The Benefits and Accessibility of Sound Therapy By Áine Hartnett

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# Abstract

The objective of this study is to compile evidence of the benefits of Sound Therapy, alongside determining the accessibility of it to those who may benefit from its practices. This was achieved by conducting a survey specifically for those who currently practice various forms of sound therapy. It allowed a space to collect data on both the benefits of it and gather information on how accessible it is, by identifying trends and patterns among those who practice. Analysis of the responses collected demonstrate a significantly positive response on the benefits of sound therapy. However it was evident that it is still a largely under researched area, therefore positive results appear to be inconsistent. The survey also provided evidence that accessibility is determined by the method of sound therapy used, and the resources of the individual looking to practice. This concludes that overall it is not a highly accessible form of therapy to those who may benefit from it.

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## **Introduction**

This study focuses on the practice of sound therapy, both the mental and physical benefits of the practice and discovering how accessible it is to the average person to utilise. With a focus on vibroacoustic therapy, Sound baths and Autonomous Sensory Meridian Response (ASMR).

Sound Healing or Sound Therapy has been defined as using sound as a means to improve or enhance mental and physical health. It can involve listening to music, meditating to certain frequencies which are commonly seen and used in sound baths, vibroacoustic therapy, Autonomous Sensory Meridian Response (ASMR), among many more. Although the practices of Sound healing/ Therapy and Music Therapy have many similarities, they have their differences. Music therapy has become legitimated by academic research and is commonly used and integrated into different areas of modern day medicine. However Sound Healing is heavily linked to the spiritual world, which isn't seen as legitimate in western culture, although the practice is becoming more accepted by medical professionals, particularly those in the field of psychology. As a profession, Music Therapy began in the 20th century, after World War I and World War II, when musicians would play for veterans who had suffered both physical and emotional trauma from the wars. The patients noted a significant improvement in their health which led to hospitals then hiring musicians to play for them. With that, the demand grew for a college curriculum, in order to research and expand on the practice as a potential aid in the healing of illnesses. Typically in a medical setting with a music therapist, it is common for music therapists to have guitars and pianos to play music for the patient. Furthermore, also been noted that playing particular songs can cause reactions with those in comas. The advent of social media can also be attributed to the acceptance of the practice, due to the rise in people speaking out about how sound therapy has impacted their mental health in particular, along with the rise in ASMR artists who regularly post content on streaming platforms such as YouTube.

Sound therapy dates back to ancient Greece, circa 500 BC. Our current understanding of it is believed to be first linked to Phytagoras, who discovered that musical intervals and using sound and harmonic frequencies could be used to heal certain ailments. It is believed he referred to the healing process as "soul adjustments", and this process would allow souls to align to their divine nature. Throughout history it has been used for many more reasons such as in religious ceremonies, such as Shamanism, to heal the soul and ward off evil spirits.

Studies have found that some of the benefits of sound therapy are stress reduction, aids in helping insomnia, including the quality of sleep. Those who practice have also noted decreased anxiety levels and depression, and that their mood has significantly increased. It has been linked to an improvement in memory, helping those with dementia, multiple other psychiatric disorders including post traumatic stress disorder, cancer, reduced pain and students have reported that it helps them focus and study, particularly those with Autism spectrum disorder and attention deficit hyperactivity disorder (ADHD) among many more learning difficulties. More recent studies have linked it to improving the health of premature babies, boosting immune function and a decreased risk of heart disease and stroke.

There are many different forms of sound therapy, the voice being one of the main instruments used, as well as instruments such as singing bowls, bells, wind chimes, gongs, tuning forks, flutes, harps, and drums.

# Sound Baths

Sound baths are one of the main focuses of this study as they are so widely practiced all over the world, and are one of the oldest forms of sound healing. Typically they include the use of the instruments named above, with a large focus on singing bowls. Singing bowls are typically made from metal alloy or crystals however it's not limited to these examples and can be made from many more materials. The sound the bowl makes is largely dependent on the size and shape of the bowl, along with the placement of the mallet used on the bowl, to create the sound. It is believed that your body vibrates when exposed to certain frequencies, the instrument and frequency is what determines the result. According to sound therapist Sara Auster<sup>1</sup>, we can switch from being in one state of mind to another by using a combination of frequencies and rhythms, for example from a beta state, which is typically described as brainwaves between 15 - 40 Hz, associated with alertness and intellectual activity to a theta state, which is between 4 - 8 Hz, which is associated with a state of mental relaxation, typically a disengaged from any tasks being performed. It's normally a positive mental state and people often report being very relaxed and creative when experiencing this.

The techniques and implications of Sound Healing for the profession of Music Therapy was a study published in 1996 by the National Association for Music Therapy, concluded that further research in Sound Healing was necessary in order to integrate it into music therapy practices<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> Auster, Sara. *Sound Bath: Meditate, Heal and Connect through listening*. Simon and Schuster, 2019.

<sup>&</sup>lt;sup>2</sup> Crowe, Barbara J., and Mary Scovel. *An Overview of Sound Healing Practices: Implications for the Profession of Music Therapy*, vol. 14, 1996, p. 28. *https://academic.oup.com*.

However it also noted one of the biggest differences between the two is that music therapy does not typically consider or take into account how specific vibration patterns are affecting their clients physical and mental state when planning a music therapy session and choosing what music or techniques to use. Whereas in Sound Therapy it tends to be one of the most important influences in the techniques the practitioner uses. This is due to the belief that frequencies directly correlate to the cells in which they intend to vibrate, which is what helps them heal.

# Vibroacoustic Therapy

Vibroacoustic Therapy is also a large focus of this study, as it has gained popularity in recent years due to the positive impact on various different physical and mental health issues. It can be described as a technology that uses sound to produce mechanical vibrations which are applied to the body via a medium such as mattresses, mats, chairs, tables etc. Speakers are placed under or within one of these mediums which the patient would then lie or sit on, it can be both a physiological and auditory experience. Generally vibroacoustic therapy uses sinusoidal low-frequency sound which is the source of the vibration.

