

**Discovering the mind-body connection through music
as a tool for chronic pain management: A case study of
psychodynamic music therapy**

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<p>Tiivistelmä – Abstract</p> <p>Chronic pain illnesses like fibromyalgia are progressively increasing in modern world. The conventional treatments are directly influenced by the biomedical model, according to which the symptoms are suppressed and the mind is viewed as a separate entity from the body. In contrast, the bio-psychosocial model integrates all aspects of a person into a whole. Pain is viewed as an individualised condition requiring multiple facets of the human existence to be taken into account. In this case study, a client with fibromyalgia was treated in music therapy sessions for a period of twelve weeks. The collected data were analysed using Interpretive Phenomenological Analysis focusing on the meaning that the therapeutic process held for the client and the effects it had on her life and on the symptoms of pain. Psychodynamically-oriented music therapy has proven to be beneficial in the treatment of chronic pain and into promoting health, self-awareness and a better quality of life. Using music as an intervention, in collaboration with the client, an attempt was made to build a bridge between her mind and her body and to reconstruct the fragmented links between those two elements.</p>	
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“What makes us feel drawn to music is that our whole being is music: our mind and body, the nature in which we live, the nature which has made us, all that is beneath and around us, it is all music.”

Hazrat Inyat Khan (Sufi Master) (1882-1927)

1 INTRODUCTION

This thesis presents a case study of my first internship in the master programme of music therapy in the University of Jyväskylä. In this case study, a music therapy treatment of twelve sessions with a client suffering from fibromyalgia is described and analysed. The emphasis was given on how music therapy could benefit the client's quality of life and the meaning that music therapy sessions held for her. Since the beginning of the therapy, I was eager to explore whether music therapy could help a client with fibromyalgia and in which ways.

The main symptom was pain but the majority of the malicious conditions that follow the fibromyalgia syndrome (depression, anxiety, sleeping problems, functionality issues) were present as well. Having in mind that thoughts and memories (cognitive level), images (symbolic level), emotions (emotional level), and bodily sensations (sensorimotor level) could be accessed in music therapy and connect to each other, I tried to discover, together with the client, how she understands these connections. Additionally, processing the literature review made me wonder whether there is a link with the fact that the majority of the fibromyalgia clients are females. To summarise, during the analysis I made an attempt to place all these concepts into a common framework.

Firstly, Chapter 1 (Introduction) introduces the reader to the topic and provides a brief indication on the thesis' structure. In Chapter 2 (Literature Review), I describe what music therapy is and how psychodynamic principles could be applied in the music therapy process. Details on the condition of fibromyalgia are presented as well as evidence that music and music therapy interventions are beneficial for this clinical population. Furthermore, I provide information about the mind-body problem regarding the medical field and psychotherapy and thoughts about the nature of fibromyalgia regarding this problem.

In Chapter 3 (Methodology), I discuss my research questions and hypothesis for the study, the way that the data collection was made and provide information about the chosen method for analysing the collected data and limitations that the present study might have. Chapter 4 (The therapy process) is a description of the context of where

the internship took place with a detailed plan about the therapy process and each session individually. Additionally, this section provides information about the client and the therapeutic goals she set, my theoretical background as a therapist and the interventions that were used during the process. Finally, Chapter 5 (Results) indicates the results of the data analysis and Chapter 6 and 7 (Discussion) and (Conclusion) is a reflective discussion about the conclusions, further recommendations and future directions of the present study.

2 LITERATURE REVIEW

2.1 Music therapy and chronic pain

2.1.1 Music therapy

Music and its qualities are still surrounded by great mystery in the philosophy of music. From time to time, exceptional points of view were expressed about what music is and how it works but only recently, research in music psychology became systematic and effectuated tangible proof regarding a variety of hypotheses on how this primitive instinct could be interpreted. Nevertheless, while well-aired definitions of music have been given, none of them could illustrate the whole spectrum and broadness of musical *praxis*. The biggest challenge is that music is shaped and interpreted in a variety of ways worldwide depending on social, cultural, personal and situational attributes and states. But what is the effect that music has on humans and their lives? Music psychology sheds light into different facets of this inquiry.

Primarily, music is an emotional experience. According to Juslin (2008), “People use music to change emotions, to release emotions, to match their current emotion, to enjoy or comfort themselves, and to relieve stress (p.1)”. In essence, music could reflect one’s inner state and evoke deep feelings. Another core characteristic is that music could induce bodily responses (both physiological and physical) (Hodges, 2011). In precis, music could affect the human gestalt as perceived until today, both the mind and the body. Hence, it would not be irrelevant to hypothesise that this powerful stimulus could be used either in advance or to harm one’s health. Indeed, one of the spurs that triggered the flourishing of music therapy is the non-historically proven hypothesis that music could have healing properties (Ruud, 2000).

Currently, music therapy is a rapidly evolving science and has been gaining trust and accreditation as a result of practicing evidence-based research. Bruscia (2014b) has provided the music therapy world with his thoughtful and concise definition that he rephrased

during a period of 25 years¹: “Music therapy is a reflexive process wherein the therapist helps the client to optimize the client’s health, using various facets of music experience and the relationships formed through them as the impetus for change (p. 36).”

What differentiates music therapy from other interventions is the broadness of types and intensities of the dynamics of the therapeutic relationship that arise when utilising this powerful mode of non-verbal communication. In essence, by using music, the therapist and the client could reach deep levels of understanding that concern the unconscious, the preconscious and the conscious. Methodologically, active music therapy could make use of performing, improvising, composing, arranging, and conducting (Bruscia, 2014b); proportionally, music listening is an intervention of receptive music therapy. Musicing itself or music healing are by no means music therapy as music therapy should always be applied in a clinical setting with specific goals and objectives by a credentialed music therapist (American Music Therapy Association, 2013).

2.1.2 Psychodynamic music therapy

The main aim of music therapy is to promote health by exploiting the therapeutic potential of music. This is achieved by using the relationship that emerges between the client and the therapist in such constructive ways in order to trigger therapeutic changes. In psychotherapy the therapeutic relationship is formed via language, whereas, in music psychotherapy it is formed via music experiences. The music psychotherapy practice obtains equivalent theoretical orientations to the field of psychotherapy, those are, either psychoanalytic, cognitive and behavioral, experiential and humanistic, systems-oriented or other influential models².

The psychoanalytic thought of Freud was an essential step in understanding the depths of the human psyche. Besides that, it was also the sparking of the critical analytical thinking that framed the psychodynamic approach in therapy, “the most dominant specific theoretical orientation used by psychotherapy clinicians and educators” (Bergin & Garfield, 1994, as cited in Hadley, 2003). Psychodynamically-oriented music therapy is influenced less or more from drive theory, ego psychology, object relations theory, self psychology and Jungian theory. After summarising the premises of this approach, Bruscia (1998) captures the two primary aims of psychodynamic therapy:

¹The first definition can be found in the first edition of the book *Defining MT* (1989), the second revised one in the second edition (1998). In the prologue of the third edition, Bruscia explains thoroughly the reasons he rephrased the definition.

²See the book *Essential Psychotherapies* (1995) for extended descriptions of the main psychotherapeutic approaches.

