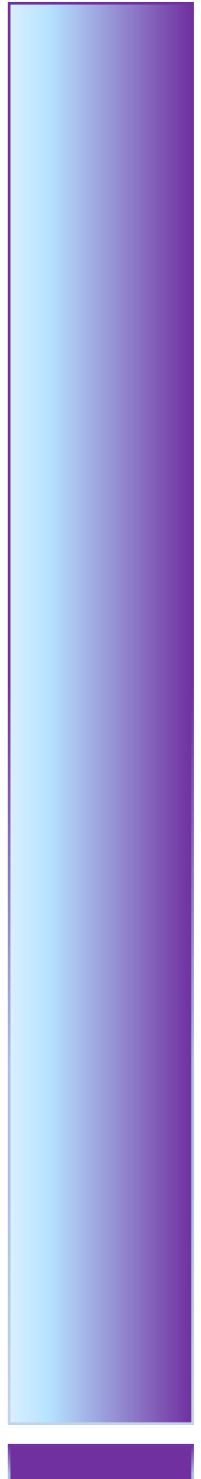




# **Virtual Group Music and Breath Work Program PILOT EVALUATION REPORT**

*The Healing Centred Cooperative*

*February 7, 2022*



## Table of Contents

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<b>1. Introduction</b> .....	<b>3</b>
1.1. Project overview .....	4
1.2. Pilot objectives: .....	5
<b>2. Evaluation</b> .....	<b>6</b>
2.1. Evaluation plan .....	6
2.2. Aim of evaluation .....	8
<b>3. Methods</b> .....	<b>9</b>
3.1. Sources of data collection and analysis:.....	9
<b>4. Results</b> .....	<b>12</b>
4.1. Summary of results.....	12
4.2. Participants pre and post session mood scale results.....	17
4.3. Participants feedback survey results .....	19
4.4. Focus group discussion findings .....	25
<b>5. Strength and limitation of the pilot study</b> .....	<b>29</b>
<b>6. Conclusion</b> .....	<b>30</b>
<b>7. Recommendations</b> .....	<b>30</b>
<b>8. Acknowledgement</b> .....	<b>31</b>

<b>9. Appendices.....</b>	<b>31</b>
APPENDIX A. Evaluation framework .....	32
APPENDIX B. Mood scale (pre and post).....	35
APPENDIX C. Participants feedback survey.....	36
APPENDIX D. Themes from analysis of open-ended comments.....	40

# 1. Introduction

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There are DISPROPORTIONATELY unmet mental health needs of marginalized and underserved Calgarians, including immigrants. Although there are currently some mental health support programs in Calgary, people working two or three jobs including frontline workers, with childcare requirements, without disposable time or income are less able to get the social and mental health needs met. The pandemic has further magnified the inequity that has always existed in health and social systems, where racialized people distributed throughout Calgary face similar structural discrimination. Interestingly, the pandemic has opened novel opportunities in understanding the potential and ease of using virtual TECHNOLOGY for healthcare delivery. This generally facilitates access to health care. Unfortunately, many of the available online mental health support platforms are mostly based on talk therapies and require high levels of language literacy and technical navigation skills, which many immigrants may not have. Example of such programs include, Wellness Together, a federal government app for mental health that is free to anyone interested, but heavily relies on assessment tools. This initiative involves self-guided courses and applications, an online community for coaching, synchronous counselling, and different pathways for adults and youth. The counselling is free only for the duration of the pandemic, while the federal government funds the service, and a user will get a different practitioner every time they phone. Immigrants/Newcomers require services provided by CULTURALLY COMPETENT, trauma-informed professionals working with ethnocultural communities. This population needs providers who can accommodate for different language needs, varying beliefs, and cultural practices, and recognize the strengths and natural resources that can be leveraged. People may need additional support in signing into virtual care.

Given the gaps in addressing mental health needs of immigrants, it was important to collaborate with this interest groups to design a program that was acceptable, accessible, and culturally competent. Emergent evidence shows that music therapy program can be effective in a multidisciplinary context for chronic (increasingly prevalent) mental health illnesses as well as some of the physical challenges seen in sustained COVID illness. For example, In the United Kingdom, the English National Opera piloted a singing program

aimed to assist the pulmonary and mental health status of sufferers of long-COVID. This pilot was so successful that they are scaling up quickly this year. Based on the positive outcomes of the National opera, the aim of the pilot study/program was to explore culturally competent virtual music-based program and its effects on the mental health status of immigrant population in Calgary with the following expectations:

- To model a partnership with racialized Calgarians that “moves at the speed of trust.” This will lay the foundation for bidirectional knowledge transfer, for ongoing innovations in healing care, and for interested communities to become active members of the Healing Centred Cooperative moving forward.
- To provide an online program that features music and breathwork, which is a novel, helpful modality for people with mental health and nervous system disorders not amenable to traditional therapy.
- To provide measurements on the effects of the program on mental health of participants in the pilot.
- To foster connections and lessen isolation within the different ethnocultural groups, by providing flexible virtual online meeting spaces given the current limitations of in person gathering in traditional spaces (religious or spiritual places of worship, community halls, and social contacts) secondary to the pandemic.

## 1.1. Project overview

This music-based program was a pilot study that was co-designed and adapted in partnership with stakeholders and advisors from immigrant and newcomer communities in Calgary to ensure the program was emergent and fit-for-purpose. This pilot program was funded by the provided budget as seed fund for a duration of six months. Study population included newcomer communities in need, those for whom traditional mental health programs are insufficient or unsuitable. The pilot program leveraged on professional and community networks to finding immigrants and refugees, particularly from racialized populations, who may benefit from this innovative program. Services were delivered by culturally competent, trauma-informed professionals (psychologists, music professionals, physicians, and researchers) who could accommodate differing language needs, varying beliefs, and cultural practices. Implementation involved a 4-week group music and breath work sessions tailored to four different communities (Arabic, Mandarin, Tagalog, and Tigrinya). Host sessions of music-based program with a defined number of sessions in each community, at a time and frequency were

established with relevant stakeholders. Each session was hosted by the project lead, and two leaders: Two music-based professionals and one psychological professional. This ensured that the program was of the highest quality while also maintaining a trauma-informed environment and an atmosphere of attunement and safe engagement. The program delivery employed a virtual technology (zoom) while ensuring a safe and accessible space for those with limited mobility, distance, or scheduling challenges. The program's design was adaptable for constant modification of prototype for optimal user experience and best results using principles of both developmental and principles-focused evaluation through social innovation. Program modality allowed for services that do not require English language literacy for full accessibility. Language translation, clear pathways, and simple navigations were fundamental to ensure optimal user experience/user interface (UX/UI), especially for vulnerable populations. The adaptability of the program with low barriers is geared towards future scalability.

## 1.2. Pilot objectives:

The aim of the pilot was to explore virtual music-based program and its effects on the mental health status of immigrant population in Calgary. The objectives are:

1. To provide a more effective, efficient, and safe alternative (group music and breath work program) to the current online mental health support platforms, which are mostly based on talk therapies and requiring high levels of language literacy and technical navigation skills.
2. To co-create a culturally competent program in response to disproportionately unmet mental health needs of diverse community groups, marginalized and underserved Calgarians with.
3. To increase accessibility of mental health support for immigrants and refugees
4. To increase opportunities for Calgarians to connect within their different ethnocultural groups and address isolation using the program.

## 2. Evaluation

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The evaluation was conducted to gain understanding of the implementation and utility of the virtual music-based program as an alternative to existing treatment options for the mental health needs of the immigrant population in Calgary. It further examined the strengths and weaknesses of the program to propose recommendations and improve implementation for scale up. The broad evaluation questions are:

1. How will you know the implemented intervention is high quality and operating successfully?
2. How will the intervention achieve intended outcomes (Positive mental health and wellbeing) among participants and/or within a community?