It has been used for pain management, symptom reduction, and physical therapy. It is known to ease stress and anxiety amongst many other benefits. It has become a more desired form of therapy due to its non-invasive and non-pharmacological nature. Vibroacoustic therapy was first developed between the 1970's and 1980's, Particularly by Olav Skille, who developed the first Vibroacoustic chair and experimented with low frequency sounds between 20 and 120Hz on children with various physical and mental disabilities.<sup>3</sup>

There have been many clinical experiments and studies regarding the use of vibroacoustic therapy since it was first discovered. One study explored the effects of vibroacoustic music on symptom reduction and inducing the relaxation response by Dr. George Patrick. The trial gathered 272 patients who had varying health issues including cancer, heart, lung and blood disorders, several diseases and mental disorders.<sup>4</sup> Data was self-reported before and after the treatment of vibroacoustic therapy which showed to have an overwhelming positive response from patients in the level of pain reduction and heightened relaxation they felt. Although it was noted by the author that a placebo effect may have also influenced the findings, therefore further studies that focus on collecting quantifiable data would be beneficial.

<sup>&</sup>lt;sup>3</sup> (Boyd-Brewer, Chris. Vibroacoustic Therapy: Sound Vibrations in Medicine, 2003.

<sup>&</sup>lt;sup>4</sup> Patrick, George. The Effects of Vibroacoustic Music on Symptom Reduction Inducing the Relaxation Response through Good Vibrations. 1999.

There are many Music Therapists, Doctors and health care professionals who are qualified to offer Vibroacoustic Therapy however it is not common practice or widely available, as it is seen as a form of holistic therapy in comparison to western medicine. A Finnish study<sup>5</sup> published in 2012 explores the use of Vibroacoustic therapy in clinical practice and offers valuable insight on the perspective of the use of the therapy in a clinical setting as well as the research and training necessary for it to be used effectively.

Canyon Vista recovery centre based in Arizona is just one of the clinics offering Vibroacoustic Therapy as part of their Addiction Recovery programmes due to the positive effects on the lowering of blood pressure, stress, muscle tension and overall improvement in mood, which in turn helps their clients manage their recovery better.<sup>6</sup>

# Autonomous Sensory Meridian Response (ASMR)

Autonomous Sensory Meridian Response (ASMR) is described as a tingling sensation, particularly at the crown of the head, the scalp, and neck, in response to an audio visual trigger such as tapping, whispering, mouth noises among many more.<sup>7</sup> It is a relatively recent phenomenon, and still has a long way to go when it comes to understanding the psychological basis for it. The term was coined in 2010 by Jennifer Allen who found a community of people online, who each described the sensation which she had experienced herself. Although it has not been around long enough to be legitimized as a mode of sound therapy, the benefits are similar to the ones described for other modes of sound therapy, with the main results reported include relaxation, stress and anxiety relief, enhanced mood, help with insomnia etc.

A 2018 study conducted two experiments, one online and one laboratory study, in order to test the emotional and physiological responses of ASMR. The results show that positive results show only for those who experience ASMR. The second study discovered that ASMR reduced heart rate and increased skin conductance levels, showing evidence of ASMR being a physiological response.<sup>8</sup>

<sup>8</sup> Poerio, Giulia, et al. *More than a feeling: Autonomous sensory meridian response (ASMR) is characterized by reliable changes in affect and physiology*, 2018, https://iournela.plac.arg/placege/article2id=10.1271/journel.pong.0106645

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0196645.

<sup>&</sup>lt;sup>5</sup> Punkanen, Marko, and Esa Ala-Ruona. "Contemporary Vibroacoustic Therapy: Perspectives on Clinical Practice, Research, and Training." 2012. *https://www.researchgate.net*.

<sup>&</sup>lt;sup>6</sup> Hurley, Terry. 2017. *Canyon Vista*, Canyonvista.com.

<sup>&</sup>lt;sup>7</sup> Understanding ASMR, Psychology Today, https://www.psychologytoday.com/ie/basics/asmr.

In this study the aim is to discuss and discover how accessible these means of sound therapy are. Can the average person use sound therapy on a regular basis, at ease. For the purpose of this research the 'average person' is described as being one who is not typically informed or well connected to the world of sound therapy. The benefits to sound healing are evident, so why don't more people use it? There appeared to be many questions as to why it's not the first thing people utilise when feeling stressed or anxious, some of those questions including, do they know what it is?, how it can be used and what are the benefits? Is it cost and space effective? Can it be practiced in their own home, what equipment is required for the most effective results? This study explores these options with a focus on the aforementioned therapies, Sound Baths, Vibroacoustic Therapy and ASMR. These particular means of sound therapy cover a wide scope of benefits, as well as being at varying levels of accessibility.

# Literature Reviews

This chapter explores an in-depth investigation into the practices of sound therapy, with a focus on Sound baths, Vibroacoustic therapy and ASMR. The aim of the literature review is to gain a deeper understanding of these particular therapies and the mental and physical benefits of practicing them. By exploring varied studies on these modes of practicing, it can be concluded as to how accessible they are to the average person. Taking into consideration accessibility issues such as cost, what equipment is needed to practice, and how much physical space is needed to practice and achieve effective results.

Taking these factors into consideration could mean a significant improvement on the mental and physical health of the general public. It would mean people have access to almost instant treatments in some cases, which are cost effective, to help maintain and manage their ailments and illnesses. It could potentially also mean more people take a less invasive approach in treating any illnesses, alongside reducing the need for pharmaceuticals to treat them. Similarly to how people use physical exercise to de-stress, alleviate anxiety, help with sleep and increase overall mood and physical health, they could combine sound therapy to further these results and lessen their symptoms.

However further study is essential before it could be recommended as a treatment by medical professionals. Although doctors and particularly those in the field of psychology have been vocal about the benefits of Sound Therapy. It's important that there is enough research carried out to be in a position to recommend a specific type of sound therapy to a patient, and possibly produce high quality content for specific treatment plans, which can be issued accordingly by professionals. To recommend Sound Therapy to a patient currently, may be overwhelming as there are so many various routes that can be taken. it would be unfortunate for someone to dismiss the practice out of prejudice or not knowing where to begin. Alongside that, there is also the risk that a patient, if unguided, may encounter certain sounds that trigger negative reactions. For example, a patient is recommended ASMR to alleviate anxiety and for relaxation, but they have misophonia, a disorder in which certain sounds can trigger a negative psychological and sometimes physiological response. In this case, certain genres of ASMR should be avoided, as instead of being beneficial to the patient, it could potentially worsen their symptoms.