(1) to bring into the client's conscious experience material from the past that has been repressed and kept in the unconscious through defenses and resistances and that exerts adverse psychological effects on the present and (2) to work through that material by using transference and countertransference to engage the client in corrective emotional experiences (p. 14).

Therapists need to understand and handle the psychodynamic concepts of defense, transference and countertransference in order to provide healthier mechanisms and coping skills to the client. A number of psychotherapists stressed the essentiality and superiority of music over language especially regarding the therapy process (Hadley, 2003). The point though is for the therapist to be capable to identify and handle which, how and how much is going to use either of them inside the process in order to cope with ambivalence. This is exactly what Bruscia (1998) wanted to illustrate with his classification (music as psychotherapy, music-centered psychotherapy, music in psychotherapy, verbal psychotherapy with music). As a matter of fact, music therapists have been broadly applying these premises of psychodynamic therapy in order to help the client resolve conflict from past relational experiences.

2.1.3 The condition: fibromyalgia

Definition and symptoms

According to Clauw (2009), fibromyalgia is “a disorder of central pain processing that produces heightened responses to painful stimuli (hyperalgesia) and painful responses to nonpainful stimuli (allodynia) (p. 3)”. Central pain is a neurological condition that makes the Central Nervous System (CNS)³ to behave in an erroneous way and specifically to send amplified signals to the body. Fibromyalgia is considered the prototype disorder that complicates the nociceptive process and creates oversensitiveness of the CNS.⁴

Indisputably, pain is the main fibromyalgia symptom. The International Association for the Study of Pain (IASP) stresses the sensory and emotional dimension of this variable by providing the following definition: “Pain is an unpleasant *sensory and emotional* experience associated with actual or potential tissue damage, or described in terms of such damage (Merskey & Bogduk, 1994).” Other definitions emphasize the fact that pain and especially the perception of pain is a highly individualistic and subjective experience (Aronoff, 2002; McCaffery, 1968).

³The CNS consists of the brain and spinal cord.

⁴Chronic musculoskeletal pain can be classified as peripheral (rheumatoid arthritis), neuropathic (carpal tunnel syndrome) or central (fibromyalgia).

The pain of fibromyalgia could be described as chronic non-malignant, widespread and inner (also mental, psychological, emotional). The fibrous tissue is spread all around the body so the malicious condition could appear and also migrate anywhere. On the first stages of the disorder though, it could be sensed mainly in one or two distinct body areas (usually in the low back and neck)⁵. Additionally, fluctuations and intensity variations of pain are usually increased during the morning hours. Chronic pain can lead to depression, anxiety and feelings of powerlessness (Siedliecki & Good, 2006).

People with fibromyalgia could develop also sleeping disorders like poor sleep quality, sleep apnoea or periodic limb movement disorder. As a result of non-restorative sleep, some people can encounter fatigue and several cognitive symptoms like impaired concentration and memory⁶ (Park, Glass, Minear, & Crofford, 2001).

Pharmacological and non-pharmacological treatments

Although fibromyalgia is under the microscope for such a long period of time, there is still not an effective cure. Alternatively, there is a vast collection of treatments that could be classified into two distinct categories: pharmacological and non-pharmacological. These treatments though are targeted mostly in managing the symptoms since the aetiology of the illness is not yet completely conceived. The main concept followed in the pharmacological approach is that pain is related to central sensitization.

As a result, in order to treat the pain symptom, physicians frequently subscribe painkillers (analgesics), narcotic medication, nonsteroidal anti-inflammatory drugs, anti-depressants, anticonvulsants or muscle relaxants. However, according to the National Institute of Arthritis, Musculoskeletal, and Skin Diseases (2014),

there is no solid evidence showing that for most people narcotics actually work to treat the chronic pain of fibromyalgia, and most doctors hesitate to prescribe them for long-term use because of the potential that the person taking them will become *physically or psychologically dependent on them*.

Pharmacological treatment is important for the patients because it is one way to cope with the symptoms. Despite that, all medicine could have side effects and medical therapy has shown to have limited success in treating chronic malignant pain (Lister, 1996; National Institute of Arthritis, Musculoskeletal, & Skin Diseases, 2014).

⁵In fibromyalgia, the pain has been described as “stabbing and shooting, with deep muscular aching, throbbing, and twitching”.

⁶Sometimes called *fibro fog*.

TABLE 1. Meta-analysis on the effects of non-pharmacological approaches to fibromyalgia (Goldenberg et al., 2004)

Evidence of benefit	Intervention
Strong	Cardiovascular exercise
	Cognitive behavioral therapy
	Patient education
	Multidisciplinary therapy
Modest	Strength training
	Hypnotherapy
	Biofeedback
	Balneotherapy
Weak	Acupuncture
	Chiropractic, manual, and massage therapy
	Electrotherapy
	Ultrasound
No	Tender (trigger) point injections
	Flexibility exercise

This convention is leading more and more people to seek for alternative or complementary ways of therapy. A combination that seems to be effective is physical exercise and cognitive behavioural therapy (CBT). Nevertheless, not every method applies to everyone. Learning new ways to cope with this kind of disorders is essential and the effectiveness of CBT opens a path to integrate psychotherapy in the treatment of illnesses containing chronic pain. Table 1 condenses the effect of non-pharmacological approaches regarding fibromyalgia after a meta-analysis made by Goldenberg, Burckhardt, and Crofford (2004). Interestingly, music is not present in this research probably due to the fact that the use of music as a therapeutic intervention regarding chronic pain gained more interest in the past decade and this meta-analysis covered the years from 1980 to 2000.

2.1.4 The analgesic quality of music

There is a vast literature regarding music and the effects it has on acute and chronic pain. Audio-analgesia or music-induced analgesia is the ability of music to affect the pain perception and reduce the intensity of the noxious stimulus (MacDonald et al., 2003). According to Garza-Villarreal et al. (2014),

music-induced analgesia may be regarded as a central type of analgesia, as the effect seems to occur in the brain stem, secondary to cognitive and emotional brain processes and by means of central neurotransmitters (i.e., dopamine), and not in the

peripheral nociceptive receptors (p. 1).

Music as an alternative to analgesic medication can act in several ways. According to Mitchell, MacDonald, Knussen, and Serpell (2007), some of them are distraction, relaxation, perceived control and enhancement of well-being.

Firstly, Melzack and Wall (1965) suggested that cognitive and emotional processes could contribute positively to pain modulation. This innovative systematic theory evolved inside the medical circles, particularly anaesthesiology. Thereafter, research has been highlighting the value of emotionally engaging stimuli in order to shift the attention from pain and reach a point of relaxation (Leventhal, 1992). Music is considered to be an effective emotional stimuli by means that it could induce emotions.

In 1991, Sloboda studied the connection between structural components of music and intense emotional reactions (Sloboda, 1991). A decade later, he discovered these structural components' lack of ability to evoke full emotional responses (Sloboda, O'Neill, & Ivaldi, 2001). This finding resulted into an increasing curiosity regarding the musical or extramusical characteristics of music that can create emotional reactions and into various classifications of music-induced emotions (Juslin & Laukka, 2004; Zentner, Grandjean, & Scherer, 2008).