These two questions relate to the developmental and summative(impact) evaluations of the program. (Evaluation framework included in [“Appendix A”](#))

### 2.1. Evaluation plan

The evaluation was designed to address questions which measures the impact of the virtual group music and breath work program on the components of effectiveness, accessibility efficiency, acceptability, appropriateness, and safety. [https://hqca-hqca-ca-wp.azurewebsites.net/wp-content/uploads/2018/05/HQCA\\_User\\_Guide\\_Web.pdf](https://hqca-hqca-ca-wp.azurewebsites.net/wp-content/uploads/2018/05/HQCA_User_Guide_Web.pdf)

<i>Quality components</i>	<i>Description</i>
<i>Effectiveness</i>	<i>To what extent were the pilot objectives achieved using this program? What was the effect of this alternative online music-based session on the mental health status and wellbeing of newcomer families to Calgary?</i>
<i>Accessibility</i>	<i>How easy was it for people to participate in the virtual group music sessions? Were participants able to access the group music sessions in the most suitable setting and in a timely manner?</i>

<i>Efficiency</i>	<i>To what extent did the use of the virtual platform in obtaining services add value (directly or indirectly) for the patient and minimize waste? Program is optimally run to avoids waste of resources e.g., time and energy?</i>
<i>Acceptability</i>	<i>To what extent do participants have a positive experience participating the virtual music program? Did the participants perceive the program as responsive to their needs, expectations, and preferences?</i>
<i>Appropriateness</i>	<i>How well did the participants feel like a partner in the program received? Did the participants feel responsible in the planning, development, and monitoring of the program to make sure it meets their needs? (People-centered care)</i>
<i>Safety/Security</i>	<i>To what extent did the use of the virtual music sessions prevent or mitigate risk of harm to the participants? Did the program avoid actual or perceived physical, cultural, and psychological harm? Did the program maintain a trauma-informed environment and an atmosphere of attunement and safe engagement?</i>

**Developmental design:** Developmental evaluation and adaptive series were employed to constantly modify the prototype for optimal user experience and outcomes. Post session feedbacks from participants were shared with the program and leadership team for modification of subsequent music sessions. This data was carefully measured and monitored in the four different community groups to ensure continuous learning and program adaptability.

**User experience/user interface (UXUI):** considerations included survey translations in four different languages to accommodate for participants who lack English language literacy. Links were sent through zoom to ease navigation. The evaluation used simple data sets such as fun emojis and modified Likert scales to keep participants engaged and enhance accessibility.



## 2.2. Aim of evaluation

The aim of the evaluation is to assess the effectiveness of the music-based program in achieving its pilot objectives.

<i>Pilot objectives</i>	<i>Evaluation objectives</i>
<p>1. To provide a more effective, efficient, and safe alternative (group music and breath work program) to the current online mental health support platforms, which are mostly based on verbal therapies and requiring high levels of language literacy and technical navigation skills.</p>	<p><u>Effectiveness</u> -To determine the effect of this alternative online music-based program on the mental health status and wellbeing of newcomer families to Calgary.</p> <p><u>Efficiency</u> -To assess participants' perception of efficiency when using this program.</p> <p><u>Safety</u> -To assess participants' perception of safety when using this program.</p>
<p>2. To co-create a culturally competent program in response to diverse community groups- marginalized and underserved Calgarians with disproportionately unmet mental health needs.</p>	<p><u>Appropriateness</u> -To assess participants' view of the program as relevant to their needs, including their perception as a partner(collaborator) in the design and implementation of the program they are receiving.</p>
<p>3.To increase accessibility of mental health support for immigrants and refugees.</p>	<p><u>Accessibility</u> -To measure the accessibility of the virtual group music program: by assessing the ease of participating in the virtual group and breath work sessions.</p>
<p>4. To increase opportunities for Calgarians to connect within their different ethnocultural groups and address isolation using the program.</p>	<p><u>Acceptability</u> -To assess participants' perception of the impact of virtual group music program in fostering community connections; sense of community/belonging, addressing isolation.</p>

## 3. Methods

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During the month of October 2021, twenty-nine immigrant and newcomer families were recruited to participate in a virtual online music and breathwork program. A total of twenty-six females and three males from 4 communities; Arabic (2), Mandarin (10), Tagalog (9) and Tigrinya (8) signed up for the program.

### 3.1. Sources of data collection and analysis:

#### a. Program utilization data

Utilization data and user demographics was tracked by program coordinator between October 2021 to January 2022.

#### b. Participant pre and post session mood scale

Between October 19 to December 9, 2021, participants were asked to assess their overall happiness (mood) before and after the group music session using a simple mood scale every week for four weeks. The anonymous online mood scale is a subjective emojis/modified Likert scale which consists of 0-10 item self-report evaluation (10 being the best mood and 0 being the worst mood). The difference between the mean pre- and post- mood scores was analysed weekly to observe the trend. An Independent samples t-test was conducted to test if there is statistically significant difference in pre and post mood scores of participants per week. (A sample of the Mood Scale is included in [“Appendix B”](#))

#### c. Participant feedback survey

Participants were asked to complete an anonymous feedback survey after each music session throughout the four-week implementation period (Between October 19 to December 9, 2021). The feedback survey questions were designed to include three quantitative (closed ended) and three qualitative (open ended) questions. The closed ended questions were analyzed using Google forms dashboard and

Microsoft excel. While comments from the open-ended questions were analyzed and responses were themed as appropriate. Outcomes were reported in aggregates.

The survey questions were targeted to address the evaluation objectives listed above, which measured the impact of the music program on the components of accessibility, acceptability, appropriateness, and effectiveness as summarized below:

A Sample of the Participant feedback survey is included in [“Appendix C”](#).

<b>Survey question</b>	<b>Purpose of question</b>	<b>Evaluation design</b>
<p><u>Question 2 (quantitative):</u> Was the system(zoom) easy to use today? If no, why? (qualitative)</p>	<p><b>Accessibility:</b> To assess how easy, it was for people to participate in the virtual group music sessions using Zoom.</p>	<p>-UXUI evaluation</p>
<p><u>Question 3 (qualitative):</u> What did you like best about today's music session?</p>	<p><b>Acceptability:</b> To assess the extent to which participants had a positive experience participating in the virtual music program.</p>	<p>-UXUI evaluation -Developmental evaluation</p>
<p><u>Question 5 (quantitative):</u> "I would recommend this music program to my friends and family.</p>	<p><b>Acceptability:</b> To assess the extent to which participants liked the program enough to refer it to their friends and family.</p>	<p>-UXUI evaluation</p>
<p><u>Question 4: (qualitative):</u> what could we do to make the next session better?</p>	<p><b>Appropriateness:</b> To ensure the participants feel like a collaborator in the program they are receiving; to ensure it meets their needs. (People-centered care)</p>	<p>-Developmental evaluation</p>

<p><u>Question 6 (qualitative):</u> Please tell us about how today's music session impacted you e.g., you can tell us a story about your experience today</p>	<p><i>Effectiveness:</i> To gather examples of how participating in the music- based group might have a positive effect on the perceptions of newcomer families; regarding their environment (e.g., creates positive or calming environment), their emotions (e.g., expressing emotion/cultures/memories) and social interactions/engagement/sense of belonging.</p>	<p>-Summative (Impact)evaluation</p>
<p><u>Question 7 (quantitative):</u> How satisfied are you with the music session today?</p>	<p><i>Effectiveness:</i> -To assess participants overall experience in participating in the virtual music program. -To gather examples of how participating in the program might have a positive effect on the perception of newcomer families such as interactions, cultures, emotions, community connections (social), need for physical activities(physical), life skills (intellectual).</p>	<p>-Summative (Impact)evaluation</p>

**d. Focus group discussion report.**

Two focus groups were conducted via zoom between January 24<sup>th</sup> and 25<sup>th</sup>, 2022. A total of eight participants responded to the invite, some decided to provide written feedback. The discussion was designed to gather information from the participants regarding their experience and perception of program based on the components of effectiveness, safety, efficiency, and accessibility. Feedback was summarized and themed as appropriate. Qualitative data analysis was done using NVivo.

## 4. Results

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### 4.1. Summary of results

A total of 21 respondents completed the pre/post mood scale and the feedback survey (response rate of 72%).

#### Program utilization data (October 2021- January 2022)

- Number of contacts who signed up for the program: 29
- Number of females: 26 (90%)
- Number of males: 3 (10%)
- Number of communities represented: 4 =Arabic (2), Mandarin (10), Tagalog (9) and Tigrinya (8)
- Number of focus group participants: 8

**Objective 1:** *To provide a more effective, efficient, and safe alternative (group music and breath work program) to the current online mental health support platforms, which are mostly based on verbal therapies and requiring high levels of language literacy and technical navigation skills.*

#### *Evaluation 1.1 (Effectiveness)*

*-To determine the effect of this alternative online music-based program on the mental health status and wellbeing of newcomer families to Calgary.*

#### Mood scale-pre/post sessions. (October 19<sup>th</sup> to December 9<sup>th</sup>, 2021).

- There was a clear difference in the trends of pre- and post- sessions mood score for the participants, with higher scores reported for post sessions.
- There is a statistically significant increase in the mood scores of participants conditions in three out of four weeks of the program.
- These results suggest that music does have effect in improving the mood of people.

### Participants feedback survey (October 19<sup>th</sup> to December 9<sup>th</sup>, 2021).

- Majority of respondents (94-100%) were “very satisfied/satisfied” with the music sessions throughout the program.
- Top positive impact reported by respondents include ‘Very relaxing’ (37%); ‘it was great/energizing’ (27%); ‘the music was emotional, reminding me of good memories from my home country’ (19%) and ‘enjoyed meeting people/the conversations/sharing experiences’ (10%).

