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# Music Therapists' Knowledge of and Attitudes Towards Sustainability: Instruments

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# **Music Therapists' Knowledge of and Attitudes Toward Sustainability: Instruments**



Honors Thesis

Sarah Whitehouse

Department of Music

Advisor: Susan Gardstrom, Ph.D., MT-BC

April 2019

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## **Abstract**

Sustainability has become a common point of conversation and concern in today's society. The purpose of this project was to explore salient issues, attitudes and practices in music therapy sustainability.

Information was gathered through an in-depth review of the materials used in the make and manufacturing of commonly used instruments in music therapy practice. In addition, a survey was sent to music therapy professionals with the MT-BC (Music Therapist – Board Certified) credentials to ascertain current knowledge of and attitudes toward sustainability within the profession.

## **Acknowledgements**

I would like to extend my appreciation to Dr. Susan Gardstrom, MT-BC for advising me throughout this project and providing her continued guidance and support. I would also like to thank Abby Klemm, MT-BC for working with me on the qualitative content analysis portion of the study.



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### **Abstract**

In the United States, there has been an increased promotion of sustainable practices in the work environment. Companies are studying how they can promote a sustainable workplace and have implemented policies and procedures to increase eco-friendly work (Blok, Wesselink, Studynka, & Kemp, 2013; Inque & Alfaro-Barranties, 2015). That being said, a thorough search of English-language music therapy publications uncovered no published research pertaining to music therapy and sustainable practices, which led me to undertake this survey study.

I was curious to learn what music therapist know about current sustainability practices and their attitudes toward these practices. I was also interested in learning what types of eco-friendly practices related to selection, care, and recycling of musical instruments are available to music therapists. In order to gain this information, I first conducted a comprehensive review of literature about instruments commonly used in clinical practice. I then circulated a survey to professional members of the American Music Therapy Association to ascertain their current understanding of and attitudes towards sustainability within music therapy practice, with a focus on clinical instruments.

I analyzed survey data with able and valued assistance from a co-analyst, a certified music therapist with experience with qualitative content analysis. Findings indicated that participants value sustainability, but there are myriad considerations that affect a music therapist's ability to implement sustainable practices in their music therapy practice. Follow-up studies are recommended to investigate balancing these considerations with sustainable practices.

## **Introduction**

In the United States, there has been an increased promotion of sustainable practices in the work environment. Companies are studying how they can promote a sustainable workplace and have implemented policies and procedures to increase eco-friendly work (Blok, Wesselink, Studynka, & Kemp, 2013; Inque & Alfaro-Barranties, 2015). That being said, my thorough search of English-language music therapy publications uncovered no published research pertaining to music therapy and sustainable practices. This lack of information led me to undertake this survey study, the purpose of which was to learn more about music therapist's knowledge, attitudes, and practices regarding sustainability in the work place. I was curious: 1) What current knowledge do music therapists have on sustainable music therapy practices? 2) What are music therapists' attitudes towards the concepts of sustainability and implementing sustainable practices within their music therapy practices?

In order to bring the focus of this study specifically to musical instruments, I first reviewed the literature about instruments commonly used in clinical practice, which informed the content of a subsequent survey. I then created and circulated the survey to professional members of the American Music Therapy Association (AMTA) to ascertain their current knowledge of and attitudes towards sustainability within music therapy practice, focused specifically on instruments used in clinical practice.

## Review of Literature

For the purposes of this study, sustainability is defined as, “the use of Earth’s resources in a way that will not permanently destroy or deplete them; living with the limits of Earth’s biocapacity” (Shuster, Vigna, Tontonoz, Sinha, 2014, p. 523). (Note: In this report, the terms *sustainability*, *environmentally-friendly*, and *eco-friendly* are used interchangeably.) In addition to agreeing on a definition of sustainability, it is essential that music therapists understand why this topic is important. In 2015, the Organisation for Economic Cooperation and Development (OECD) published *Environment at a Glance*, detailing the efforts made by OECD countries to improve treatment of the environment. The report also detailed areas in which there was room for improvement, one such area being “improving waste and materials management” (p. 5). Waste and materials management can be explored specifically in music therapy through examination of the management of instruments and the impact of this management on the environment.