Nowadays, research in music and emotion has developed so drastically that the knowledge and even the measurement of emotions became possible (Vuoskoski & Eerola, 2011). This process is undoubtedly challenging due to the fact that emotional, cognitive and sensorimotor states are interconnected in numerous and not always one-direction bonds. Moreover, the final outcome (when pain also is regarded as a factor) depends on numerous influences which emanate from the individual personality. These could be classified as musical (patterns, schemata), extramusical (cultural, environmental factors), or in another level as intrapersonal (meaning, mood, music preferences) and interpersonal (music-evoked emotions).

An intriguing view is that of Siedliecki and Good (2006) who studied whether music listening is effective as an emotion regulation technique in patients suffering from chronic pain. The participants were able to deal with negative emotions while listening to self-chosen music. Consequently, this resulted in feelings of power over the experience of pain. Power, Siedliecki and Good (2006) maintains, is a primary element regarding pain modulation. Additionally, the fear of pain can lead to social isolation.

In a survey conducted by Mitchell et al. (2007), the music listening behaviour of a sample of 318 patients diagnosed with chronic pain was conscientiously described. The main goal in this study was to understand the relationship between music behaviour and pain, coping habits and quality of life. The more one gives meaning to music, the more beneficial and effective music could become as an intervention for pain relief. Music listening was shown to improve mood in a greater percentage though on female participants and to lead in a significant reduction on pain symptoms. Respectively, Sedei-Godley (1987) described music listening combined with imagery and relaxation as an intervention inside pain clinics and Schorr (1993) found that self-chosen music altered the perception of pain symptoms in 30 women with rheumatoid arthritis.

Rider (1987) combined clinical improvisation and music imagery in a qualitative case study design. Each case concerned of different clients who attended music therapy in a group setting. His method included symptoms improvisation in where the clients were using their imagination in order to focus on a problematic body part. The symbolic interpretation of the symptom improvisation revealed problematic connections. The patients through music became whole by building healthier connections between the fragmented parts.

Additionally, there is a case study of individual music therapy in which Guided Imagery and Music (GIM) was used with a patient with rheumatoid arthritis (Grocke, 2012). The theoretical background of the therapist was psychodynamic. The music therapy process proved helpful with the acute pain. Moreover, through the therapeutic relationship, the inner personal cause regarding pain was explored, the one that is different for each client.

Nickel, Hillecke, Oelkers, Resch, and Bolay (2003) designed a music therapy intervention specifically for the clinical population of children enduring migraine. Their method was based on the *Heidelberg Music Therapy Manual for Pediatric Migraine* (Engel, 1977 as cited in Nickel et al., 2003). The clients attended family coaching, standard medical treatment and twelve weekly individual music therapy sessions. The interventions included musically guided imagery and symptom improvisation. The case study of Daniel, which the researchers demonstrate, indicated promising results. Additionally, in the follow up interview after six months, Daniel's mother reported that he was no more suffering from migraine.

Furthermore, Oelkers-Ax et al. (2008) conducted a randomized control trial comparing music therapy, butterbur root extract (pharmacological intervention) and a placebo group. The Heidelberg model was the basis for this study as well. The headache frequency

TABLE 2. Research on music listening and fibromyalgia 2013-2016

Intervention	Music	Condition	Sample
Music Listening	self-chosen; pre-selected	pain; functional mobility; stress; fatigue; sleep	[20-55] fibromyalgia patients (majority females)

showed a significant decrease and a superiority of both the butterbur extract and the music therapy intervention over the placebo group was reported.

To conclude, music listening preoccupies the research regarding music and pain. According to Sloboda (2003), music can be considered as a *selfadministered emotional therapy* (p. 42) and could result to a desired emotional change. Undoubtedly, receptive methods are prevailing upon the methods used in a music therapy setting regarding pain (Müller-Busch & Hoffmann, 1997). Nevertheless, there is a necessity for both qualitative and quantitative research of active methods in using music inside a clinical setting as well. Especially when there are facts in the literature indicating that 4 out of 10 music therapists are using music for pain relief (Donald & Chesky, 1995).

2.1.5 Research on music and fibromyalgia

Recently, there has been a rapidly growing literature on music and fibromyalgia. Specifically, seven publications describe music listening as an intervention in fibromyalgia's symptoms specifically pain, functional mobility, stress, fatigue and sleep disturbances. This section provides information about these unique studies that were published for a three-year period (2013-2016). A common factor in this research is that all the participants held an official diagnosis of fibromyalgia according to the ACR.

Additionally, they consist of rather small samples (smallest: 20; largest: 55) and the majority of the participants are females. Music listening was evaluated in two conditions. The music was either chosen by the participants (with or without some limitations) or pre-selected by the researchers. Table 2 summarises the research on music and fibromyalgia in this three-year period. The results in all seven studies showed a positive effect of music listening on the examined conditions.

The inspirational experiment made by Garza-Villarreal et al. (2014) is the only one in

which the participants chose their own music. However, this choice was somehow limited by asking the participants for pleasant and relaxing music. Thereafter, they were exposed in two conditions. Firstly, they listened to music and then to pink noise (control condition). The behavioural part of the experiment revealed that self-chosen music “reduced pain and increased functional mobility” (p. 1). The increasing loss of functional mobility could result in a form of disability. Subsequently, feelings of powerlessness could appear.

The sample of the experiment was selected from a clinic in Mexico and consisted of individuals without formal music training. The findings revealed the essentiality of appreciating music and the way this appreciation can relate to meaningful experiences and cultural background. Additionally, the self-selected music had shown to be proficient in reducing pain and could provide feelings of power. In the functional Magnetic Resonance Imaging (fMRI), part of the experiment that was published one year later, Garza-Villarreal et al. (2015) attempted to find out the exact functions that music reduces pain with: “We propose that the analgesic effect in this study is a consequence of top-down mechanisms, by either placebo analgesia, distraction, positive emotions, or a combination of these mechanisms (p. 9).”

In a survey conducted in Germany, thirty women’s musical behaviour was studied for fourteen consecutive days in relation to pain and physiological stress (Linnemann et al., 2015). The reasons for listening to music were described and the most common mentioned ones were found to be relaxation, activation, distraction, and reducing boredom. Additionally, the perceived control over pain was distinguished and music was found to have a positive impact on pain by mediating stress reduction.

In addition, Onieva-Zafra, Castro-Sánchez, Matarán-Peñarrocha, and Moreno-Lorenzo (2013) observed an intervention group and a control group (no intervention) for four weeks. The music was pre-selected by the researcher. The analysis illustrated that music had a positive effect on the patients regarding the symptoms of pain and depression. The study was conducted in Spain and the researchers came to the conclusion that the quality of life on this clinical population improved.

Similarly, Mercadé, Mick, Guétin, and Bigand (2015) studied the effect music has on pain and fatigue during a four-weeks period in a well-designed experiment where music listening was applied. In the suggested model, music was used for both stimulation and relaxation. Meanwhile, the control condition (listening to environmental sounds) produced the same therapeutic effect on both pain and fatigue as music listening did. In general, the results

TABLE 3. An overview of recent research (2013-2016) on music and fibromyalgia

Author/Year	Intervention	Music	Condition	Sample
Garza-Villarreal et al. (2014); (2015)	Music Listening	semi self-chosen: pleasant, relaxing	pain, functional mobility	22(21f/1m); 20(f)
Linnemann et al. (2015)	Music Listening	survey: music listening behaviour	pain, stress	30(f)
Onieva-Zafra et al. (2013)	Music Listening	pre-selected	pain	55
Mercad�e et al. (2015)	Music Listening	pre-selected: music and environmental sounds	pain, fatigue	22(f)
Alparslan et al. (2016)	Music Listening	pre-selected: sounds of water and wave	pain	37
Picard et al. (2014)	Music Listening	pre-selected	sleep	20

showed that people with fibromyalgia are more vulnerable to negative emotions. In this case, the sample was selected by placing an advertisement on the local newspapers in a city of France.