### Focus group discussion report (January 24<sup>th</sup> and 25<sup>th</sup> 2022).

- Participants appreciated the program and its importance in learning how to relax in uncertain times especially during pandemic.
- Overall, participants were happy with the program and wished they could have more sessions.

#### *Evaluation 1.2 (Efficiency)*

*- To assess participants’ perception of efficiency when using this program.*

### Focus group discussion report. (January 24<sup>th</sup> and 25<sup>th</sup>, 2022).

- Participants expressed that Zoom saves time for travel; people can participate at home with their family members during their personal time.
- “Time respect” and time management were valued by participants who were busy with work and family.
- Overall, participants expressed that the schedule was convenient for people who are working.

*Evaluation 1.3 (Safety)*

*-To assess participants' perception of safety when using this program.*

**Focus group discussion report. (January 24<sup>th</sup> and 25<sup>th</sup>, 2022).**

- Despite best efforts around privacy and confidentiality, there was a strong preference for mixed groups during the sessions as opposed to the prototype design of grouping participants from same community. People from the same cultural background often know each other and might be hesitant to share for fear of judgement from others in their community.
- With lots of stigma around mental health, the virtual platform is a great place to keep 'outbursts of feelings' private. If people are feeling emotional, they can shut off their cameras and reach out to the psychologist privately.

**Objective 2: To co-create a culturally competent program in response to diverse community groups- marginalized and underserved Calgarians with disproportionately unmet mental health needs.**

*Evaluation 2.1 (Appropriateness)*

*- To assess participants' view of the program about its relevance to their needs, including their perception as a partner(collaborator) in the design and implementation of the program they are receiving.*

**Participant feedback survey (October 19<sup>th</sup> to December 9<sup>th</sup>, 2021)**

- About half (52%) of the respondents appreciated "everything" about the program and wouldn't change any aspect. Further recommendations from participants include more singing/breath work exercises (20%); 'more sharing/testimonials among participants' (11%); 'more physical movements' (7%) and 'timing/duration of sessions not ideal'(5%).

**Focus group discussion report (January 24<sup>th</sup> and 25<sup>th</sup>, 2022).**

- Participants expressed that the pre/post session surveys were easy to use and well designed to “hear participants.”
- The consensus among participants was that they wished the program was longer.

**Objective 3: *To increase accessibility of mental health support for newcomer families (immigrants and refugee) to Calgary.***

*Evaluation 3.1 (Accessibility)*

*- To measure the accessibility of the virtual group music program: by assessing the ease of participating in the virtual group and breath work sessions.*

**Participants feedback survey (October 19<sup>th</sup> to December 9<sup>th</sup>, 2021).**

- Weekly feedback showed that majority (94-100%) of the participants, indicated easy participation in the virtual program using Zoom.

**Focus group discussion report (January 24<sup>th</sup> and 25<sup>th</sup>, 2022).**

- Generally, most participants found zoom easy to use and were comfortable with this platform since it was believed to be appropriate during the pandemic



**Objective 4: To increase opportunities for Calgarians to connect within their different ethnocultural groups and address isolation using the program.**

*Evaluation 3.1 (Acceptability)*

*-To assess participants' perception of the program impact in fostering community connection; sense of belonging, addressing isolation.*

**Participant feedback survey (October 19th to December 9th, 2021)**

- At the onset of the program (week 1 & 2), over two thirds (77%) “strongly agreed/agreed” they would recommend the program to their friends and family, 6-14% were ‘neutral’ while 10-19% “strongly disagreed”.
- By the end of the program (week 3 & 4), almost all the participants (94-100%) “strongly agreed/agreed” they would recommend the program to their friends and family, while only 6% remained “neutral”
- Most “liked” aspects of the program include: ‘the music and choice of songs’ (31%); ‘everything’ (22%); ‘breathwork/relaxation exercises’ (19%) and ‘the conversations/sharing of experiences’ (11%). Others noted; ‘the kindness of the teachers’ (8%) and ‘meditation exercises’ (4%).

**Focus group discussion report (January 24<sup>th</sup> and 25<sup>th</sup>, 2022)**

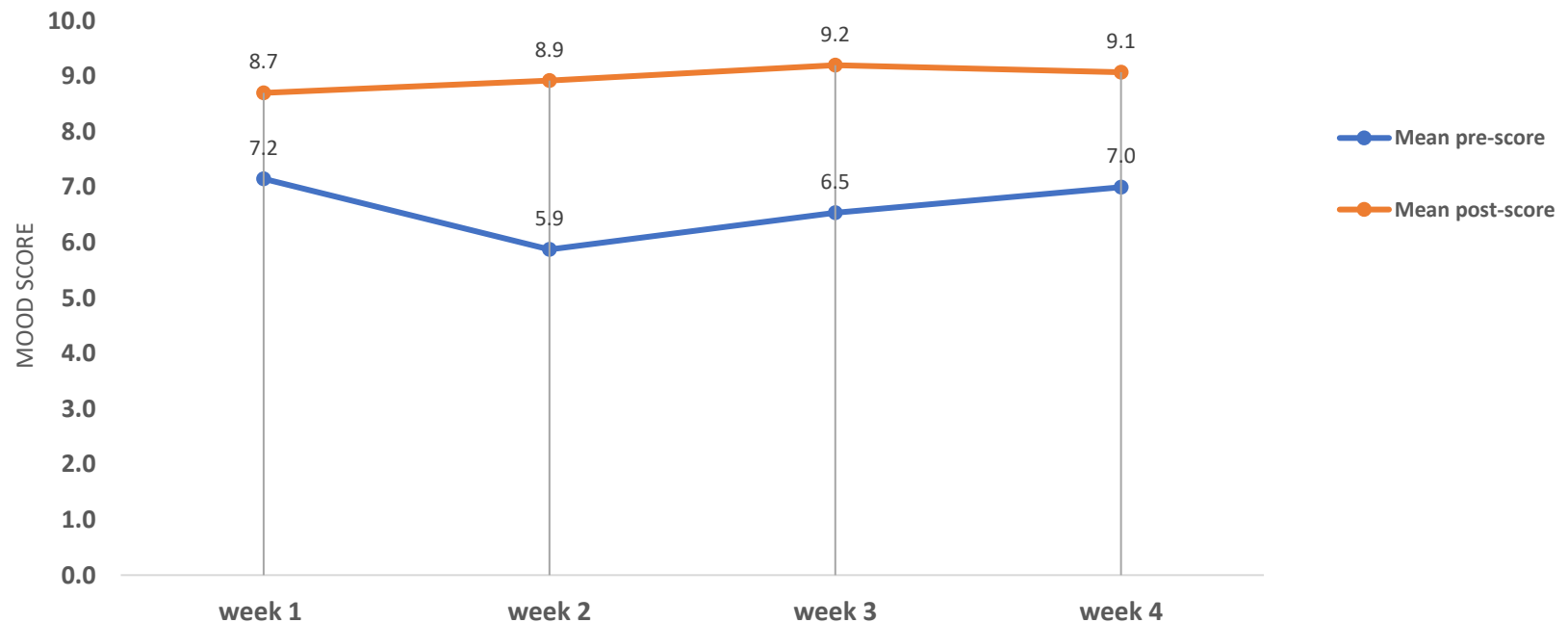
- The participants liked the piano, the singing, the breathwork and felt that the facilitators were knowledgeable and did their research in choosing music “to revisit their culture through a particular song.”
- Participants were keen to meet new friends and learn new things.