According to a survey by Corporate Express US Inc. in Broomfield, Colorado (2008), approximately 64% of workers in the United States “strongly” or “somewhat” consider a company’s environmental policies and practices when choosing whether or not to work for the company. Surveyors indicated that there appears to be an “increasing green trends” in various companies throughout the U.S., suggesting that Americans have an increased preference towards environmentally-friendly office practices. In addition, approximately two-thirds of respondents whose companies did not have any environmental practices/policies stated that they would like to see specific policies implemented in their respective offices.

Studies about pro-environmental behavior in the workplace are relevant to this discussion. Pro-environmental behavior is defined as “a kind of behaviour that consciously seeks to minimize the negative impact of one’s actions on the natural and built environment” (Block, Wesselink, Studynka, Kemp, 2013, p. 55). These studies have focused on various factors that impact a person’s reasoning to engage (or not to engage) in pro-environmental behavior. These factors include, but are not limited to, social norms, environmental awareness, universal values, situations, routines, and leadership (Block, Wesselink, Studynka, Kemp, 2013, p. 57-58). This may be valuable information in considering how to encourage music therapists to choose to practice in a sustainable way.

In 2015, Inque and Alfaro-Barrantes conducted a review of 17 empirical studies that examined pro-environmental behavior in the workplace. The researchers reviewed literature by environmental psychologists, who outline three theoretical frameworks to explain why people choose to engage in pro-environmental behavior. The first is theory of reasoned action, wherein individuals engage in behavior that is determined by their own intention to engage. The second is theory of planned behavior, which focuses not only on the intention to engage but also an individual’s perception of how easy or difficult the behavior will be to perform. The third is value-belief-norm theory, which defends a behavior as a function of personal values, beliefs, and norms. These theories can provide evidence as to why myriad environmental practices and behaviors are (or are not) occurring within the workplace.

### **Percussion Instruments in Music Therapy Practice**

A discussion about sustainability within music therapy practice can focus on a variety of dimensions of the profession. The focus of this study was instrument selection,



care, and recycling. I began with a review of the materials utilized in the manufacture of percussion instruments that are commonly used in music therapy practice in order to discern if there may be environmental considerations to explore based on these materials. The list of instruments to review was adapted from Scheffel and Matney's (2015) "The use of percussion in therapy: A content analysis of the literature." The following table (Table 1) was compiled with the findings from four different sources on the manufacturing of percussion instruments.

**Table 1. Materials in Instruments Used in Music Therapy Practice**

Instrument	Make
Bells	"Bell metal is an alloy of approximately 77% copper and 23% tin" (Holland, 2003, p. 26)
Bongo Drum	Acousticon shell, Fiberskyn drumhead (Remo)
Cajon	Acousticon shell, Fiberskyn drumhead (Remo)
Castanet	Slightly hollowed shells, usually walnut, ebony, or rosewood; connected at the top by a chord (Holland, 2003, p. 11)
Claves	Hardwood sticks, usually of ebony or rosewood (Holland, 2003, p. 14)
Conga	Acousticon shell, Suede drumhead (Remo)
Cymbals	Alloy of copper, tin, traces of silver; making involves hand hammering to create spectrum of overtones (Kvistad, 2011)
Djembe	ABS Plastic, Suede drumhead (Remo)
Frame Drum	Acousticon shell, Fiberskyn drumhead (Remo)
Gathering Drum	Acousticon shell, Skyndeeep drumhead (Remo)
Goblet Drum	Environment recycled drum shell, Fliptop synthetic drumhead (eliminates weather concern, need to tune) (Remo)
Glockenspiel	25-26 steel bars (Holland, 2003)
Gong	80% copper, 20% tin (with a little iron or lead); soften slab of metal in furnace, utilize hammer to flatten and tune (Kvistad, 2011)
Hand Drum	Acousticon shell, Fiberskyn drumhead (Remo)
Marimba	Mirlition type of buzzing resonators (Kvistad, 2011) (Mirlition: "A musical instrument with a nasal tone produced by a vibrating membrane" [Dictionary.com])
Mbira	Flatten nails create 22-28 metal keys; mounted on hardwood soundboard (Kvistad, 2011)