In, Turkey Alparslan et al. (2016) studied the impact that listening to environmental sounds (water and wave) has as an intervention during a period of fourteen days. The pain severity was found to be decreased. Finally, the authors recommend the use of music listening for this kind of clinical population and stress the need to study the analgesic effect of music on larger samples. On the last study, conducted in Canada, Picard et al. (2014) found that music could help as a sleep aid in people with fibromyalgia. Table 3 presents the most important elements from the seven articles that this section concerns.

Although this research provides the possibility for fruitful thoughts, there are some topics that require further discussion. In their majority, the samples consisted of female patients. It would be interesting to obtain information about male patients as well. In addition, some terms need further clarification. Alparslan et al. (2016) uses the term music referring on environmental sounds; Mercad e et al. (2015) though, is distinguishing between music and environmental sounds even though she found they had the same effect. Finally, the cultural diversity of the studied samples should be taken into account.

The description of two more studies is included in this section. However, they are not included in Table 2 and Table 3 for the reason that their samples do not concern exclusively fibromyalgia but other chronic pain syndromes as well. Gu tin et al. (2012) examined the efficacy of music listening as a non-pharmacological treatment. The sample consisted of 87 patients suffering from chronic pain with 44 forming the intervention group and 43 the control group. Their music taste was considered when creating the playlists and all of them were also receiving pharmacological treatment at the time of the intervention. The intervention group showed a double improvement level than the control group and this effect was maintained up to two weeks after the trial. An ambivalent aspect of this study in regards to the scope of this thesis is that the intervention was applied by nurses. In fact, inside the room where the music listening was taking place there was not any staff present. However, this does not negate the fact that music listening proved to be an effective intervention in chronic pain symptoms.

Experiments and surveys could represent and give information about the way one could act in real life although they are conducted in a laboratory environment. Proportionally, in therapy it is the lived experience that is in the center of attention. There is indeed

a lack of single qualitative case studies in research on music therapy and fibromyalgia. There is only one study where active music therapy (the Nordoff/Robbins approach) was applied as an intervention. The sample consisted of twelve patients and the benefit of music therapy was found on the emotional dimension of pain. The study was qualitative and presented the case studies of twelve music therapy clients with fibromyalgia and other pain syndromes (Müller-Busch & Hoffmann, 1997). An interesting perspective of this study was that in the analysis the researchers took into account psychophysiological and psychodynamic factors in order to clarify the reasons and the way that music therapy could help on pain reduction. Furthermore, they stressed the need for more qualitative-phenomenological case studies in the domain of art therapies.

Research during the past few years provided promising evidence regarding the beneficial effect of music as an intervention for easing symptoms and increase quality of life in patients diagnosed with fibromyalgia. This resource is extremely valuable for music therapists to acknowledge. According to Linnemann et al. (2015), there is a necessity of using “more intensive engagement with music (i.e., collective singing or music-making) rather than mere music listening (p. 1)” and it would be of great benefit on the clinical population suffering from these comorbidities.

2.1.6 The approach of vibroacoustic therapy

The vibroacoustic therapy (VAT) is a method developed in Norway during the sixties. Research found numerous supporters from the north european countries which are currently pioneering in this innovative model of therapy. Olav Skille defined vibroacoustic therapy as “the use of sinusoidal, low-frequency (30-120 Hz), rhythmical sound-pressure waves mixed with music for therapeutic purposes” (Skille, 1982 as cited in Punkanen and Ala-Ruona, 2012). The combination of music listening (pre-selected with cautious or self-chosen) and low-frequency sounds has shown evidence regarding the treatment of pain, stress-related symptoms and physical disabilities (Skille & Wigram, 1995).

According to Wigram (1996), vibroacoustic therapy not only influences psychological processes but stimulates physical responses as well. This receptive method has showed positive results regarding pain reduction in patients suffering from chronic pain and counted over fifty positive reports of fibromyalgia patients (over fifty reports). However, there was not sufficient evidence regarding the use of specific frequencies other than the prescriptive suggestions from Skille Skille and Wigram (1995) Specifically about fibromyalgia Skille (1989) mentions: “Patients suffering from this pain syndrome seem to obtain some relief of pain when they are exposed to single frequencies in the lower frequency range, directly

followed by a multi-frequency tape (p.40).”

Currently, there is a tendency to check the effects of different frequencies over the symptoms and particularly pain. To illustrate, low-frequency sound stimulation combined with music listening has been found to have a positive effect. In the study conducted by Naghdi, Ahonen, Macario, and Bartel (2015), nineteen female volunteers participated and three scales were used in order to assess the highly subjective experience of the noxious stimuli. The results were promising and have shown a beneficial effect towards pain and insomnia. To conclude, VAT is a promising method since it includes and stresses the body aspect and it may be prove beneficial for this kind of clinical population. However, more evidence-based research needs to be conducted preferably from qualified therapists as the attendance of a certified training program in this method is essential (Punkanen & Ala-Ruona, 2012).

2.2 The mind-body connection regarding chronic pain

2.2.1 The problematic nature of the biomedical model in treating chronic pain - Humanistic views in medicine

Since the antiquity, the well-known mind-body problem (in short how mental abilities interact with physical properties) was always of great interest in the philosophy of mind (Robinson, 2016). Although great philosophers like Plato and Aristotle had a different approach on the subject, they both agreed that mind is a separate entity from body, a concept broadly known as dualism (Robinson, 2016). Descartes created a more modern version of this paradigm in *Meditations* in order to resolve certain philosophical issues (Hatfield, 2016). His view was that the body works mechanically with different body parts forming a whole, while the mind (or soul) is a separate entity that does not comply to the laws of nature (Eeman, 2014).

The cartesian philosophy has affected the scientific thought in various constructive ways but the field most broadly influenced was the medical one. Its greatest contribution was that science (and, by extension, medicine) gained independency over the control of the christian church. Until then, illness was treated with the use of religious powers. This notion was put aside and along with the rapid developments in technology the scientific knowledge reached to a point that humans of cartesian era would never even have imagined. Currently, physicians are capable of treating serious conditions while efforts are made for this knowledge to become more accessible all-over the world.

Undoubtedly, this tradition influenced the perception for the world and defined the general image about human beings. However, as numerous cases have shown in the history of humanity, it is possible for scientific knowledge to be unwittingly misconstrued and misused resulting in extremities. The biomedical model, grounded in cartesian theory, is dominating until today in medicine usually without taking into account the misconceptions made during its formation. According to Duncan (2000), “while Descartes describes bodily processes in mechanical terms, and defines mind and body as separate substances, the unity of the human body and mind are an integral part of his dualism.” Hence, the development of the biomedical model (founded in this exact misconception) resulted in physicians who treat every body part of the patient as a separate entity. This justifies the multiple specialties and anatomical systems that modern medicine obtained (e.g. respiratory, cardiovascular).