## 4.2. Participants pre and post session mood scale results

Between October 19 to December 9, 2021, participants were asked to assess their overall happiness(mood) pre and post music sessions using a simple mood scale every week, over a period of four weeks. A total of twenty-one respondents completed the pre/post mood scale at response rate of 72%. (See [“Appendix C”](#) for a sample of the Mood scale)

### 1. Mood scale

*The line graph clearly shows a consistent increase in mean mood scores of all respondents comparing the pre-and post-session results from week 1 to week 4. There is a statistically significant difference in the pre and post mood scores conditions in week 1, week 2 and week 4. ( $p < 0.05$ ). These results suggest that music does have effect in improving the mood of participants.*



## MOOD SCORE ANALYSIS

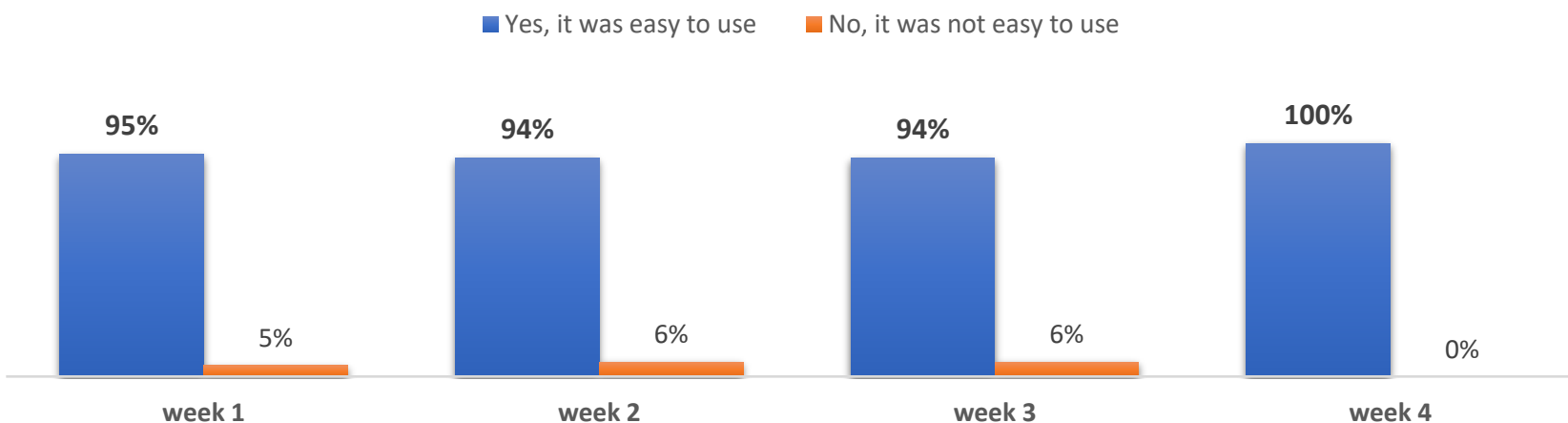
Week	Sample (n)	Mean pre-score	Mean post-score	Mean % increase	Standard deviation of pre-score	Standard deviation of post-score
<i>week 1</i>	21	7.2	8.7	17%	1.9	1.4
<i>week 2</i>	16	5.9	8.9	34%	2.2	1.3
<i>week 3</i>	17	6.5	9.2	29%	1.6	0.8
<i>week 4</i>	14	7.0	9.1	23%	2.2	1.6

### 4.3. Participants feedback survey results

Between October 19 to December 9, 2021, participants were asked to complete an anonymous feedback survey post music session over four weeks of the program. Twenty-one respondents completed the pre/post mood scale with a response rate of 72%. (See [“Appendix D”](#) for thematic analysis and verbatim responses to question 3, 4 and 6).

#### 2. Was the system (Zoom) easy to use today?

*Weekly feedback revealed that majority (94-100%) of the participants, indicated it was easy participating in the virtual program using Zoom, while less than a tenth of respondents (5-6%) ever reported an issue with the system. Challenges reported include link not working and camera not working.*

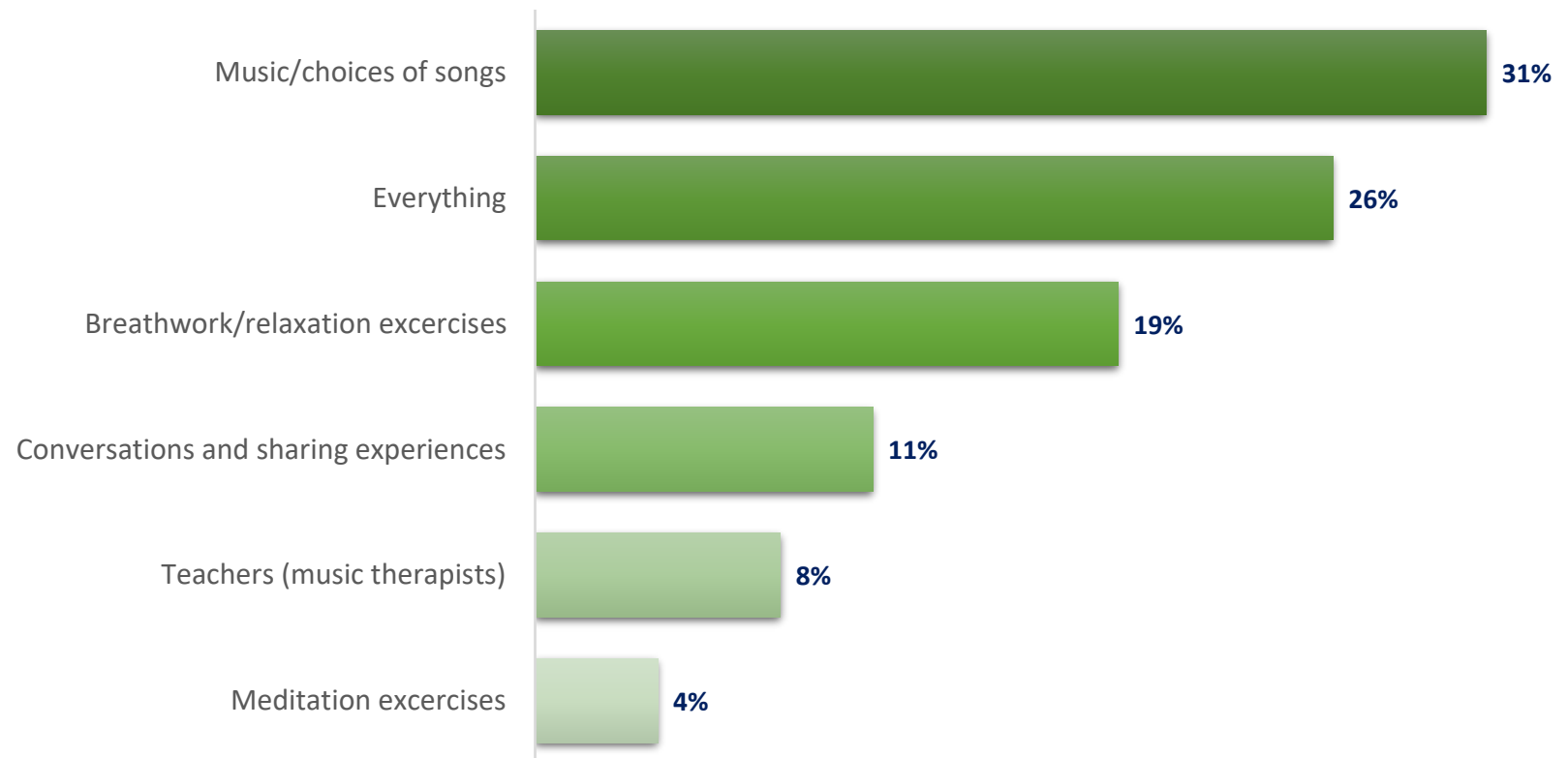


#### 2a. If No, why? Verbatim responses (n=3)

- “I don’t know”
- “The link was not working great at first”
- “The camera wasn’t working”

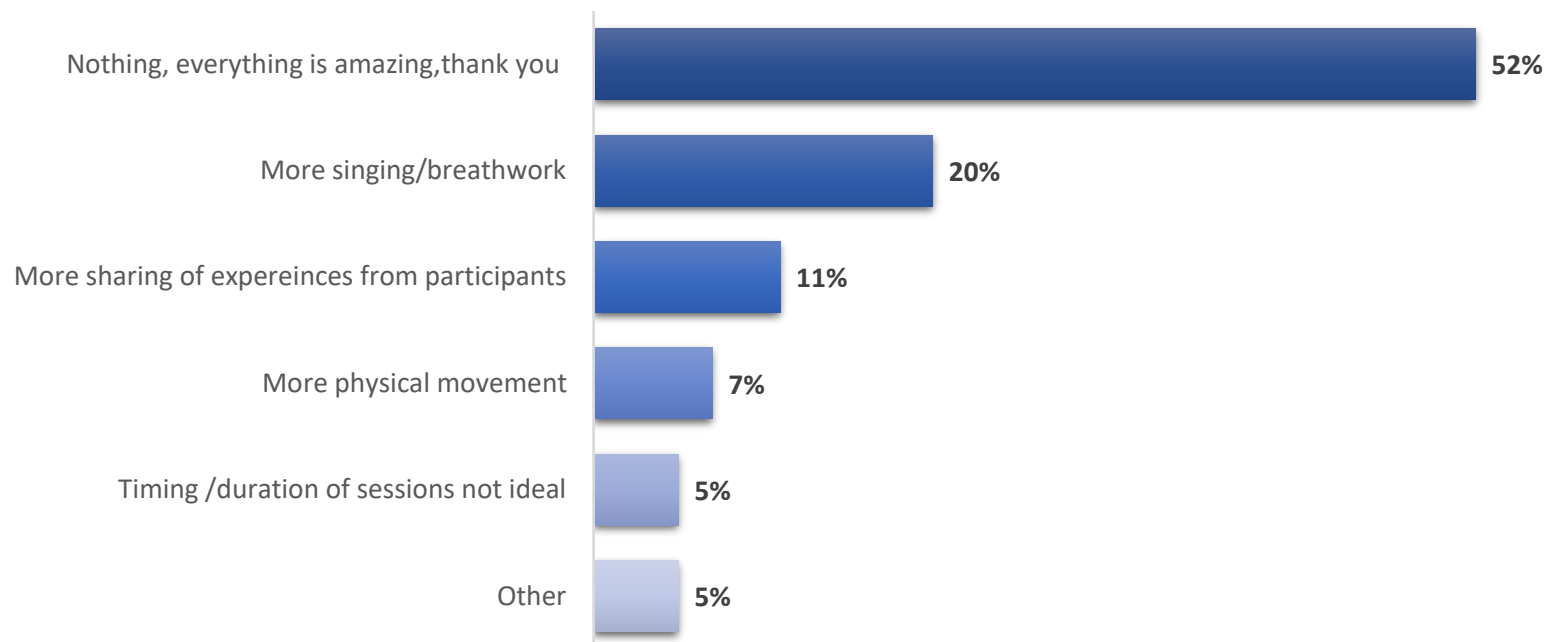
**3. What did you like BEST about today's music session?** n= 72 responses (multiple responses included)