Healing Sound: Contemporary Methods for Tibetan Singing bowls by Kathleen R. Humphries<sup>9</sup> is a study describing the use of Tibetan singing bowls and exploring how their purpose has evolved over time. From the use of the instrument by buddhist monks in religious ceremonies for centuries to how they have been adapted for recreational use as well as music and sound therapy. This project heavily focuses on understanding the application of music in regards to serving a purpose of healing and personal growth. This is one of the main reasons why the study is beneficial to the current research at hand, as one of the important factors legitimizing sound therapy in western medicine is by being able to understand how it works and how it can be implemented into current treatment plans. This information can in turn allow us to prescribe sound therapy, to patients, either on its own or alongside alternative treatments such as medication. counselling, chemotherapy, physical therapy, etc. This study also delves into the manufacturing of singing bowls, which is essential to understand, as this is what creates their unique sound and frequencies. It is clear that the author mainly focused their research on studies both old and current, as well as focusing largely on the history of singing bowls, as the paper thoroughly describes the history and potential uses of the bowls over time. However this study also references medical studies relating to sound therapy to support its argument.

Alongside this the author compares how singing bowls have been used and interpreted from East to West. In particular, discussing how the harmonics of the bowls go beyond what is typically produced in western instruments, where they are commonly artificially tuned to create perfect intervals, the author goes as far as describing this method of music theory to being restrictive, an artificial restriction which is not an issue for instruments such as singing bowls or gongs. To further tie the importance of this research to the current investigation, the author states how the traditional uses of the bowls were commonly used to connect the body and spirit, practitioners at this time were not basing the use on intellect but rather intuition, and focusing on the experience itself. This method may not be so welcomed or seen as legitimate in today's society as humans have become so accustomed to analytical thinking. The author concludes that this is why it is so important to continue research in the area, alongside carrying out different experiments with Electroencephalography, commonly known as EEG, a technology used to measure neurological activity and monitor brainwaves. By carrying out further experimentation we would be able to apply the findings to treatment plans involving sound therapy.

<sup>&</sup>lt;sup>9</sup> Humphries, Kathleen. "Contemporary Methods for Tibetan Singing Bowls." *Healing Sound*, vol. Undergraduate Library Research Awards. 2, 2010. *Digital Common*, https://digitalcommons.lmu.edu/.

The tuning fork and the "Soundtherapy", by Daniele Masala and Valentina Merolle explores the history and importance of the tuning fork in sound therapy.<sup>10</sup> The article explores the work of Sir Peter Guy Manners who discovered the healing properties of the tuning fork. Throughout his research he found different frequencies related to a different part of the body, it could be connected to an emotional state, a particular muscle, organ, gland etc. He discovered that sound therapy could be used as a healing tool, by understanding the vibrations on the part of the body that was disharmonious, specific frequencies could be used to heal that part of the body and become harmonious again. Throughout Manners own work he studied and treated multiple issues such as general pain, tumors, chronic inflammation, arthritis, bacterial and viral infections. It is believed that Manners discovered over 600 healing frequencies. The authors of this article discuss the science and maths behind how tuning forks are made, how the oscillation of them depends on what material they are made out of. This information is vital to understand if there is any benefit to be had from using tuning forks for healing properties. The article references how certain frequencies (between 440 and 450Hz) were used in war to make soldiers more aggressive so they would fight better and on the contrary how other frequencies can activate an alternative or more relaxed brain state.

Another important figure in sound therapy which this study explores is that of french researcher, musician and acupuncture doctor, Fabien Maman who is considered the "father of sound vibrational therapy". He connected acupuncture and music, creating a system which uses the tuning fork instead of needles in acupuncture points. The theory is based on different tuning forks and bells being placed on a patient to treat acupuncture disequilibrium by channelling the tuning fork vibrations to the specific cells. The authors have compiled this study by examining previous research and articles. This study also provides insight into how the tuning fork is played, by hitting a prong with the back of a hand or by using a specific drum stick.

<sup>&</sup>lt;sup>10</sup> Masala, Daniele, and Valentina Merolle. *The tuning for and the "Soundtherapy"*, vol. 4, no. 2, 2017. *https://sensesandsciences.com*.

This research is important and relevant to the study under investigation as it is important to understand the history of the practice and how it was used and tested previously, to allow practitioners to further research in the area, to possibly improve and discover even more about the healing properties of tuning forks, as they are a common instrument used in Sound Baths. As this study is focusing on how accessible sound therapy is, it is important to understand the science behind it and how certain instruments are used in order to know and develop how these practices can be made more accessible.

The following article titled, 7 Health Benefits of Vibroacoustic Therapy by Deb Wellmes<sup>11</sup>. The author is Speech Language Pathologist, Vibroacoustic Therapy Specialist, Neuroplastician and Reiki Practitioner with a Doctor of Naturopathy Degree giving them an extremely well rounded knowledge on the uses, effects and potential benefits of Vibroacoustic Therapy. They have cited works which have studied the history and health benefits of VA therapy including studies with significant research and experimentation on this mode of therapy to support their theories.

The article discusses vibro-tactile healing alongside vibroacoustic therapy, a type of non-invasive treatment that involves vibratory stimulation as a means to promote healing. It has been tested for use to treat those with diseases such as Parkinsons and Fibromyalgia, where a gentle vibratory stimulation is applied, usually to the fingertips, in order to reduce pain, improve sleep quality among many more positive effects. The findings report the timeline and evolution of vibrational therapy. From 40,000 years ago when the earliest known method for vibro-tactile healing has been traced back to the Aboriginal people of Australia who used the didgeridoo, to promote vibrational based healing, as the frequencies from the instrument are so low, a commonality between some of the other instruments used in Sound Baths.

The article also notes key dates in the development of VA therapy, including one of the first instances that equipment and software was developed by Olav Skille in 1968, to begin studying the effects of vibrational therapy on children with disabilities. The history and underpinnings of vibroacoustic therapy are essential to be able to understand the full scope and capabilities of this mode of therapy. Seeing how it was done in the past can only inform us on ways to implement it in the future, in an accessible and cost efficient way. This article also describes the science behind VA therapy as well as noting the health benefits such as Lower Blood Pressure, Increased Circulation, Improvement in sleep quality, Reduction in pain and anxiety as well as many more.