This reality in modern medical practice sometimes leads to paradoxical situations like the one that Cassell (1998) subtly describes: “Even in the best settings and with the best physicians, it is not uncommon for suffering to occur not only during the course of a disease but also as a result of its treatment (p. 129).” As a matter of fact, in many cases when patients report their pain all they hear as an answer is that this pain is in their imagination or “psychological” implying that it is not real. However, advocates of humanistic views argue that the patient should be seen as a person living an individual life in a unique world that has nothing common with the world of science.

In phenomenology this notion is called *lifeworld* and it means the world that a specific person gives meaning to (D. W. Smith, 2016). Hence, the person lives bodily and perceives the world through the body in the “here and now”. This phenomenological space and time contrasts the concept of physical space and time that positivism depicts. Cassell (1998) maintains that this lifeworld consists of a variety of factors:

All the aspects of personhood - the lived past, the family’s lived past, culture and society, roles, the instrumental dimension, associations and relationships, the body, the unconscious mind, the political being, the secret life, the perceived future, and the transcendent dimension-are susceptible to damage and loss. (p. 138)

Hence, the physician has to take into account the patient’s lifeworld that is unique for each individual in order to provide the correct treatment.

On the same line of thought, Tauber (as cited in Marcum, 2008) stresses the significance of others (may be social, physical or divine) as the medium for a person to establish the sense of self. He further points that dualism is not a suitable viewpoint for the physician to treat

an illness for the reason that curing an illness is not an epistemological problem but rather an ethical one (Tauber, 1999 as cited in Marcum, 2008). If the physician's perspective is based on this false notion (the one that the biomedical model implies), the treatment could add to the suffering of the patient (Cassell, 1998). All these viewpoints described above stress the need for a more human-centred (and not disease-centred) approach in medicine. The focus has to be on the patient and on the meaning that the disease has for the patient. The body then could be viewed not as a separate part but as an object like all the other objects in the patient's lifeworld. Regarding suffering from pain, Cassell (1998) suggests that an effective coping strategy is to understand the nature of the pain and alter its meaning; in other words, to take control over the symptom.

The alternative option, that advocates of humanistic theories suggest over the biomedical model, is the biopsychosocial model. As its name indicates, multiple aspects of the patient's lifeworld are taken into account and an effort is made by the physician to gain an understanding of the psychopathology of the illness. However, even though there is a tendency by a great number of doctors to overcome the mind-body dichotomy, the lack of evidence-based research still deters the establishment of this alternative model inside the medical world (Astin, Shapiro, Eisenberg, & Forys, 2003).

2.2.2 How the mind-body connection is perceived in psychotherapy

The notion that emotional conditions could affect the bodily state is not at all new. Hippocrates (in third century BC) was the first known one to put on the basis for psychotherapy when he conjectured that the emergence of physical causes is leading to mental disturbance (Hamlyn, 2007). Although his theory was not scientifically proven, its contribution to the holistic line of thought is considerable beyond doubt. Hippocrates' notion did not come on the surface again earlier than 1700, when the rapid development of microbiology suggested that there is a correlation between physical and psychological symptoms. In addition, this approach was re-examined further by Charcot during the nineteenth century when, in reverse to Hippocrates, he began to seek psychological causes for physical symptoms (Hamlyn, 2007).

Freud himself, attended Charcot's lectures and was affected by his views. Despite the fact he was coming from a medical background and was advocating dualism, he renounced these views when he formed the identity theory. He expressed his thoughts regarding the mind-body connection most distinctly in *An Outline of Psychoanalysis* (1940 as cited in D. L. Smith, 1995):

It is generally agreed ... that ... conscious processes do not form unbroken sequences which are complete in themselves; there would thus be no alternative left to assuming that there are physical or somatic processes which are concomitant with the psychical ones and which we should necessarily have to recognize as more complete than the psychical sequences ... If so, it of course becomes plausible to lay stress in psychology on these somatic processes, to see in them the true essence of what is psychical and look for some other assessment of the conscious processes. The majority of philosophers, however, as well as many other people, dispute this and declare that the idea of something psychical being unconscious is self-contradictory. But that is precisely what psycho-analysis is obliged to assert. (p. 17)

Freud grasped the idea that there are existing connections between the unconscious and the bodily material. Thereafter, Reich, one of Freud's student, was the first one to explore the body's role in psychotherapy. In short, he suggested that repressed emotions are reflected in the body by means of tension, posture and movement. From his work a bunch of body-focused humanistic psychotherapies have emerged. Body psychotherapy is a humanistic method in which the mind-body connection is highly acknowledged inside the therapeutic process. According to Staunton (2002), "the fundamental principle in body psychotherapy is that our core beliefs are embodied, and that until we begin to experience the pain held in them directly through our bodies, they will continue to run our lives (p. 4)." However, one ambiguous ethical issue regarding this model is that therapists usually touch their clients.

The view of the mind and body being closely interrelated is reflected in the philosophical aspect of holism (Hamlyn, 2007). Each person is unique and inseparable into mind and body. The client should be treated as a whole and each part is of equal role in perceiving the gestalt of each individual. Additionally, the context plays a major role as well. Currently, the majority of psychotherapists specializing in treating chronic pain subscribe to the biopsychosocial model, accepting the wholeness of each client. In their majority, they accept what Cassell (2004) subtly indicates: "the emotions or the meanings of which the emotions are a part do not cause the physical phenomena; the physiological responses are part of the emotion and the meaning (p. 236)".

2.2.3 Is fibromyalgia a bodily or a psychological illness?

Fibromyalgia is a condition spreading all over the body. However, there could be other comorbidities like psychological symptoms as well. There is evidence that patients with chronic pain report that during their past there was one or more traumatic events (of physical or emotional nature). In fact, patients with fibromyalgia "have more risks to have been sexually, physically or emotionally traumatised" (Jay, 2005, p. 1100). According to Jay (2005), psychosomatic symptoms may occur while these individuals are repressing

their memories of the traumatic event. Furthermore, Winfield (2001) reflects his thoughts about a study regarding somatization and chronic pain:

To some, the elegant study by McBeth and colleagues reported in this issue of *Arthritis and Rheumatism* (1) would appear to be just further proof that fibromyalgia is purely a psychological syndrome. Not at all! The nature of chronic pain and associated symptoms in fibromyalgia is rapidly becoming understood (2,3), and the meticulously designed and conducted investigation by McBeth et al. adds another piece to the puzzle (p. 751).

In addition, he stresses that both the therapist or physician and the client should accept that the condition is both biologic and psychological. In fact, a more accurate term than psychosomatic would be that fibromyalgia is a psychophysiological disease (Jay, 2005). What is mentioned in the previous subsection⁷, should apply in fibromyalgia patients as well: each one of them should be perceived individually. An effective treatment should include a combination of physical and psychological therapies. An interdisciplinary team of experts treating the patient would be favourable as well.