Most “liked” aspects of the program reported by respondents include: ‘the music and choice of songs’ (31%); ‘everything’ (22%); ‘breathwork/relaxation exercises’ (19%) and ‘conversation/sharing of experiences’ (11%). Others noted ‘the kindness of the teachers’ (8%) and ‘meditation exercises’ (4%)



**4. What could we do to make the next session BETTER?** n= 44 responses (multiple responses included)

About half (52%) of the respondents appreciated everything and wouldn't change anything about the program. Further suggestions for program improvement include; more singing/breath work exercises (20%); more sharing/testimonies among participants (11%); more physical movements (7%) and timing and duration of sessions not ideal (5%).



**Other:(n=2) Verbatim responses**

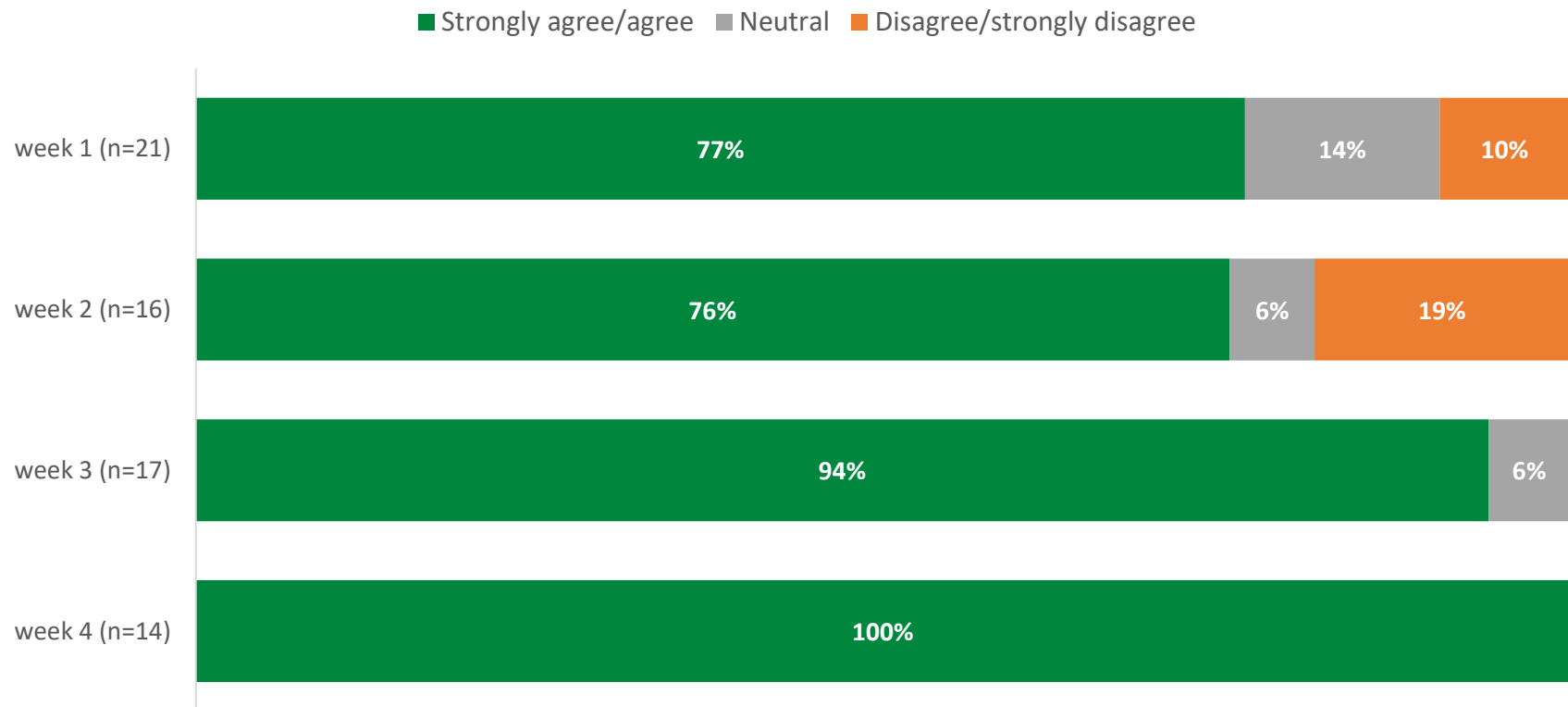
- “I wish I can have videos that we can practice everyday”
- \*\*“Lose the translations”

*\*\*translating from English to languages slowed things down and most participants were fluent English speakers*

**5. "I would recommend the music program to my friends and family" To what extent do you agree with this statement?**

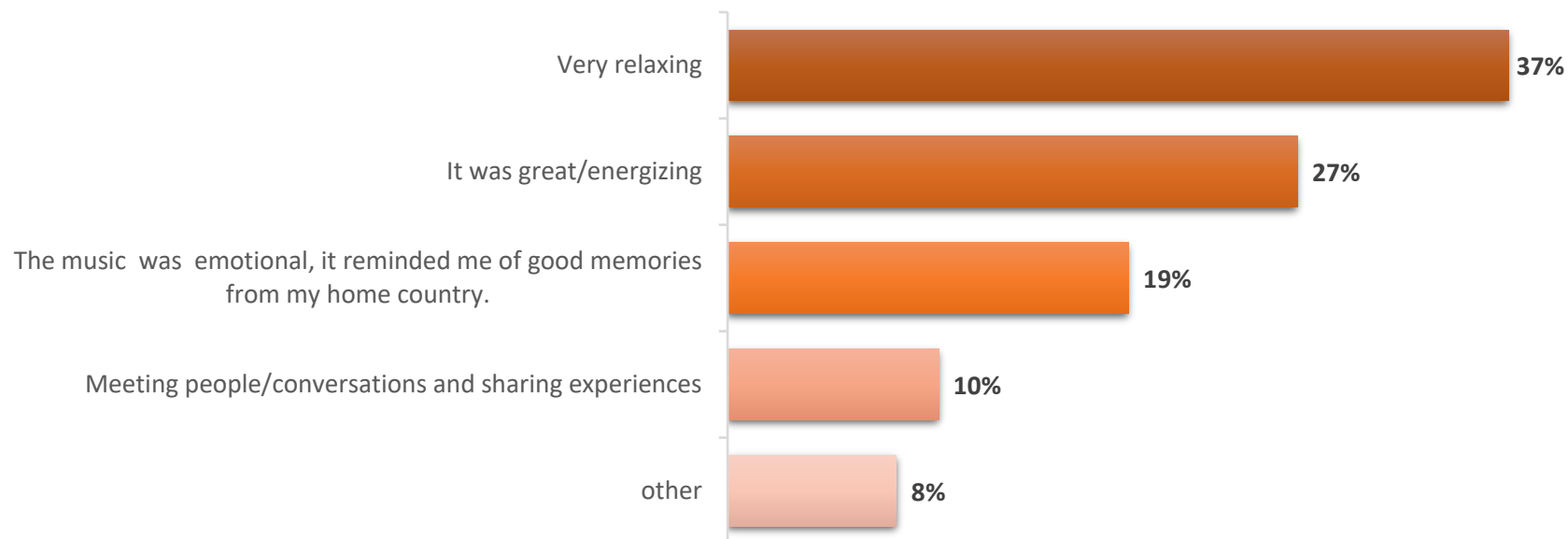
*At onset of the music program (week 1 & 2), over two thirds (77%) of respondents "strongly agreed/agreed" that they would recommend the program to their friends and family; 6-14% were 'neutral" while 10-19% "strongly disagreed".*

*By the end of the program (week 3 & 4), almost all the participants (94-100%) "strongly agreed/agreed" that they would recommend the program to their friends and family, while only 6% remained neutral.*



6. Please tell us about how today's music session impacted you e.g., you can tell us a story about your experience today (n= 52 responses)

Top positive impact reported by respondents include ; 'very relaxing' (37%); 'it was great/energizing' (27%); 'the music was emotional; it reminded me of good memories from my home country' (19%) and 'meeting people/conversations and sharing experiences'(10%).