<sup>&</sup>lt;sup>11</sup> Wellmes, Deb. "7 Health Benefits of Vibroacoustic Therapy." 2015. *https://westsidedbt.com*, https://westsidedbt.com/7-health-benefits-of-vibroacoustic-sound-vibration-therapy/.

Effect of Vibroacoustic therapy on pain management in adolescents with low back pain was a study<sup>12</sup> published in 2016 which assessed the effect of vibroacoustic therapy on low back pain management in adolescents. A group of 40 adolescents (13-18) years old, were divided into two groups, Control Group - the half that would just receive physiotherapy for back pain management over the course of the 3 weeks study, and the second group, which would receive both the same treatment plan as the control group and vibroacoustic therapy - the vibroacoustic group. The VA therapy was performed by using a vibro chair which was set at 4-8Hz, paired with Music which was played through headphones. Standard tests (Visual analogue scale and oswestry disability index) were taken before and after the trial period in order to be able to monitor the results. Ultimately it was found there was no significant difference between the two groups.

The reason this is significant to the current study is because although the results weren't in favour of VA therapy, by doing studies like this we will be able to differentiate where the therapy should be applied, and where it may not make much difference to the patient. It's also important to note that only the frequencies between 4-8Hz were used for 20 minute sessions, and the back pain was described as less than moderate. This poses the question of whether an alternative frequency may be more beneficial, and whether more severe cases of back pain should be taken into consideration. The study ultimately concludes that further study is necessary to explore the potential of VA therapy in low back pain.

This research is significant to the current study as although there weren't any notable differences in the two groups, it was noted that the VA therapy did seem to stimulate relaxation, so there may be more of a direct psychological benefit to it, rather than physical. As back pain is a more universally experienced pain regardless of age, gender, physical activity, it may be beneficial for the study to be expanded. It's also worth noting that although the exact price of the chair used in this study could not be found, other chairs available for purchase online range from between \$1000 to \$3000 on average. This is important to note in terms of accessibility. As the average person may not have thousands to spend on a VA chair, alongside having the space to accommodate one. If the option of purchasing a chair or piece of VA equipment is not in reach, a person would have to look into practitioners who offer VA therapy as a service.

<sup>&</sup>lt;sup>12</sup> Dudoniene, Vilma, et al. *Effect of vibroacoustic therapy on pain management in adolescents*, vol. 18, 2016. *https://www.jvejournals.com/article/17165*.

Is Vibroacoustic Therapy, Music Therapy?, by Jeff Hooper<sup>13</sup> was published in 2002 and examines the theoretical background to VA therapy and introduces four different VA therapy systems along with research that has been carried out using these systems. This study explores the theoretical history of VA therapy, in particular how it was examined and how it has evolved over time. The four systems discussed are Vibroacoustic and Physioacoustic therapy, Somatron and Music Vibration Table (MVT). While the author outlines the main uses for each device, they also assess the use of VA therapy in Music therapy and how legitimate it is. The study is highly relevant to the current investigation as being able to identify the goal of a particular system will help in determining which method would be best for a specific issue. It would be able to help in making it more accessible as there are more options. The study also discusses the use of this mode of therapy when treating patients who are deaf or hard of hearing. It is beneficial to those, as hearing is not an absolute necessity when it comes to VA therapy.

Vibroacoustic Treatment and Self-care for Managing the Chronic Pain Experience, Elsa A. Campbell. This dissertation explores the benefits of Vibroacoustic Therapy for managing chronic pain. The author describes how chronic pain affects approximately 20-33% of the world's population and how it contributes to disability, absenteeism and presenteeism alongside the economic ramifications. They focus on mood disorders, such as depression and anxiety in particular, as they are largely untreated conditions and are difficult to manage due to their subjective nature. The author describes how chronic pain and mood disorders have a common neurological basis which makes therapy that focuses on both the psychological and physiological desirable as a treatment for pain management, making Vibroacoustic therapy very desirable.

The above studies allow us to gain a rounded understanding of what exactly sound therapy means, in the context of these particular modes. In order to be able to legitimize Sound Therapy in western medicine it is important that research is carried out and furthered. Some of the research shown displays results from studies, in a quantifiable manner, which gives us more of an exact and measurable idea of what does and does not work.

<sup>&</sup>lt;sup>13</sup> Hooper, Jeff. *Is VA therapy, music therapy?*, 2002.

https://www.wfmt.info/Musictherapyworld/modules/mmmagazine/issues/20021018120155/2002 1018122201/Hooper.pdf.

More than a feeling: Autonomous sensory meridian response (ASMR)<sup>14</sup> is characterized by reliable changes in affect and physiology is a study published in 2018 investigating the changes in affect and physiology as a result of experiencing ASMR. Two studies were conducted that test the emotional and physiological responses to ASMR. Both studies show that watching ASMR videos caused positive reactions in only those who experienced ASMR. The second study showed that there was in fact a physiological response, including reduced heart rate and increased skin conductance levels. Ultimately the study concludes that ASMR is a physiologically rooted experience and may be beneficial to mental and physical health. By testing the physiological response, the effect of ASMR on the body is measurable, although it may be hard to quantify the psychological benefits, reduced heart rate alone has a myriad of positive side effects. Such as decreased stress and anxiety levels.

This research is very beneficial to the current investigation as thus far it appeared to be the most accessible and attainable form of sound therapy out of the three modes of therapy researched as part of this study. Although it may not have the exact same benefits or results as vibroacoustic therapy in particular, the positive effects are significant.

Sensory Determinants of the autonomous sensory meridian response (ASMR): understanding the triggers By Emma L. Barratt<sup>15</sup>, is a study published in 2017 investigating the triggers of ASMR. To better understand these triggers, a study was carried out online, targeted at 130 people who had self-reported experiencing ASMR. The aim of the investigation was to discover and analyze the multisensory triggers that induce ASMR. Timing, visual characteristics, and pitch were just some of the aspects analysed. The study focuses on examining popular ASMR content online, such as audio-visual content uploaded to YouTube.