⁷2.2.2 How the mind-body connection is perceived in psychotherapy

3 METHODOLOGY

3.1 Research questions and hypothesis

The researched phenomenon was the first internship of my clinical training as a student in the Music Therapy Master Degree programme at the University of Jyväskylä. The client was diagnosed with fibromyalgia and the main reason for her to receive therapy were the strong, debilitating pains she was suffering from.

Research has shown promising results on the fact that music is an effective intervention towards symptoms of fibromyalgia and particularly chronic pain (Alparslan et al., 2016; Garza-Villarreal et al., 2015, 2014; Guétin et al., 2012; Linnemann et al., 2015; Mercadé et al., 2015; Müller-Busch & Hoffmann, 1997; Onieva-Zafra et al., 2013; Picard et al., 2014). Research has also shown that perceiving the client as a whole is extremely significant in the case of fibromyalgia and in any condition where chronic pain is the main symptom (Cassell, 2004; Jay, 2005; Staunton, 2002). Based on these notions, the hypothesis stated on this study is that a music therapy treatment could be beneficial in treating chronic pain and contribute to the improvement of the quality of life of the particular client. This study is considered as a study of music therapy discipline research according to the classification of Bruscia (2005) .

To test the initial hypothesis, several research questions had to be set. According to Given (2008), research questions “designate what researchers want to understand about the research problem that led to their study” (p. 768). The research questions help the researcher to focus on the phenomenon of interest, in this case on the therapy process. According to Bruscia (2005), “qualitative research questions have two primary components, a focus and a purpose”. The focus, as Bruscia describes, is the phenomenon of interest, in this case the music therapy process. According to Bruscia (2005) in qualitative music therapy discipline research there is always one core question: *What happens in music therapy?*.

This thesis was written in order to answer the following main question:

“How psychodynamic music therapy could help in the condition of chronic pain?”

Due to the fact that this question is quite general, I had to be more specific on both the client and the process so I set three sub-questions:

- What kind of effect chronic pain has on the client’s life and how this effect can be seen inside the music therapy process?
- In which ways psychodynamic music therapy is affecting the chronic pain condition?
- How helpful is it for a client with a chronic pain condition to create a bridge between mind and body using a form of non-verbal communication, in this case music?

3.2 Initial assessment and used scales

An initial assessment was conducted on the first meeting before the therapy begun. During this meeting, a day and time were selected for each weekly session. We discussed several topics about her life and condition in form of an semi-structured interview. Thereafter, a consent form was filled by the client in which she agreed to have each session audio and video recorded for research and educational purposes. Additionally, she was informed about the vibroacoustic equipment’s contraindications and the therapeutic goals were discussed. Finally, we explored the reasons for her coming to the therapy and her relationship with music.

Except from the consent form, in this early meeting, the client filled two scales: the Insomnia Severity Index (ISI)¹ and a pain drawing². This was made in order to develop a comprehensive view about her condition. The ISI scale developed by Morin (Bastien, Vallières, & Morin, 2001) is a valid instrument consisting of seven Likert-type questions designed to assess the impact of insomnia in adults. Pain drawing (Haefeli & Elfering, 2006) allows the client to mark the body parts that are affected by pain on a graphic representation of a human body with a front and a back view. Additionally, it provides information about whether the pain is internal or external.

During the therapy process, in order to understand whether the music therapy interven-

¹See Appendix A.1 Insomnia Severity Index (ISI)

²See Appendix A.2 Pain drawing

tions were effective I used the Visual Analog Scale (VAS)³ before and after each session. VAS is a simple and broadly applied instrument for “evaluating variations in pain intensity” (Onieva-Zafra et al., 2013, p. 41). In essence, it is a 100mm line with extreme limits on its endpoints (no pain, worst possible pain) that the participants are asked to fill in. VAS was first used in psychology by Freyd (1923) and since then its validity has been broadly tested (Haefeli & Elfering, 2006; Price, McGrath, Rafii, & Buckingham, 1983). According to Lázaro, Bosch, Torrubia, and Banos (1994), it is convenient for use in a clinical setting. However, for the purpose of this thesis, VAS was just an indication for a possible therapeutic change and was not considered clinically significant on its own.

3.3 Primary data

According to Forinash and Grocke (2005):

Phenomenological research allows data to be collected from a number of different perspectives: by self-reflections (heuristic descriptions); by interviewing other people about their experience of the phenomenon under study; by gathering writings about the topic; or by depictions of the topic in question as expressed in works of art, in dance, or in poetry.

Throughout a music therapy session the therapist is normally inquiring the client regarding the way she interpreted the intervention and the meaning it has for her. This process could be compared with an unstructured interview. Furthermore, the client could reflect on the intervention or on herself without the therapist asking. These reflections and answers constitute my primary data which are qualitative. Moreover, any comment the client made about her thoughts, emotions, images and bodily sensations that she had during the process is considered as primary data as well. To summarise, my primary data are the client’s experiences and interpretations of these experiences inside the music therapy process.

The sessions were audio and video recorded so after watching the recordings I transcribed the dialogues into my notepad. This transcription took place twice and the difference between them was that the second one was more detailed and with more depth than the former. The purpose was to address the meaning of the music therapy experience for my client.

³See Appendix A.3 Visual Analogue Scale (VAS)

3.4 Secondary data

After each session but also in between sessions (after watching the recorded session) I regularly kept a diary. My notes consisting of my thoughts, emotions, bodily sensations and images while participating either as a therapist or observer in the sessions form the secondary data. I used the secondary data to support the client's experiences (my primary data). The peer supervision, the clinical teachers and the tutors contributed to this diary adding their fruitful and essential comments. Finally, the results of the scales described on section 3.2, my clinical report and my self-reflective report (both written after the process) were also evaluated as secondary data.

3.5 Methods for analysis

According to Wheeler and Kenny (2005) "the overall goal of qualitative research is the discovery of the meaning" (p. 59). Since the purpose of this study is to discover how the particular client interpreted the music therapy sessions and the meaning that the process held for her, the research methods used are by nature qualitative.

I chose to utilise Interpretative Phenomenological Analysis (IPA) for analysing the data from my transcriptions. The goal of IPA is to interpret and understand the participant's point of view of the phenomenon under study (Conrad 1987, as cited in J. A. Smith, 1996). Felicitously, J. A. Smith and Osborn (2015) introduce the core of IPA: "...a two-stage interpretation process, or a double hermeneutic, is involved. The participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world (p.53)." According to Smith et al. (2009, as cited in Frost et al., 2011) IPA is a method that combines phenomenology, hermeneutics and idiography.

Aldridge (1989) defines phenomenology as an approach that "allows researchers to study phenomena, such as human experience, as unified wholes" (p. 92). Mainly, it is a methodology used to describe the *lived experience* with the aim to gain and enrich the understanding of its structure (Holloway & Galvin, 2016). Literally, phenomenology studies the appearance of things and the meaning they have to our conscious experiences (D. W. Smith, 2016). More recently, it is applied as a human science in various disciplines like education, health science, clinical psychology and law Given (2008). Phenomenological methods were the first ones used in music therapy (Aigen, 2005). Hermeneutics as a method of interpretation "is concerned with problems that arise when dealing with meaningful human

actions and the products of such actions, most importantly texts” (Mantzavinos, 2016). Finally, Allport (1937 as cited in Runyan, 1983) used the term idiographic to “indicate a concern for what is particular to the individual case” (p. 414). All these elements point out that IPA is a humanistic approach that involves observation.