**Other:(n=4) Verbatim responses**

- “When I learnt to sing the welcome song, I felt like a little child starts learning to speak”
- “It was very good. Because it was about love”
- “As I try to say it at the end of the session, the last music took me to another world”
- \*\*“Pleasant manners win the day”

\*\**(Some dysregulated emotions during the sessions)*



### 7. How satisfied are you with the music session today?

*Majority of respondents (94-100%) indicated they were “very satisfied/satisfied” with the music session each week. Only 5- 6% of respondents expressed dissatisfaction with the sessions between week 1 and 3 of the program.*



## 4.4. Focus group discussion findings

Two focus groups were conducted between January 24th and 25th 2022. Participants were invited to participate in the focus group discussion via zoom. A total of 8 participants responded, some decided to provide written feedback. The discussion was designed to gather information from the participants regarding their experience and perception of the program’s effectiveness, safety, efficiency, and accessibility. The qualitative analysis revealed five overarching themes across the two groups:

### **Personal stories**

Overall participants were happy with the program and wished they could have more sessions. One participant came to the focus group “just to say thank you.” And another expressed, “as a new person to this country, it was a very new experience to join this kind of program... I enjoyed how they try to make me be more engaged and try to make me feel happy every time... I am grateful for this experience.” One person shared that she joined the program with her friend, to support her, but “eventually it was also important to me.” She explained how she lives alone because her husband travels and it was nice to connect with others. She found herself writing down the words we were singing” because they felt meaningful to her. She says it was “an acknowledgment of the situation we are in and a reminder to be present.”

The participants liked the piano, the singing, the breathwork and felt that the facilitators were knowledgeable and did their research in choosing music “to revisit their culture through a particular song.”

We learned about the lives of these newcomers during our time with them in our pilot. While some had contracted Covid, others had lost their jobs or started new jobs, others were experiencing health crises like cancer and others were starting school to begin new careers. One participant explained that she works in a salon that keeps opening and closing through the pandemic and she enjoyed the consistency of the music program during unstable times. Another participant expressed that people used to comment that her “face looks tense and nervous” but now people started to notice that her face was “warmer and more relaxed.” One participant shared that “we have never

been in a situation like this with the pandemic, so it was important to learn how to relax.” Another shared that “it was a great experience for me to exercise the calm mood.”

The consensus among participants was that they wished the program was longer. “With this pandemic we don’t know what is going to happen; what kind of problems or emotions will present, it is nice to have this [program] as a coping strategy.” Some did, however, comment that they did learn some techniques that they can practice on their own at home. Overall, participants expressed that the schedule was convenient for people who are working. “Time respect” and time management were valued by participants who were busy with work and family. Sometimes participants showed up late, but the facilitators started on time and things would go according to schedule.

### ***Recruitment***

From the participant feedback, postering seemed to be a less effective recruitment technique because the messaging was confusing. One participant explained that he lives with several other newcomers that he would have invited to join the program, but he thought that it was only for people who had contracted Covid-19. The messaging was much clearer when recruitment came through Action Dignity or CIWA. We should consider recruitment through community programs as the most effective tool to get future participants. Suggestions were made to target programs for men and seniors because these are demographics that could really benefit from the program.

### ***Technology***

Each participant was given a Fire tablet which required participants to have or create an Amazon account. Depending on their age and where there were at in their immigration journey this was either a barrier or not for participants. While some had been using Amazon already, others had to create an account that asks for their credit card information. Some participants were too young to have credit cards or just didn’t feel safe about sharing that information. Luckily, they were able to create an account without a credit card, but

it took a little IT support from our team or their family members. One participant explained that the tablets were more of an incentive to participate (a gift) and that she enjoys having the tablet to use while she is on the treadmill. In fact, another participant said that she had a phone and computer already and offered to return her tablet if someone else needs it. This is not the case for everyone, we had two sisters participate in the program and since they were in the same household, we delivered one tablet. They politely requested a second tablet stating that “we have few electronics to use in our household.” Some participants found that it was easier to participate on a laptop because “you could only see one person at a time” in the Zoom meeting while using the tablet. “It’s like trying to use Zoom on your phone, it’s just easier on the computer.”

Generally, most participants found Zoom easy to use and were comfortable with this platform since using it so often during the pandemic. While most participants agreed that in person meetings would be ideal, it was believed to be the appropriate solution during the pandemic. Some of the advantages of using Zoom were shared such as: It also saves time for travel, people can participate at home with their family members during their personal time, and if people are feeling emotional, they can shut off their cameras and reach out to the psychologist privately. With lots of stigma around mental health the virtual platform is a great place to keep these ‘outbursts of feeling’ private.

During the focus group, participants expressed that the pre/post session surveys were easy to use and well designed to “hear participants.” It took a little time to get participants used to doing the surveys in real time, but that survey completion improved over time. Small things like making the date automatically recorded on the surveys would be easier for facilitators to save them from constant reminders to participants related to the surveys.

E-transfer was easy and convenient for most participants to receive their honorariums, however, there were some youth participants who were very new immigrants that did not have a bank account. We sent a gift card by mail instead. Flexibility is key when working with this population because some people have just arrived while others had been living in Canada for several years.

### *Group selection*

The logistics of organizing groups by language was evident for the purposes of using translators, however, there was a strong preference for mixed groups for a variety of reasons:

People from the same cultural background often know each other and it happened in one of our groups that the translator knew everyone. Despite our best efforts around privacy and confidentiality, people might be hesitant to share for fear of judgement from others in their community.

-Participants were keen to meet new friends and learn new things

-participants expressed interest in hearing music from other cultures. For example, a participant indicated that she really loves music from India and that she finds it relaxing.

## 5. Strength and limitation of the pilot study

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The strength of the pilot study include:

- The Healing centred cooperative collaborated with the community advisor to provide a culturally competent mental health support program to participants.
- The concurrent user experience/ user interface (UX/UI) considerations helped to keep the participants engaged, therefore improved program accessibility.

Limitations:

- Small sample size: Only 29 people participated in the study and the response rate varied for different weeks.
- The short duration of the program: There was an increase in positive feedback from participants towards the latter weeks of the programs, which suggests that participants can engage and benefit optimally as they gain understanding of the program and feel a sense of belonging within their community groups.

## 6. Conclusion

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The evaluation was conducted to gain understanding of the effectiveness and implementation of a culturally competent virtual music-based program as an alternative to existing treatment options and assess its outcomes based on the components of effectiveness, accessibility, efficiency, acceptability, appropriateness, and safety. The finding suggests that, to a large extent, the pilot met its objective for all these components. The study found clear improvement in the mental health status and experience of newcomer families to Calgary who participated in this study. The asset of the pilot study is that it explicitly links the music group sessions with the ability of music therapist to provide a culturally competent program. This approach ensured the program provided possible solutions to barriers affecting Calgary's immigrant population.

## 7. Recommendations

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Based on the responses from the study participants, clear recommendations emerged:

- Consider recruitment of participants through community programs as the most effective tool to get future participants, posterings seemed to be a less effective recruitment technique because the messaging was confusing.
- Target more men and seniors for future music and breath programs.
- The duration of the program should be longer to accommodate more singing/breathing exercises, more sharing of experiences, and more physical exercises.
- Consider mixed groups, people from the same cultural background often know each other and might be hesitant to share experiences for fear of judgement from others in their community.

## 8. Acknowledgement

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The Healing Centred Cooperative thanks the City of Calgary for the funding to run this pilot as part of The Change Can't Wait! Calgary Mental Health and Addiction Framework to test innovative ideas that bring change at the individual, family, community, and policy or system level.