One of the main objectives of the study was to provide insightful insights for ASMRtists to take on board when creating effective audio-visual ASMR content. One of the common issues reported in the survey was Auditory discomfort, such as poor quality sound mixing, harsh trigger sounds and the host's voice and language also made a difference. One participant reported, "The host was trashy and the whispering was very aggressive and included swearing." Participants concluded that realistic sounds were the most triggering and they preferred for the visuals to be a realistic representation of what noise the object or host would make.

<sup>&</sup>lt;sup>14</sup> oerio, Giulia, et al. *More than a feeling: Autonomous sensory meridian response (ASMR) is characterized by reliable changes in affect and physiology*, 2018,

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0196645.

<sup>&</sup>lt;sup>15</sup> Barratt, Emma L. Sensory Determinants of the autonomous sensory meridian response (ASMR), 2017. https://www.researchgate.net, 10.7717/peerj.3846.

Approximately 77% of the participants agreed that the pitch of the trigger affects the intensity of the tingles and 10% disagreed with this.

Overall, low pitches were reported as more likely to produce a stronger sensation. 12% agreed that higher pitched sounds caused a more intense reaction. Majority also reported that background music in these videos inhibited their reaction. They also conclude that the ideal length to focus on one trigger is 1 to 10 minutes and unscripted videos are preferred.

The author advises that although the study could be beneficial to future investigations, it would be an advantage for future research to steer away from self-reported data and instead monitor subjects' motor function or physiological monitoring. This study and others similar are important for ASMRtists to create effective content, although this form of sound therapy is in its infancy it proves to be effective for a significant number of people.

# <u>Methodology</u>

This chapter focuses on the methodology of the study. The aim of this study was to understand the benefits of various methods of sound therapy and how it can become more accessible for the average person to utilise. The purpose of investigating accessibility lies in the reality that sound therapy is not on most people's radar. It is not typically prescribed or advertised in western medicine as an accompaniment to patients' treatment plans, despite the benefits, of which various studies and research has been carried out and shown. As part of the research the main methods of sound therapy that have been investigated are Sound Baths, Vibroacoustic Therapy and ASMR. Although there are other forms of sound therapy, these three vary in accessibility and cover a wide variety of physical and mental ailments and capture the overall benefits that most forms of sound therapy have to offer.

Both qualitative and quantitative research is used in order to gain a rounded conclusion of the topic that was both factual and understanding of the subjective nature of sound therapy. By using a qualitative research method, a detailed description of human behaviour within the context of this study can be gathered. Using quantitative research methods such as analysing statistics and data to allow a more fixed and measurable conclusion. The aim of this study is to understand the benefits of sound therapy and how it can be used as an accessible tool for those who may benefit from the various practices. As part of the study it was important to gather primary data from those who practice sound therapy.

A survey was conducted in order to gather the relevant information, and posted in online forums and groups specific to sound therapy. Some of the websites used were Reddit, Facebook, Twitter and Youtube. The survey was conducted to get quantifiable information as well as giving the participants the option to add any information they believed was relevant or beneficial to the study. Alongside this it was important to analyze and compile data from previous research and studies which provide quantifiable evidence of the benefits of sound therapy. Previous studies and surveys have been specific to one particular medium, such as ASMR, or specific to Vibroacoustic therapy as shown in the literature reviews examined as part of this research. As a result of this it was important to conduct a survey which asked questions focusing on the type of person and usual behaviours of those who practice sound as a therapeutic method as opposed to the specifics of one particular method of practicing sound therapy.

This allowed the survey to show trends, or lack thereof, in age, country of residence, gender identity and level of experience in practicing using sound therapy. These questions were asked to gain an understanding of the people who are availing of sound therapy and therefore can give insight on how the accessibility could be improved.

Alongside this participants were asked what form of sound therapy they practice where they were given the option of choosing Sound Baths, Vibroacoustic Therapy, ASMR and if they wanted to disclose any alternative methods. In asking participants how they would define sound therapy and what the benefits are it provides subjective experiences with sound therapy and allows further analysing of trends regarding what people generally use it for. Participants were also asked how often they practice, this was essential to compare the results of those who practiced often to those who rarely practiced.

A theme that became evident in articles previously published was the intent behind certain sound therapies and how that ultimately could decide or dramatically influence the outcome or results for the person practicing. There appeared to be a large connection between the frame of mind one has while practicing and how that influences the benefits.

Subjects were also asked how they measured the effectiveness of sound therapy for them. This information was important as it may be beneficial to observe the results of this for future research and how individuals may perceive effectiveness. It may also be a benefit to compare a subject's opinion on how effective it is with a more quantifiable method, such as measuring heart rate, breathing, sweat etc.

The survey also asked if participants believed sound therapy could or should be used as a tool or treatment in modern medicine. Although the survey was for people who practiced and not only for experts in the field, this question was used as a tool to gain information on the perspective of sound therapy from those who practice it and if it is seen as a legitimate form of therapy in these circles.

Two crucial questions to the results of this study, was how participants found out about sound as a form of therapy and do they think it's accessible for the average person to avail of and benefit from. These questions ultimately provided information on how people who are practicing, found out about it. Subjects were given a list of resources from which they could choose from, such as the internet, tv, a friend, traditional media etc. They could also add others if they wished.

The survey was conducted in this manner to observe and explore trends between those who practice sound therapy and to ensure each participant was a suitable candidate to include in the findings. It was important to gain as much quantifiable data as possible in order to explore these trends but also important that participants were comfortable to offer any further information they felt valuable to the research.

It would perhaps be beneficial for future studies to carry out multiple surveys relating to each of the different aspects of sound therapy in order to find out what factors make the experience more impactful, as this survey did not focus on the specifics of the quality of various sound therapy techniques. For example, Previous studies as referenced in the literature review chapter of this thesis, did focus on the quality of the ASMR and how that improved or hindered the overall experience for the listener.

# <u>Analysis</u>

In total, 48 usable responses were gathered from the survey, although in some responses certain questions were not answered therefore they weren't included in the final figures. The first set of questions were age, gender identity, and location. These were asked in order to observe and examine any significant trends within those who practice sound therapies.