Psychodynamic music therapy could be likened to IPA as both of them are focusing on the client’s perception of the lived experience. The essential factor of IPA when used in music therapy is the client’s psychological world as opposed to an objective description. The common goal is to interpret the meaning that the client gives to her actions and interactions with other people. In addition, in IPA one of the most effective methods to collect data is a semi-structured interview which could be compared to a music therapy session.

According to J. A. Smith (1996), IPA is suitable for research in health psychology and particularly, the body and its perception could be a useful subject to study. Furthermore, together with Osborn, they provided a comprehensive guide on how to use IPA when they studied individuals with chronic benign low back pain (J. A. Smith & Osborn, 2015) which is the case in the present study as well. Clearly, they stress the appropriateness of this method in studying pain conditions: “the context and personal meanings of the pain to the sufferers are critical to their experience (J. A. Smith & Osborn, 2015, p. 67).”

3.6 Limitations of the study

As an intern, I had to adapt both the role of a music therapist and a researcher. This could prove to be demanding in regards to where the focus should be. However, the prevailing view behind the study was that the client’s benefit takes priority over any other matter. In order to alleviate this challenge of a dual-relationship and to safeguard both the client’s side and mine, I took advantage of the supervision that the master programme offers. According to Bruscia (2014a), the goal of research (“increasing or modifying the knowledge base in music therapy” (p. 198)) is different from the goal of practice (“helping specific clients address health matters” (p. 198)). Furthermore, he adds: “in research, knowledge is gathered for its own sake, whereas in clinical work, knowledge is gathered for the client’s sake” (p. 198). Additionally, Bruscia (2014a) is stressing the meaning of an individualistic approach for each client “Every music experience provides opportunities to explore the inherent life tension between being free and being limited, controlled, or structured in some way. Similarly, clients enter therapy with differing needs and preferences for freedom and limits. Thus, we have to consider these concerns together”

(p. 155). Having the aforementioned issues in mind, I therefore tried to be as cautious as possible regarding the distinction of the adopted roles.

4 THE THERAPY PROCESS

4.1 Flow of the therapy

The internship included twelve weekly sessions lasting forty-five minutes each. It took place in the clinic 007 in the building of the Music Department (Musica) at the University of Jyväskylä from the 10th of February 2016 until the 10th of May 2016. The time of the sessions were the same every week (Tuesday, 13:15-14:00). Unfortunately, due to cancellations there were some alterations on the schedule regarding five sessions. These sessions were rescheduled for another day and time of the week¹.

Ala-Ruona (2015) suggests that a therapeutic change could occur in twelve sessions. Hence, he provides a comprehensive plan which was adapted in this study:

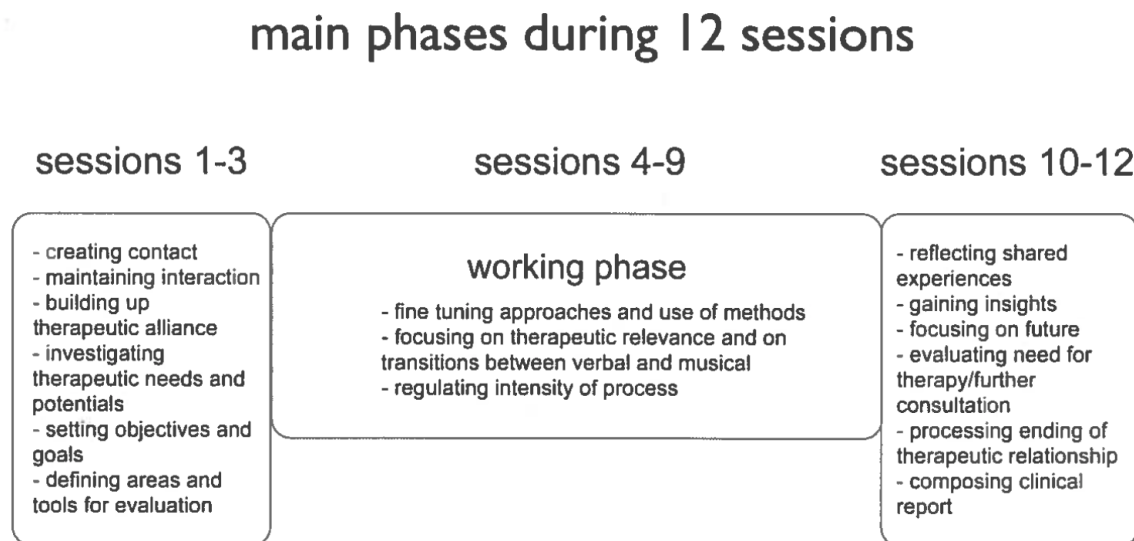


FIGURE 1. Structure, phases and content of clinic period (Ala-Ruona, 2013; retrieved from Ala-Ruona, 2015, p.55)

Shortly, at the first three sessions the therapeutic trust is established. The main music

¹Session 1: Wednesday 10/2/16 12:00-12:45; Session 2: Tuesday 16/2/16 14:00-14:45; Session 4: Wednesday 2/3/16 14:30-15:15; Session 8: Thursday 14/4/16 11:00-11:45; Session 11 Tuesday 5/5/16 13:15-14:00

therapy work happens in the following six sessions. Finally, the last three sessions are used for reflection and closing of the process.

4.2 Flow of each session

The suggested structure for each session was the following:

Opening → Music Listening → Clinical Improvisation → Closing

FIGURE 2. Structure of the sessions

Firstly, there was an opening discussion in order to open the session and adapt to the environment of the clinic. Thereafter, music listening followed in which, vibroacoustic equipment was used². The themes that emerged during music listening were then further processed during the clinical improvisation afterwards. Finally, to close the session and prepare the client for the outer world, a reflective dialogue was fostered.

4.3 Context and facilities

4.3.1 The University of Jyväskylä

The University of Jyväskylä is one of the oldest and the second largest University in Finland. It is placed in Jyväskylä, a city in Central Finland where the climatic conditions during the long winters sometimes make the transportation a real challenge for students and staff. However, the municipality offers various ways of transportation so normally it takes 20 to 30 minutes to reach the Main Campus from the Student Accommodation.

4.3.2 The Master of Arts in music therapy and the music therapy clinic

The music therapy master's programme was taught originally in Finnish language. However, 2010 was the first year that a foreign student was accepted and since 2012 it has been taught in English. In the educational model adapted in the programme, the supervision is made at the end of each clinical day and all the sessions are audio and video recorded (Ala-Ruona, 2015). The programme offers countless opportunities and possibilities to conduct research in music therapy related fields. Every week, there is a different clinical teacher present in the group supervision fostering fruitful discussions and introspective dialogues.

²Physioacoustics (Next Wave) and the Sound Oasis

The music therapy clinic (M007) is located on the ground floor of the Department of Music's building at the Main Campus. The clinic is fully equipped with a variety of musical instruments of different kind and audiovisual equipment. It is organised in such a way to meet both research and educational requirements.

