form that also allows the people with predispositions to boost confidence, be able to voice their anxiety, solve it and be able to explore and communicate with situations and people unknown to them. These qualities are fairly easily attainable with confident, open minded and specific facilitation with fixed goals to teach specific skills like absence of mistakes or seeing failure as a moment of creativity. These skills easily travel to social situations as group musicianship is really more of a language than just a tool. This language will play an important role in the future of communicative evolution.

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