Age group was divided into categories, for example, 18 - 24, 25 - 34, 35 - 44 and so on. Out of 48 responses 45.8% of participants were between the ages of 25 - 34, 33.3% were between the ages 18 - 24, 14.6% were between the ages 35 - 44, 4.2% were between the ages 45 - 54 and 2.1% were between the 55 - 64 age category.

Out of the 48 responses to gender identity, 56.3% identified as male and 43.8% identified as female.

68.91% of the participants stated they were from the USA, 8.3% from Canada, 10.5% from the UK. Each of the following locations were stated once, Egypt, Germany, Italy, New Zealand, Ireland and Vietnam.

In the next section participants were asked to rate their level of experience in practicing sound as a therapeutic method between 1 to 5, 1 being beginner and 5 being a professional. 14 .6% rated themselves at 1, being beginners. 16.7% rated at a level 2, 47.9% rated themselves at 3, being intermediate. 18.8% rated at 4 and only 1 participant rated themselves at a 5, stating they are a professional practitioner.

Following this it was asked of participants to select what method of sound therapy they used. Subjects could select multiple answers to this question. The options stated were Sound Baths, Vibroacoustic Therapy and ASMR as they are the main forms of sound therapy relevant to this study. However the option to submit alternative methods was given. In total 37 out of the 48, 77.1% selected ASMR, 18.8% selected Sound Baths and only 2 participants, at 4.2% selected vibroacoustic therapy as a method they practiced. Some of the added responses included the following, Guided meditations and Yoga Nindra, Vocal Toning/ Sounds, Lofi, Binaural Beats, Beatboxing, and one participant stated they were a musician and stated that playing and practicing music is their meditative state.

Next participants were asked how they would describe sound therapy and what are the benefits they experienced. The most common benefits stated were bringing them to a state of relaxation and calm, a reduction in depression, anxiety and stress and improvement in sleep, an improvement in the reduction of intrusive thoughts. An improvement in the quality of their dreams and night terrors. Some mentioned it helped them with sensory overload, focus and with creative inspiration as well as helping with meditation and astral projection. Many participants mentioned specific frequencies and how the vibrations from the sound is what helps heal their cells. Some stated it assisted with migraines, muscle relaxation, reduced blood pressure and other physical pain although not specified.

48.9% said they practiced sound therapy most days of the week, 23.4% said multiple times a week, 17% practice multiple times a month and 10.6% submitted that they rarely practiced, meaning every few months.

On a scale of 1 not being important at all and 5 being very important, participants were asked how important intent was when practicing sound therapy. Out of 47 responses 29.8% selected 3 on the scale, 29.8% selected 4, 23.4% selecting 5. Out of the responses only 10.6% voted 2 and 6.4% voted 1 on the scale.

As part of this question it was also asked why intent is important when practicing sound therapy. Out of the 35 responses on this question, the majority stated that it was important in order to achieve the desired results. Some of the examples given were having the intent to sleep, relax, astral project and meditate, it is important to focus and allow the mind and body to become calm for results to be effective. Others stated it only seems to work when they are already calm and in the right mindset going into it.

When asked how they measure how effective practicing is for them, the majority stated that they know it's effective in how their mindset, mood and energy levels are afterwards. Some reported that they know it's working when they are using it for a specific intention, ie, for focus or to sleep and let go of negative thoughts. Others noted some physical measurements such as a change in heart rate, blood pressure, reduced physical pain such as stomach pain and headaches.

When asked if they thought Sound Therapy could/ should be used as a tool/ treatment in modern medicine, majority of the responses were in favour of the use of sound therapy in this setting and stated some of the positive benefits they experienced and knew of such as aiding with their sleep, both falling asleep and the overall quality of the sleep. Many participants mentioned it helps with anxiety, stress, inducing specific states of mind, an improvement in physical pain as well as mental disorders. Although there were some participants who stated it may not be much benefit, however even if it was a placebo effect and gave the illusion of pain relief it may still be worth trying. It is also important to note many of the responses stated that it may be beneficial to use only as a complementary tool to existing treatments due to the lack of research in the area and proof of consistent positive or lasting long term benefits as opposed to the sole course of action by the patient's doctor.

Participants were asked how they found out about Sound as a form of Therapy, 83.7% found out about it via the internet, 14.3% through books, 10.2% through a friend, 4.1% found out about it via Traditional media, including newspapers and radio, and a further 4.1% found out about sound therapy through TV. Some of the extra answers submitted included finding out about it through a teacher/ healer, their therapist, yoga studio, through a spiritual awakening, one participant stated they believe they have always turned to sound in the form of music to help self regulate. Lastly another participant stated they have experienced ASMR since they were a child, before it was much more accessible to find audio for sound therapy. They noticed they enjoyed certain voices and would try and remember them when they wanted to relax.

Finally participants were asked if they think sound therapy is accessible for the average person to avail of and benefit from. 85.7% stated it was, 6.1% stated it wasn't. There was also an option for subjects to add an alternative answer if they wished. One subject added it was somewhere in between yes and no as far as being accessible to the average person as it is available however the lack of knowledge and understanding of the benefits hinders people from using it. Another added that it could be more accessible however until modern medicine and media tell people it is okay it will not be considered as a legitimate form of therapy.

# **Discussion**

This study aimed to provide evidence of the benefits of sound therapy by means of analysing previous research and experiments, and to gain insight into the accessibility of sound therapy, specifically Sound Baths, Vibroacoustic Therapy and ASMR. These modes of sound therapy were chosen due to the variety in their process, application and accessibility. Due to both the qualitative and quantitative methods used to gather and compile information throughout this study, it was able to gain new information, particularly in the accessibility of sound therapy. Although the benefits of sound therapy can be subjective, by making it more accessible, a wider variety of people may be able to benefit from it.

The survey was conducted to get first hand information from those who practice sound therapy and to observe any trends that may arise, including information such as age, gender identity and location. As 79.1% of participants stated being between the ages of 18 to 34, and only 2.1% were between the ages 55-64, the distinction became clear that the majority of the people using sound therapy are within the younger age brackets. An interesting observation that may connect to this, is that 83.7% claimed they found out about sound therapy via the internet, only 3 of the participants above the age of 34 claimed to have discovered it outside of the internet, although 2 of those 3 also now use asmr and guided meditations. It is important to note that the survey was only posted on the internet, therefore this may be biased and further research may benefit from other methods of conducting the survey via practitioners who may be willing to disperse it among their clients.