Ngoma	Acousticon shell, Mondo Nuskyn drumhead (Remo)
Ocean Drum	Acousticon shell, Clear Mylar resonant drumhead (Remo)
Paddle Drum	Acousticon shell, Skyndeeep drumhead (Remo)
Rainstick	Cactus branch with a hollow shaft filled with stones or seeds (Kvistad, 2011)
Rhythm Sticks	Hardwood, with a “clean, natural finish” (Remo)
Scraper	Solid or hollowed body of wood, bone, shell, gourd, or other material notched on its surface and scraped with a stick (Marcuse, 1964, p. 464)
Shaker	Plastic; non-toxic beads (Remo)
Slit Drums	Traditionally, a hollowed-out wooden log (Holland, 2003, p. 32)
Steel Drums	55-gallon oil drums, originated from Trinidad (Kvistad, 2011)
Talking Drum	Acousticon shell, Suede drumheads (Remo)
Tambourine	Acousticon shell, Fiberskyn drumhead (Remo)
Timpani	Copper bowls and membranes, which are made from animal skin or synthetic material (Kvistad, 2011).
Triangle	Variety of different metals used, depending on the desired pitch and timbre (Holland, 2003, p. 53)
Tubano	Acousticon shell, Nuskyn Type 2 Mondo drumhead (Remo)
Vibraphone	Metal alloy (Holland, 2003, p. 54). (Dictionary.com – a metal made by combining two or more metallic elements, especially to give greater strength of resistance to corrosion)
VibraSlap	Described as “vegan Quijada:” wooden box with loose metal pins inside that vibrate when ball on the other end is rapped (Kvistad, 2011)
Xylophone	Traditionally, bars were made of Honduras rosewood; however, due to difficulty obtaining enough quality seasoned wood, manufacturers are now using synthetic material (Author believes this leads to a noticeable difference in sound) (Holland, 2003, p. 59)

Remo, Inc., based in Santa Clarita, California, is perhaps one of the most well-known distributors of instruments among professional music therapists and is considered a leader in sustainable manufacturing and distribution of percussion instruments. The website states:

We are proud to say that Remo, Inc. has always been at the forefront of sustainable manufacturing. We were the first to successfully introduce an alternative to calfskin drumheads and traditional wood drum shells with Remo film processing technology and Acousticon® drum shells, respectively (Company).

A sampling of Remo products is listed above in Table 1 and warrant further explanation regarding their make and manufacturing process. The Acousticon drum shells are made with multiple thin layers of wood-fiber recycled material, laminated under high pressure, and coated for moisture reduction and tone/acoustic quality purposes. Another example of Remo's sustainable percussion products includes Skyndeeep, commonly used for drumheads. The infusion of pigment into a polyester surface is considered "uniquely attractive" while "producing warm tones" by increasing sound volume and projection. Additionally, Fiberskyn drumheads are utilized on a variety of their products. These drumheads are created with a combination of PET film and Tyvek. PET (polyethylene terephthalate) film is a thermoplastic polymer resin, combining chemical ethylene glycol and purified terephthalic acid. This material is 100% recycled, and, while strong and durable, is also very lightweight (Company).

## Research Methods

### Participants

The participants in this study were professional members of the American Music Therapy Association (AMTA). AMTA granted me access to members' email addresses exclusively for research purposes. A total of 2,079 professional members of AMTA were invited to participate in the study. The final sample included 255 respondents (12% response rate).

### Procedures

*Survey Construction.* I designed a 19-item survey to acquire information regarding current knowledge of and attitudes towards sustainability within music therapy practice (see outline of survey questions in Appendix B). A draft was piloted by two MT-BC music therapy lecturers at a university before the final survey was disseminated. The questions on the survey investigated the following topics:

1. Participant demographic information
2. Personal definition of sustainability
3. Value of sustainability within music therapy practice
4. Knowledge of instrument manufacturing
5. Care/maintenance of instruments
6. Attitudes towards natural/synthetic

The survey consisted of a variety of question types, including Likert scale, multiple choice, check-all-that-apply (CATA), and open-ended with text answers. The survey pilot took approximately seven minutes to complete.