## 9. Appendices

### APPENDIX A. Evaluation framework

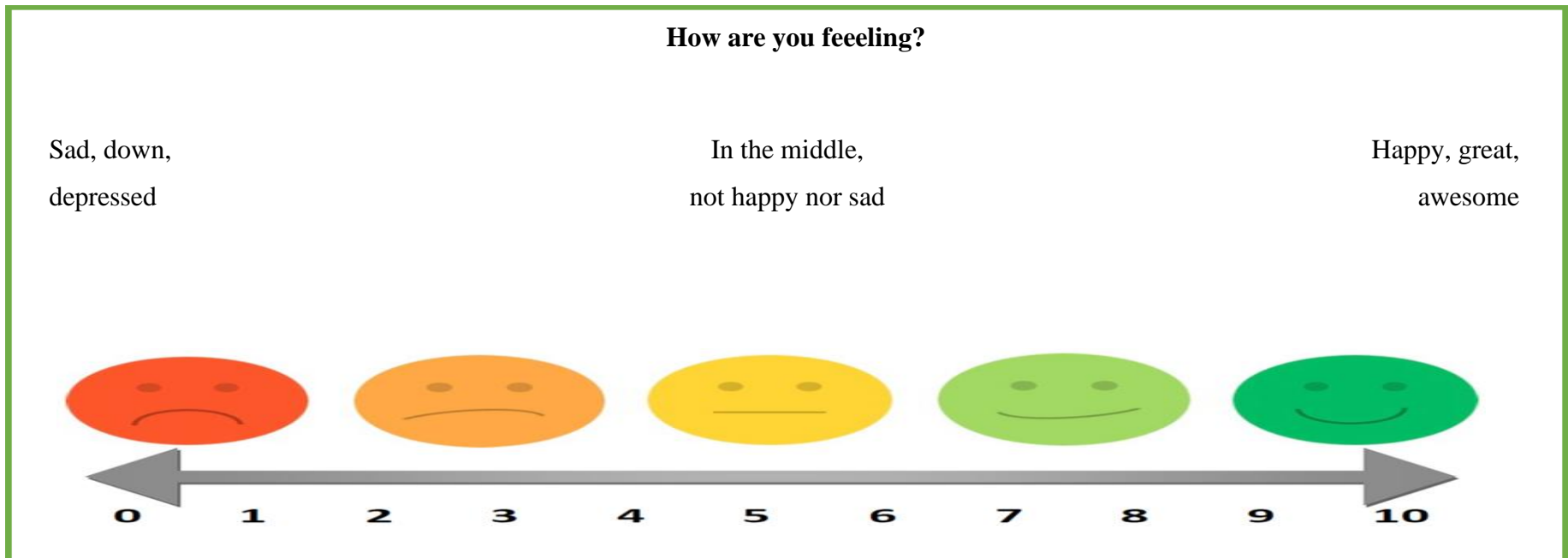
Virtual Music Group and Breath Work Evaluation Framework					
Evaluation category	Expected outcomes	What are we measuring?	How do we measure or collect this data?	When will we	Who will collect this data?
A) Developmental evaluation: <i>How will we know the implemented intervention is high quality and operating successfully?</i>	<b>Accessibility:</b> More participants can access the program in the most suitable setting and in a timely manner	# Contacts served # Families served # Participants who report ease/timely access to program	- Utilization register  -Participants feedback survey	Weekly	Project coordinator  Music therapist
	<b>Appropriateness:</b> More participants feel like a partner in their care/intervention	# Participants who feel like a partner in program received.	-Participants feedback survey -Focus group report	Weekly  Post-sessions	Music therapist, Project coordinator, Evaluation team
	<b>Acceptability:</b>	# Participants satisfied with the intervention received	-Participants feedback survey	Weekly	Music therapist Project coordinator

	More participants are satisfied with the program		-Focus group report - observation/Field notes	Post-sessions	
	<b>Effectiveness:</b> More participants report a positive mental health/wellbeing.	-Trends -Mean percentage improvement in mood.  Difference in the mean pre and post session scores and trend	Mood scale (Pre and post session)  <u>Mental health check-in</u> (emoji/likert based mood scale)	Weekly	Project coordinator Evaluation team
	<b>Safety:</b> More participants feel confident/trust in the use the program?	Participants feel trust in the use the program	Focus group report	Post-sessions	Project coordinator Evaluation team
	<b>Efficiency:</b> program adds direct/indirect value to participants, program is optimally run to avoids waste of resources	Participants feel the program is efficient (saves time and cost)	Focus group report	Post-sessions	Project coordinator Evaluation team
B)	More Calgarians report a strong sense of	-# Contacts	-Program attendance register		Project coordinator Evaluation team

<p>Summative/impact evaluation:</p> <p><i>How will the intervention achieve intended outcomes (Positive mental health and wellbeing) among participants and/or within a community?</i></p>	community and belonging	-Participant(s) report strong sense of community/belonging	-Utilization stats		
	Increased opportunities for Calgarians to connect within their communities	Participant(s) feel less isolated	Focus group report		
	More Calgarians experience strong social support/ availability of natural supports	Participant(s) reports increased connections within their communities	Focus group report		
	Improved ability to cope with stresses and strains of everyday life	Participant(s) reports experience strong social support/ availability of natural supports	Participants feedback survey Focus group report		
		Participants who feel they could use these life skills			

## APPENDIX B. Mood scale (pre and post)

### 1. Mood scale



## APPENDIX C. Participants feedback survey

2. Was the system easy to use today?



- Yes, it was easy to use
- No, it was not easy

If No, why?

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3. What did you like BEST about today's music session?



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4. What could we do to make the next session BETTER?



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5. "I would recommend music therapy to my friends and family" *To what extent do you agree with this statement?*

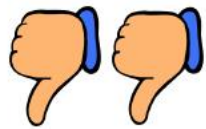


- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

6. Please tell us about how today's music session impacted you e.g., you can tell us a story about your experience today



7. How satisfied are you with the music session today?



Very Dissatisfied



Dissatisfied



Neutral



Satisfied



Very Satisfied

- Very Satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very Dissatisfied



## APPENDIX D. Themes from analysis of open-ended comments

n= number of responses (multiple responses are represented)

<b>3. What did you like BEST about today's music session? (n=72)</b>	
<b>Themes</b>	<b>Verbatim responses</b>
<i>Music/singing/choice of songs (n=22)</i>	<i>The songs at the beginning and the end</i>
	<i>I liked the songs and the music</i>
	<i>Singing about welcoming</i>
	<i>the breathing and singing</i>
	<i>Beautiful music and voice warm up</i>
	<i>I like the song choice and tiffany and Emmas sweet voices!</i>
	<i>Breathwork, voice and music, sharing of memories through music</i>
	<i>I like the most is when the Filipino song was being played because it's giving me the Filipino vibe and it kinda make me feel like I'm in Philippines and it also made me feel a bit better</i>
	<i>The music appreciation part</i>
	<i>Singing exercises!</i>
	<i>New circle song</i>
	<i>breathing, music and even the lyrics of the breath song</i>
	<i>Breathing and moving your hands to relax, circle songs, sharing personal mental health experience</i>
<i>The dancing and music</i>	
<i>Singing with inspirational lyrics</i>	

	<i>The inclusive Tigrigna music that was inspirational.</i>
	<i>The music relaxed me</i>
	<i>I like best the vocalization if I'm not mistaken. Sorry I was late because I had my presentation in my class.</i>
	<i>Thank you</i>
	<i>I liked both songs today. I really liked the forefront therapies about the soul and identity</i>
	<i>New circle song and hearing old song Jasmine</i>
	<i>Beautiful songs and I really enjoyed the thankful song . May we request a recording from Tiffany to share in our chat group.</i>
	<i>The breathing and the "thank you" song</i>
<i>Everything (n=19)</i>	<i>Everything</i>
	<i>Every activity is good</i>
	<i>Amazing with great inspiration</i>
	<i>everything is amazing</i>
	<i>everything!</i>
	<i>I don't like it because I love it. The session today was great from start to the end.</i>
	<i>Everything</i>
	<i>All are excellent to me</i>
	<i>all</i>
	<i>everything!</i>
	<i>All are good</i>
	<i>everything</i>

	<i>Everything about the session is the best</i>
	<i>I love everything its just too energetic for me</i>
	<i>All the session was helpful breathing</i>
	<i>Everything</i>
	<i>very smooth</i>
	<i>good</i>
	<i>All the session was helpful breathing</i>
<i>Breathwork/relaxation exercises (n=14)</i>	<i>Breathing exercises</i>
	<i>the breathing and singing</i>
	<i>breathing techniques and humming</i>
	<i>Breathwork, voice and music, sharing of memories through music</i>
	<i>Practicing how to relax by breathing exercise</i>
	<i>breathing, music and even the lyrics of the breathe song</i>
	<i>Breathing exercises</i>
	<i>Beautiful music and voice warm up</i>
	<i>Breathing and moving your hands to relax, circle songs, sharing personal mental health experience</i>
	<i>I absolutely love the breathing exercises, especially the roller coaster one. And the song that Tiffany introduced what just so beautiful and powerful. I am deeply moved.</i>
	<i>breathing</i>
	<i>Sharing and breath work</i>
<i>The relaxation exercises</i>	