There was no significant difference between gender identities as 56.3% identified as male and 43.7% as female. There were also no particular trends in location other than the majority, 68.91% stated they were from the USA. However in most cases the participants from the USA also claimed they became aware of sound therapy via the internet so it isn't particularly significant data, to the final results.

Majority of participants (47.9%) claimed they were at an intermediate level when asked to rate their level of experience in practicing sound as a therapeutic method. 18.8% rated at a level 4, and 1 at a level 5 which was classified as professional/ expert in the area. 72.3% stated they practice sound therapy multiple times a week. This data was collected in order to trust the findings of the survey were usable and responded to with a significant level of knowledge and experience in the area.

Although the largest mode of sound therapy that was practiced amongst participants was ASMR, which is the newest identified and named therapy out of the three observed throughout this study. This may not mean the participants are any less knowledgeable in the area of sound therapy however it may be beneficial for further studies to gain more insight from those who practice other methods. This data also raises a question of accessibility with other modes of sound therapy as ASMR is the arguably the one with the easiest access, as all that is needed is a device to connect to the internet and headphones for the best results, whearas vibroacoustic therapy requires equipment and relatively in depth knowledge of the practice and sound baths can be hard to come by for those not based in big cities or who are able bodied enough to get to a session in person. That being said there are videos of Sound Baths YouTube, and some which are advertised as 'ASMR Sound Bath'.

Other forms of sound therapy mentioned were Beatboxing, Lofi, Binaural Beats, and Guided Meditations, however some of these may verge on music therapy. Especially Lofi and Binaural Beats which tend to be aimed at those looking for help with focus and concentration, a particular trend online is 'Lofi Beats to study to' as many people claim it helps with their productivity. These particular genres are quite new and have gained millions of views on YouTube. As they are so new it may be a topic worth researching in the future.

The following question asked participants how they would describe sound therapy and what the benefits are, almost every answer claimed it brought them to an improved frame of mind, whether it be generally more relaxed and calm, a reduction in anxiety and stress levels, improved mood helping life a depressive state and many answered that it helped with sleep issues such as insomnia and night terrors. These results are consistent with the findings of previous research showing the benefits of vibroacoustic therapy in relation to insomnia, measured by fmri results.<sup>16</sup> Additionally, it was noted that sound therapy helped with creative inspiration and sensory overload which were two results that didn't arise in other research as much as the above mentioned benefits.

However sensory overload is typically an issue associated with being overstimulated by noise and certain sounds so this may potentially be an area to investigate, could sound therapy be used where appropriate if it may help someone who experiences sensory overload? Alongside the mental benefits of sound therapy a smaller number of participants stated it helped with physical pain including migraines, muscle relaxation and blood pressure.

<sup>&</sup>lt;sup>16</sup> Zabrecky, George, et al. *An fmri study of the Effects of Vibroacoustic Stimulation on Functional Connectivity in Patients with Insomnia*, vol. 2020, 2020, p. 9. https://doi.org/10.1155/2020/7846914.

Previous studies also show improvements in these areas by measuring physical changes however thus far it appears to be subjective and therefore could potentially be too inconsistent to use as a stand alone treatment in westen medicine currently.

Throughout researching for the survey a recurring theory that came up was how important is intent when practicing sound therapy. Author Johnathan Goldman, who has written multiple books regarding sound therapy, stated in his first book, released in 1999, that intention was as important as the frequency of the sound used, claiming, "Frequency plus intention equals Healing"<sup>17</sup>. He stated the importance of intent again in his 2008 book titled, 'The 7 Secrets of Sound Healing', naming intent as one of the most important factors in achieving the best results from Sound Therapy alongside the basic principles of vibration.<sup>18</sup>

Overall when asked to rate how important on a scale of 1 to 5 was intent, 5 being very important, 83% selected 3 or higher, and the remaining 17% voting that it wasn't so important. The theory of intent in the effectiveness of sound therapy has been documented many times by practitioners in the field however there were few case studies to examine from those who aren't professional. Among the 17% who stated it was less important, when asked why they claimed they only reaped the benefits when they were already in a calm state of mind as opposed to it being the tool that calms them. This along with previously mentioned data from the survey further notes its subjectivity.

It may be beneficial in further studies to have participants in a controlled environment and practicing the same mode of therapy or listening to the same sounds to achieve more accurate results. Although it has been noted in previous studies that some people become desensitized to sounds that once would have been successful in triggering the tingling sensation associated with ASMR, and others don't experience the feeling at all so it may be harder to measure the results of this particular method of sound therapy.

One of the perceptions about sound therapy is that it is a placebo effect, for this reason it was important to ask participants how they measured how effective it was for them. The most common trend between responses was that they felt a noticeable difference in their mood, energy levels and letting go of negative thoughts. These results are quite difficult to quantify or prove other than trusting participants are reliably self reporting. However for those who claimed it helps with sleep disorders such as insomnia, night terrors and overall better quality of sleep, these improvements are much easier to prove as there appears to be a direct improvement that can be observed.

<sup>&</sup>lt;sup>17</sup> Goldman, Jonathan. *Healing Sounds: The Power of Harmonics*. HarperCollins, 1996.

<sup>&</sup>lt;sup>18</sup> Goldman, Jonathan. *The 7 Secrets of Sound Healing*. Hay House, 2008.

This was also the case for those who claimed it helped with migraines, reduced physical pain, blood pressure and a change in heart rate. Although some studies have been carried out where these functions have been examined, as mentioned in the literature reviews, measuring physical differences and improvements might be what pushes it to become more accepted and legitimized in western medicine.

When asked if sound therapy could or should be used as a tool/ treatment in modern medicine, most participants responded positively but cautiously, noting that it may not be effective enough on its own due to its subjective nature however it could be a significant benefit to people with a large variety of both physical and mental illnesses if used in addition to other treatments.

Interestingly most participants also stated that sound therapy was accessible for the average person to benefit from. However it is also important to note that the largest form of sound therapy practiced by this group is ASMR. This may suggest this particular answer reflects their own personal abilities to access ASMR as opposed to those who may not have the same resources. Alongside this it also poses the question if participants took into account other forms of sound therapy.