*Survey Dissemination.* Participants were invited to the study via email invitation with a hyperlink to the survey. The first section of the survey included the informed consent, approved by the University of Dayton Institutional Review Board (see Appendix A).

### **Data Analysis**

*Quantitative Data.* The quantitative data from the survey was generated and represented in chart form via Survey Monkey, the online platform utilized to construct and disseminate the survey.

*Qualitative Content Analysis.* Given the nature of the narrative data and the need for interpretation of individual attitudes, this data was subjected to an in-depth qualitative content analysis. I conducted the analysis with a co-researcher. We adhered to Mayring's (2000) process as follows:

- 1) We independently read the survey answers containing narrative response, then culled any answers that appeared irrelevant to the question.
- 2) We independently highlighted "meaning units" within narrative answers, beginning with the first 50% of the answers. The derived meaning units were compared, and we adjusted as necessary. Once we came to a consensus on the meaning units in the first 50% of narrative answers, the same process was repeated with the remaining answers.
- 3) When the meaning units were established, we independently derived themes from the first 50% of the meaning units. Once agreed upon, we continued the process for the second 50% of the meaning units.

- 4) Once all the themes have been agreed to, we will list the themes and place the ascribed meaning units under each theme. It is possible that more data will be culled as it does not directly relate to the research question and emerging themes.

## Results

### Results: Quantitative

The results of the quantitative data are depicted below in charts 2 through 10. The title of each chart is the exact wording of the question asked in the survey.

**Table 2. As a music therapist, how important is sustainability in your practice?**

Answer Choices	Responses
Extremely important	13.20%
Very important	31.47%
Somewhat important	38.07%
Not so important	15.74%
Not at all important	1.52%

**Table 3. How knowledgeable are you of the manufacturing process by your preferred manufacturer of percussion instruments?**

Answer Choices	Responses
Extremely knowledgeable	1.06%
Very knowledgeable	2.66%
Somewhat knowledgeable	13.83%
Not so knowledgeable	23.40%
Not at all knowledgeable	59.94%

**Table 4. When choosing instruments to purchase for your practice, which of the following are important considerations for you?**

Answer Choices	Responses
Sound Quality	88.89%
Appearance	41.80%
Materials	41.27%
Price	88.36%
Portability	68.78%
Needs of clients	90.48%

**Table 5. How often do you clean your instruments used in practice?**

Answer Choices	Responses
Always	51.65%
Often	42.31%
Rarely	5.49%
Never	0.55%

**Table 6. In the event that an instrument is broken, are you more likely to repair or dispose of the instrument?**

Answer Choices	Responses
----------------	-----------

Repair	73.48%
Dispose	26.52%

**Table 7. How do you dispose of instruments that cannot be repaired?**

Answer Choices	Responses
Trash	65.92%
Recycling	43.58%
Dismantle and keep materials	33.52%
Donation	32.96%
Other	17.32%

**Table 8. Do you prefer instruments made of synthetic or natural materials?**

Answer Choices	Responses
Synthetic	9.55%
Natural	12.36%
No preference	25.84%
It depends on the instrument	52.25%

**Table 9. What is your opinion on instruments made from various animal parts?**

Answer Choices	Responses
Extremely like	7.06%
Somewhat like	40.59%
Somewhat dislike	35.88%
Extremely dislike	16.47%

**Table 10. What affects your opinion of instruments made from animal parts?**

Answer Choices	Responses
Sound Quality	56.73%
Appearance	17.54%
Materials	25.73%
Price	47.95%
Portability	15.79%
Needs of clients	44.44%
Other	27.49%

### **Results: Qualitative**

Due to the depth and breadth of narrative survey responses, the qualitative content analysis is ongoing. I have chosen a select sample of the emerging themes to discuss for this thesis.