	<i>The breathing and the "thank you" song</i>
<i>Conversation/sharing experiences (n=8)</i>	<i>Good conversation and very light, easy</i>
	<i>Breathwork, voice and music, sharing of memories through music</i>
	<i>I liked how everybody was sharing what they thought about the music and I'm happy to meet everyone.</i>
	<i>Everyone is smiling and sharing ideas</i>
	<i>It was relaxing and all our teachers were joyful that pass to me as well. Thank you for passing the joy.</i>
	<i>I liked the songs and the music</i>
	<i>Breathing and moving your hands to relax, circle songs, sharing personal mental health experience</i>
	<i>Sharing and breath work</i>
<i>Teachers (n=6)</i>	<i>It was relaxing and all our teachers were joyful that pass to me as well. Thank you for passing the joy.</i>
	<i>Very patient teachers</i>
	<i>I liked that the teachers were very kind and patient with us.</i>
	<i>The positivity in our teachers.</i>
	<i>I like the song choice and tiffany and Emmas sweet voices!</i>
	<i>The best thing was the kindness the instructors sent!</i>
<i>Meditation exercises (n=3)</i>	<i>imagination activity</i>
	<i>Meditation</i>
	<i>I liked both songs today. I really liked the forefront therapies about the soul and identity</i>

<b>4. What could we do to make the next session BETTER? (n=44)</b>	
<i>Themes</i>	<i>Verbatim responses</i>
<i>Nothing, everything is amazing thank you!</i> (n=23)	<i>There is nothing!</i>
	<i>Everything is amazing all is great</i>
	<i>so far so good</i>
	<i>Nothing it's all good so far:)</i>
	<i>For now, it's all good.</i>
	<i>There's nothing I can change because this is all I am satisfied with.</i>
	<i>Just keep it up.</i>
	<i>Keep up the good work. Thank you so much</i>
	<i>Nothing thanks you!</i>
	<i>nothing</i>
	<i>Keep up the good work. Thank you for your energy, enthusiasm and patience with us. I look forward to our sessions every other Tuesday. Man do I feel great right now - so much energized. Thank you!!!</i>
	<i>Left to the program organizers</i>
	<i>Keep going</i>
	<i>I am enjoying it all. Keep it up.</i>
	<i>You all did a fantastic work! We feel so blessed and valued to know that people care about each other and would get together to make such a wonderful group.</i>
	<i>It's good enough!</i>
<i>Really good and amazing sessions</i>	

	<i>It's all good.</i>
	<i>Try to continue pls</i>
	<i>Left to the programmer</i>
	<i>Carry on with the same progress</i>
<i>More singing/breathwork (n=9)</i>	<i>More singing training</i>
	<i>Keep the breathing exercises</i>
	<i>Maybe more Filipino song and some activities</i>
	<i>keep great music</i>
	<i>more meditative music listening</i>
	<i>I am enjoying it all. Keep it up.</i>
	<i>Add some instrumental music without words also example like the Indian traditional one for relaxation</i>
	<i>a song you like</i>
	<i>Maybe some exercise that requires standing up? and can we sign more songs?</i>
<i>More sharing of experiences from participants (n=5)</i>	<i>maybe to be engage more your participants</i>
	<i>more sharing?</i>
	<i>more sharing / testimonies from participants</i>
	<i>You all did a fantastic work! We feel so blessed and valued to know that people care about each other and would get together to make such a wonderful group.</i>
	<i>The program leader's choice is a good experience to me</i>
<i>Meeting people/sharing</i>	<i>Meeting with people and peers help me understand the situation better</i>

<i>(n=5)</i>	<i>I was able to share my gratitude to this group, meeting new friends, almost done with my school and thankful for all of them</i>
	<i>The sharing from a participant was touching when the song reminded her of the past</i>
	<i>It was another very good session. I love a participant's sharing about her experience as a child and how she has risen above the experience. And how she was determined to be a different mom and be more loving and supportive.</i>
	<i>Thank you everyone.</i>
	<i>I will share my story maybe in an email.</i>
<i>Timing/duration of session not idea</i>	<i>the session was around dinner time and it's not ideal</i>
	<i>I think 1 hour is not enough</i>
<i>l(n=2)</i>	
<i>Other</i>	<i>“I wish I can have videos that we can practice everyday</i>
	<i>“Lose the translations”</i>
<i>(n=2)</i>	

6. Please tell us about how today's music session impacted you e.g., you can tell us a story about your experience today (n=52)

<i>Themes</i>	<i>Verbatim responses</i>
<i>Very relaxing (n=19)</i>	<i>very relaxing</i>
	<i>It was very fun and relaxing!</i>
	<i>Feel relax</i>
	<i>I keep on yawning, not because I was board, but because I was so relaxed!</i>
	<i>It made me relax and calm.</i>
	<i>great. session. .... felt relaxed.</i>
	<i>It was relaxing. It reminds me of a time I was watching television with my siblings a video with that exact song.</i>
	<i>Before I joined, I was so tired and anxious. I also had been experiencing chest pains/heart palpitations. After the session, I felt better. Music is indeed one of the best, if not the best therapy for any stressful situation or when you are feeling blue.</i>
	<i>I am happy to be here, and it was helpful to make me relax.</i>
	<i>Feel relax</i>
	<i>very personal and calming; a great reflection we can be at our center and experience peace</i>
	<i>I as very anxious at first but now I feel welcomed</i>
	<i>I already shared verbally with the group. I liked the peace of mind and soul it brought me at the end of a chaotic stressful day</i>
<i>I felt really at piece for the most part. Especially at the humming tones and practice.</i>	
<i>Was feeling stressed before we started, but now feeling much better</i>	



	<i>Relaxed</i>
	<i>I felt very calm at one point of the music program. I felt myself floating away and staying in this calm space.</i>
	<i>The breath practice that makes me sleepy.</i>
	<i>It was good and making me feel better</i>
<i>Great/energizing (n=14)</i>	<i>It was great</i>
	<i>Feel energized</i>
	<i>I had a lousy, unfulfilling day and after the session I am replenished.</i>
	<i>simply amazed and so thankful for the session</i>
	<i>It's very enjoyable.</i>
	<i>It was beautiful thank you.</i>
	<i>Beautiful and inspired</i>
	<i>today I was feeling tired but now I feel energy</i>
	<i>I felt lovely and loved the session and made me dance in myself and move my body to the music</i>
	<i>it was great</i>
	<i>Felt great after months breathing exercise, singing thank you song</i>
	<i>It was nice</i>
	<i>I experienced a lot of love and kindness and warmth in today session.</i>
	<i>All are great</i>

<i>Emotions/Memories/Culture</i> (n=10)	<i>I remembered my younger years</i>
	<i>Emotional</i>
	<i>The music we heard was a little bit emotional, but it reminded me of good memories from my home country.</i>
	<i>The legend Musician Abrahams reminds me nostalgia</i>
	<i>Today's music really had me get to have different emotions because I remember my country and just want to go back there. I wish our country is all happy with love and normal again so we can all go back.</i>
	<i>I really enjoyed abraham afwerki's music and the whole experience</i>
	<i>it was very emotional, abraham afwerki is an eritrean hero</i>
	<i>It's weird but the session made me cry/sad, maybe due to some realizations. I was having anxiety and had some breakdowns in the past few weeks.</i>
	<i>When I closed my eyes with a sound background it brought me to my daughter who passed 12 years ago. We are under the tree</i>
<i>I remembered my country more because I barely watch videos about my country because I'm busy.</i>	
<i>Meeting people/sharing</i> (n=5)	<i>Meeting with people and peers help me understand the situation better</i>
	<i>I was able to share my gratitude to this group, meeting new friends, almost done with my school and thankful for all of them</i>
	<i>The sharing from a participant was touching when the song reminded her of the past</i>
	<i>It was another very good session. I love a participant's sharing about her past experience as a child and how she has risen above the experience. And how she was determined to be a different</i>

	<p><i>mom and be more loving and supportive.</i></p> <p><i>Thank you everyone.</i></p>
	<p><i>I will share my story maybe in an email.</i></p>
<p><i>Other</i> <i>(n=4)</i></p>	<p><i>When I learnt to sing the welcome song, I felt like a little child starts learning to speak</i></p>
	<p><i>It was very good. Because it was about love.</i></p>
	<p><i>Pleasant manners win the day</i></p>
	<p><i>As I try to say it at the ed of the session, the last music took me to another world</i></p>