As the results show, most participants were between the ages 18 - 34, their main mode of sound therapy was ASMR and they discovered it through the internet. Taking this into consideration in the wider context of accessibility, appears evident that sound therapy is not as accessible as the survey results show. For example a group that would largely benefit from sound therapy, would be those who are above 65, the average age of those who suffer from alzheimers<sup>19</sup>may not have the resources to get online and find ASMR or even know what it is. This only stresses the importance of further studies in sound therapy as once it is seen as legitimate in western medicine, Doctors may be more willing to avail of it to help their patients.

As so few participants have used vibroacoustic therapy there is not an accurate measure to its accessibility. Although equipment for vibroacoustic therapy can be bought online it is very expensive and can be quite space inefficient. For someone on a budget or lacking the space this option is not the most accessible in regards to owning equipment personally. Alternatively there are many holistic therapy and sound therapy clinics which offer vibroacoustic sessions as a service.

<sup>&</sup>lt;sup>19</sup> Clements-Cortes, Amy, et al. *Short-Term Effects of Rhythmic Sensory Stimulation in Alzheimer's Disease: An Exploratory Pilot Study*, vol. 52, 2016. https://pubmed.ncbi.nlm.nih.gov/27031491/.

The accessibility of these would be subjective as it depends on the pricing of that particular clinic and their location. There is significant research in vibroacoustic therapy showing the benefits as mentioned throughout this study so it would be greatly beneficial to many if it was a service more widely available than it is currently.

Many participants stated they also have used Sound Baths as a mode of sound therapy. Sound Baths are the oldest method out of the therapies researched in this survey and the overall consensus, taking into consideration the findings of this survey and previous research papers, is that there are numerous undeniable benefits to sound therapy. Sound Baths are also quite accessible as there are many practitioners who stream their sessions online now so clients can virtually attend. Whether this affects the quality or impact of the sound bath is questionable as virtual sound baths are relatively new and have become popular since 2020 due to Covid-19. There are many YouTube Channels dedicated to Sound Baths using different types of instruments and some focusing on specific frequencies.

The responses from the survey regarding sound baths are more focused on spirituality than ASMR and vibroacoustic therapy and there isn't as much quantifiable research regarding the benefits. Sound Baths appear to be more accessible due to the large array of content online, however if someone wanted to try using the instruments themselves it can vary in cost depending what instrument is used, for example if using the voice it can be free however instruments such as crystal singing bowls can be quite expensive. Alongside being accessible online, there are many holistic therapy clinics that offer Sound Bath workshops and sessions in person.

## **Conclusion**

This study aimed to investigate the benefits of sound therapy and determine how accessible it is to the average person, as previously defined as someone who was not knowledgeable or well connected to the world of sound therapy. The accessibility of sound therapy is important as there have been many studies showing the benefits of sound therapy for various conditions therefore it was important to ask why it is not used more in western medicine. As there are many types of sound therapy the three focused on throughout this thesis, ASMR, Vibroacoustic Therapy and Sound Baths, were chosen due to the varying levels of research studies showing the benefits alongside the varying levels of accessibility they offer.

The findings of this research show first hand accounts gathered from the survey conducted, of participants detailing the benefits of sound therapy. In conclusion each and every participant described how it had improved their lives in some capacity, be it the quality of sleep, reduction in stress and anxiety, relief from physical pain. Alongside these results, this investigation also studies previous research and compiled further evidence of the benefits. Taking both into account, there is an undeniable benefit for most people, to avail of Sound Therapies. However, by compiling and collecting this data, the evidence shows sound therapy is still a largely under-researched area and many findings are either inconclusive or inconsistent enough to make it a reliable mode of therapy in western medicine. That being said, the positive results still outweighed any negative or inconclusive results, and as it is largely a non-invasive form of therapy, there appears to be little to lose in trying it.

Most of the participants who partook in the survey practiced only ASMR and discovered it via the internet. Unfortunately this meant there were not as many first hand accounts of the benefits of vibroacoustic therapy and sound baths. However this did lead to the conclusion that they are not as accessible as ASMR, in particular vibroacoustic therapy due to the lack of clinics offering it as a service along with the expense of the equipment and space issues if someone wanted to practice privately.

Sound Baths proved to be slightly more accessible due to the rise in virtual sound baths however as the virtual experience with sound baths is quite new, it's unclear if the effect and benefit is as intense as a session in person with a practitioner. Aside from this, they have shown to be more widely available than vibroacoustic therapy, making them slightly more accessible.

This research clearly illustrates the benefits of sound therapy from first hand accounts of those who practice, however it has also shown that a lot more research is required in the area in order to make the results consistent and measurable to a standard that would make it acceptable to be used in western medicine as a complementary therapy alongside existing treatment plans.

This would also make it more accessible to people who suffer from diseases like alzheimers, who may benefit from sound therapy but may not be able to or have access to the internet to avail of the services online or who don't know this is a therapy they may benefit from.

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#### Appendix

# Survey Questions

1. Age Group

18 - 24 25 - 34 35 - 44 45 - 54 55 - 64 65 - 74 75 -84

2. Gender Identity

Female / Male/ Non-binary/ Other:

3.

Location (Country)

- 4. Level of experience in practicing Sound as a Therapeutic Method 1/2/3/4/5
- 5. What form of Sound Therapy do you practice? Check all that apply.

Sound Baths/ Vibroacoustic Therapy/ ASMR

- 6. How would you describe sound therapy and what are the benefits?
- 7. How often do you practice/ use sound therapy?

Rarely (every few months) Fairly Often (multiple times a month) Very Often (multiple times a week) Most days of the week

- 8. How important is intent when practicing sound therapy? 1/2/3/4/5
- 9. Why is intent important whilst practicing Sound Therapy?
- 10. How do you measure how effective practicing is for you?
- 11. Do you think Sound Therapy could/ should be used as a tool/ treatment in modern medicine? If so, how?
- 12. How did you find out about Sound as a form of Therapy? Check all that apply.

The Internet A friend Books TV Traditional Media (Newspapers/ Radio) Other:

13. Do you think Sound Therapy is accessible for the average person to avail of and benefit from?

Yes / No / Other:

14. Please leave any relevant information you feel would be beneficial to the study here. Thank you!