*Prioritizing client over sustainability.* When justifying the importance of sustainability within their music therapy practice, some participants discussed the value of prioritizing the clients over all else. One participant wrote,

- “The needs of the client is the first priority, sustainability would be second.”

Different examples of prioritizing the clients over sustainability were cited throughout the survey. Some participants discussed using their time at work to focus on patient care rather than on sustainable practices. Another example relates to cleaning materials; participants indicated that they will use the most effective cleaning products to ensure client health and safety, even if they are not the most sustainable products.

*Personal values in, or versus, professional lives.* The data revealed a dichotomy in respondents’ personal and professional values about sustainability. Some participants indicated that sustainability is an important value in their personal lives, and therefore they transfer this value into their professional lives. The following responses echo this sentiment:

- “I believe sustainability is important in all aspects of my life, including music therapy practice.”
- “My practice is an extension of my life, so I attempt to be true to my values each day.”

On the other hand, some respondents indicated that they value sustainability in their personal life, but it does not completely transfer into their professional life. One respondent writes:

- “This is not something I have considered related to my professional practice, but is something I consider in my private life.”

Other participants with similar answers cited various reasons why this lack of transfer occurs. Some indicated that they work for companies that do not value sustainability, or that sustainable practices are challenging given certain protocols (e.g. cleaning products in hospitals). Others simply indicated that they simply have not thought about sustainable practices in the work environment, though they do in their personal lives.

*Infection control policies.* Infection control policies are essential in decreasing the spread of infection and ensuring client/patient safety in health care environments. That being said, respondents indicated that infection control policies in their respective settings often do not co-exist with sustainable practices. Two participants write:

- “Must adhere to infection control measures in hospital”
- “In the hospital environment, infection control is paramount. Infection control policies often (though not always) make sustainability practices challenging, if not impossible.”

Infection control policies often require the use of one-time cleaning products (e.g. wipes). These wipes can only be used once before being thrown away. Many policies dictate that the instruments must be cleaned after working with each client. Therefore, music therapists may use a handful of these wipes to clean instruments on a daily basis. Furthermore, hospital-grade wipes tend to be stronger compared to standard wipes (e.g. Clorox or Lysol). Some respondents indicated that these wipes cause more wear-and-tear on the instruments, which is a factor for therapists when considering types of instruments to buy, but also increases the frequency at which instruments need to be replaced. In certain circumstances, therapists must take additional precautions by wearing gloves, a

gown, and/or a mask while working with certain clientele. Again, these items are one-time use only and must be disposed of after interacting with one client.

Infection control policies also appeared to have an impact on participants' preference towards synthetic or natural instruments. As mentioned above, the frequency of cleanings and harsh nature of the cleaning agents requires a durable instrument. Therefore, many respondents indicated that they prefer synthetic instruments because they are easier to clean and are more durable when faced with harsher cleaning agents. Responses include:

- “In my work setting (hospital), we must use materials that can be disinfected with hospital-grade disinfectant wipes. These can easily break down and damage natural instruments so we often use instruments made of synthetic materials.”
- “Infection prevention protocols require the use of plastic instruments to allow for better cleaning. Natural products tend to be more porous and thus are not able to be cleaned if used in certain contact rooms.”

*Repurposing/donating broken instruments.* When asked about their protocols and tendencies for handling instruments beyond repair, many participants indicated that they repurpose their instruments. A common response was repurposing the instruments as art projects. Some respondents discussed how they donated the broken instruments to art teachers or art therapists, or would keep the broken instrument and create an art project themselves. Other forms of repurposing/donating include passing them off to music therapy students or donating to STEM schools. One respondent wrote:

- “I may give it to the art teacher who creatively uses parts of it, or I may give it to the greenhouse where they integrate it into a plant arrangement.”

*Porous/hard to clean animal skins.* Participants were asked about their preference towards or against instruments made with animal skins. A handful of respondents indicated that instruments made with animal skins are not preferred in healthcare settings as they are harder to clean. Animal skins tend to be more porous compared to synthetic instruments. Therefore, it is more likely that germs will reside in the pores, which can be more of a danger for clients. In addition, animal skins are more delicate than synthetic materials, so they are less likely to withstand regular cleanings for an extended amount of time. Select responses that echo these ideas read as follows:

- “Can be easily damaged when cleaning”
- “These require a great deal of care and are not easily cleaned for use in healthcare facilities.”

## Discussion

The quantitative and qualitative data that emerged from the study provided a variety of considerations for sustainability within music therapy practice. Thirty-eight per cent of respondents indicated that sustainability is “somewhat important” within their practice, though 61.02% of respondents indicated that their practice is “somewhat sustainable.” Based on this data and other results from the qualitative content analysis, there appears to be a barrier between the values placed on sustainability and the ability to implement sustainable practices in the work environment.

Many participants indicated that they value sustainability, especially in their personal lives. They cited examples of sustainable practices implemented at home. However, there were a variety of considerations and challenges that affect sustainable practices in at work. Perhaps the most often cited challenges in implementing sustainable practice is infection control policies. These policies often require one-time use of wipes and personal protective equipment (e.g., gloves, masks), all of which are discarded after one use. Additionally, participants discussed the importance of selecting instruments that are durable, given wear-and-tear from cleaning products and continuous use from clients. More often, instruments made from synthetic material are more durable, and therefore tend to be more appropriate in clinical settings. They are also easier to clean, as they are not porous. Additional considerations include, but are not limited to: driving extended distances for client visits, limiting paper use versus continuing to use paper for confidentiality purposes, and factors impacting the decision to try to repair a broken instrument, or throw it out for budgetary or safety concerns.

Perhaps one of the most important considerations throughout all the survey answers was the importance of prioritizing the client in all decisions. Many participants disclosed that though they value sustainable practices, client wellness and safety is of the upmost importance. Therefore, music therapists are more likely to make decisions that prioritize the client over sustainable practices. This may include: choosing to dispose of an instrument because it would be unsafe to continue using or try to repair it, choosing instruments that are durable and most appropriate for the clients' needs despite the materials involved in the manufacturing process, using the most effective cleaning materials to minimize the spread of germs and infections from client to client, and utilizing time at work to ensure that all services provided are of the upmost quality and benefit the clients.

All considerations listed are essential to the success of a music therapy practice and the health and wellness of clients. Further studies could investigate how to balance these considerations with the ability to implement sustainable practices.

### **Limitations**

I recognize that this study is not without its limitations. With 2,079 professional members of AMTA invited to participate in the survey and 255 respondents, the response rate for this survey was about 12%. A higher response rate would be preferred to ensure more confident generalization to American music therapists as a whole. In addition, this research was conducted as part of an undergraduate thesis, and I was working under a strict timeline, so the qualitative content analysis could not be completed before the thesis due date. Though I attempted to word survey questions carefully and piloted the tool before broader dissemination, it is possible that construct validity was compromised.

## **Conclusion**

As society becomes more attuned to concepts surrounding sustainability, considerations for opportunities and limitations in applying sustainable practices in music therapy are vast. Survey findings exemplified that music therapists' attitudes towards sustainability are impacted by a variety of factors. Numerous considerations affect their ability to implement sustainable practices. It is my hope that this study will open the doors to more conversations and research regarding sustainability within music therapy practice. Recommendations for how to apply these concepts within practice are a possible topic for follow-up research.

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## **Appendix A: Invitation to Participate**

Research Project Title: Music Therapists' Knowledge of and Attitudes Toward Sustainability: Instruments

You have been asked to participate in a research project conducted by XX from the XX, in the Department of XX.

The purpose of the project is to explore salient issues, attitudes, and practices in music therapy and sustainability, focused specifically on instruments used in the clinic.

**You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.**

- Your participation in this research is voluntary. You have the right not to answer any question and stop participating at any time for any reason. Answering the questions will take about 10 minutes
- You will not be compensated for your participation
- All of the information you tell us will be confidential
- If this is a recorded interview, only the researcher and faculty advisor will have access to the recording, and it will be kept in a secure place
- If this is a written or online survey, only the researcher and faculty advisor will have access to your responses. If you are participating in an online survey: We will not collect identifying information, but we cannot guarantee the security of the computer you use or the security of data transfer between the computer and our data collection point. We urge you to consider this carefully when responding to these questions.
- I understand I am ONLY eligible to participate if I am over the age of 18.

**Please contact the following investigators with any questions or concerns:**

XX, XX

XX, XX

**If you feel you have been treated unfairly, or you have questions regarding your rights as a research participant, you may contact XX.**

## Appendix B: Survey Questions

The purpose of this survey is to explore music therapists' current knowledge and attitudes towards issues of sustainability in their practice, specifically in relation to the instruments used most in practice. As a profession, we are in the early phases of exploring the issues of sustainability. These questions are not intended to place value on certain practices over others, rather they help us gather information regarding sustainability that could inform future practices. Please answer to the best of your ability.

1. Demographics
  - Age
  - # of years working in the field
  - Region

The word "sustainability" can have a variety of contexts and connotations - it may mean many different things to different people. I am interested in what sustainability means to you.

2. In your own words, define sustainability.

For the purposes of this survey, sustainability is defined as, "the use of Earth's resources in a way that will not permanently destroy or deplete them; living with the limits of Earth's biocapacity" (Shuster, Vigna, Tontono, Sinha, 2014, p. 523).

3. As a music therapist, how important is sustainability in your practice?  
(Likert Scale of 1-5, 1 being not important at all and 5 being extremely important)
  - Explain

The following items address your knowledge of manufacturers of instruments commonly used in practice. A manufacturer is defined as a company that produces instruments.

4. What is your preferred manufacturer of percussion instruments used in your practice?
5. How knowledgeable are you the manufacturing process by this company?
  - 1-5 - not knowledgeable → extremely knowledgeable
6. How knowledgeable are you about the materials used in production by this company?
  - 1-5 - not knowledgeable → extremely knowledgeable
7. When choosing instruments to purchase for your practice, which of the following are important considerations for you? Check all that apply.
  - Sound quality
  - Appearance
  - Materials
  - Price

- Portability
- Needs of clients

The following questions address sustainable practices in instrument care.

8. Do you clean instruments used in your practice? (Y/N)
  - What products do you use? Be specific.
9. What protocols do you have in place to ensure the longevity of your instruments? (Check box with “No specific protocol” option)
10. In the event that an instrument is broken, are you more likely to repair or dispose of the instrument?
11. If you are more likely to dispose, what factors determine this decision?
  - No training in instrument repair
  - Lack of funding
  - Lack of access to someone trained in instrument repair
  - Lack of time
  - Cost of repair is greater than replacement
  - Employer policies/procedures prohibit repair
  - Other (Please explain)
12. How do you dispose of instruments that cannot be repaired? Check all that apply
  - Trash
  - Recycling
  - Dismantle and keep materials
  - Donation
  - Other (Please explain)

The following questions concern your personal attitudes towards sustainability issues relevant in music therapy practice.

For the purposes of this study, “synthetic” is defined as a product made of non-organic, chemical materials. Common examples include plastic and artificial leather. In addition, “natural” is defined as a product made from the materials of the earth. Common examples include wood, silk, and wool.

13. Are your instruments made of synthetic or natural materials?
  - Synthetic
  - Natural
  - Both
  - Unknown
14. Do you prefer instruments made of synthetic or natural materials?
  - Synthetic
  - Natural
  - No preference

- It depends on the instrument
  - Explain
15. What is your opinion on instruments made from various animal parts (ex. Animal skins used as drumheads)?
- 1-5 Strongly dislike → strongly like
16. Earlier in the survey, you were asked which of the following are important considerations when selecting an instrument to purchase. Which of these are factors in your opinion on instruments made from animal parts? Check all that apply
- Sound quality
  - Appearance
  - Materials
  - Price
  - Portability
  - Needs of clients
  - Other
  - Explain
17. Given the provided definition of sustainability and all of the information you have provided above, how sustainable do you believe your practice is?
- 1-5 Not sustainable at all → extremely sustainable
  - Explain