4.4 Information about the client

The client was a twenty-four-year old woman diagnosed with fibromyalgia³. At the days of the internship, she was a master student at the University of Jyväskylä. She has been playing the piano since her childhood and was already aware of the therapeutic use of music especially for mood regulation and distraction in order to ease pain. Furthermore, she was engaging herself into music composition as well. She had previously attended music therapy workshops held from the University of Jyväskylä's music therapy programme. During the process, she was living with her fiancé. Her parents were divorced when she was a child and she has been attending psychotherapy sessions at the age of fourteen in order to cope with depression. However, this was the first time that she committed in music therapy. Additionally, at that time, she was a cat owner and was nurturing a number of long-lasting friendships. She was selected during the reviewing of the applications that was made in collaboration with the clinical teachers and the students of the master programme. For purposes of confidentiality, in the rest of the study I will refer to her as Areti, a greek female name that means a strong ethical quality.

4.5 Goals' setting

During the initial assessment, the client reported strong debilitating pains that were reducing the quality of her life and also signs of depression and anxiety. Her goal for coming to therapy was the relief of these pains. Consequently, this was considered as the main goal during the whole process. Additionally, in collaboration with the clinical team individual goals were set for each session.

4.6 The therapist's stance

During the process, I adopted a humanistic, person-centred role as a therapist. My background as a music therapist student is mostly psychodynamic. However, in the master programme we got in touch with a variety of therapeutic models so I tried to be as eclectic as I could for the client's benefit. My goal was to offer a safe and empathetic

³The diagnosis was made four years before attending the music therapy sessions of the internship.

environment in order for the client to freely express herself. Psychodynamic methods give emphasis to the link between the conscious and the unconscious. In short, a therapist with a psychodynamic background engages to the following principles: “focus on affect and expression of emotion, exploration of attempts to avoid distressing thoughts and feelings, identification of recurring themes and patterns, discussion of past experience (developmental focus), focus on interpersonal relations, focus on the therapy relationship and exploration of wishes and fantasies (Shedler, 2012, p. 10-11)”. During the therapeutic process, I perceived and treated the client as a whole, taking constantly into account both her mental, emotional and bodily aspects.

4.7 Interventions

In this subsection I briefly describe the interventions I used during the process and their clinical meaning.

4.7.1 Music Listening with vibroacoustic equipment

One of the interventions used in the process was music listening. The choices were either mine (in the first session) or the client’s (in the rest of the sessions). This intervention was used in combination with vibroacoustic equipment. According to Bruscia (2014a), music listening could affect physical, emotional and mental facets of an individual. Consequently, by listening to music the client has access to the wholeness of her existence, a notion that supports the theory described in the first chapter. According to Bruscia (2014a), receptive music therapy techniques can directly influence body structures and functions and influence pain. Additionally, music listening in a therapy setting can often induce memories and feelings (Bruscia, 2014a).

I chose to use vibroacoustic equipment to enhance the feeling that Bruscia describes. As a therapist, I used other techniques as autogenic induction and unguided music imaging as well. However, due to the fact that I am not an officially trained vibroacoustic therapist, I was mostly experimenting in order to see whether the client would have any benefit from the experience. She clearly indicated that musical improvisation is what she prefers most so we stopped using this intervention on the seventh session. Here, I made a conscious choice to act more as a therapist and not as a researcher as the client’s preference has showed me the path for the right way of her treatment.

4.7.2 Clinical improvisation

In the New Grove Dictionary of Music (Kernfeld, n.d.), improvisation is defined as “the creation of a musical work, or the final form of a musical work, as it is being performed.” In music therapy terms, this work created by selecting the method of collective free musical improvisation is the medium in order to reach another type of work, what Langenberg (1997) defines as the *Behandlungswerk*, that is the work produced from treatment.

The clinical improvisation provides an opportunity for the unconscious material to become audible (Langenberg, 1997). What differentiates free musical improvisation from clinical musical improvisation is the latter’s specific clinical goals and objectives. Peters (2012) highlights the *being in the moment* of improvising, a concept which could be likened with another concept broadly found in the literature of psychodynamically oriented therapies as *here and now*.

According to Bruscia (2014a), improvisation has physical, emotional and mental facets and is a multisensory experience. It allows the client to use various parts of the body as the client is actively participating in the music making. Furthermore, Bruscia (1987) stresses the subjective nature of clinical improvisation:

How an individual selects each sound, manipulates each musical element, and organizes each musical process is an unmistakable manifestation of his/her uniqueness. This uniqueness is easily apprehended by the improviser because the improvisation has given his/her impulses, ideas, and feelings perceivable forms, and has brought the content of his/her inner subjective world into outer reality. (p. 560)

Music therapists with analytically oriented background work with free improvisation for the creation of teamwork between therapist and patient and in order to form the therapeutic relationship (Langenberg, 1997). The clinical improvisation could be either instrumental referential (themed) or instrumental nonreferential (non-themed). In this case study, improvising was the most preferred intervention of the client.

4.7.3 Dialogue

According to Langenberg (1997) encounter is happening via collective musical improvisation but also “in talks that take place before and after improvisation”. Bruscia (1987) as well, follows the same notion, highlighting various ways and results of using verbal communication. After and before each musical intervention, together with the client, we had a reflective dialogue in order for both of us to better understand and analyse what happened during the interventions. The collaborative dialogue has proven to be a therapeutic

and introspective method in the therapy setting. In this case study, this intervention was used in different and constructive ways.

5 RESULTS

5.1 Stages of the analysis

The analysis was made in several phases. At first, I watched the video recordings and kept notes. After this stage, I transcribed the video recordings so all the sessions were in my macbook into a Word Document. In this stage, I also left margins on the left side for the notes. After keeping notes, the basic themes started emerging, so the final stage was to transfer the relative extracts into an Excel Document and clarify the sub-themes and the clustered themes while classifying them. The results of the process are shown in Table 1 of this Chapter.

5.2 Themes that emerged from the analysis

The analysis showed various themes. The prevailing theme, in order to answer the research questions, consisted of the effects that the music therapy process had on the client. This clustered theme included five sub-themes: the effects of each musical intervention separately, obtaining self-awareness and awareness that there is a connection between the mind and the body and finally developing coping skills towards pain. The second clustered theme consisted of the factors which influenced Areti's pain according to her own words.

5.2.1 Theme I: Effects of Music Therapy interventions on the client

Effects of music listening (using VAT equipment) on the client

Music listening using the VAT equipment was lasting 10 -15 minutes on average and was always happening in the beginning of the sessions. This intervention was used only in sessions 2 to 7 due to the fact that Areti did not have a desired reaction towards the Physioacoustic chair. According to her needs, the decision I took was to act more as a therapist and less as a researcher. When the client responds negatively to an intervention, the therapeutic trust and alliance are both put in danger and this is not a desired scenario

TABLE 1. Analysis themes

Clustered Themes	Sub-themes	Illustrative Quotes
Effects of Music Therapy on the client	Effects of music listening (using VAT equipment) on the client	‘both happy and powerful negative emotions’ ‘my back is getting warm, very nice’
	Effects of clinical music improvisation on the client	‘I’m not really concentrating on my pains at all. When I came here I had pains in my hands now it feels that I don’t ‘getting negative emotions out’
	Obtaining awareness that there is a connection between mind and body	‘[...] just not being in control of everything somehow I react with my body. I don’t know which one is first. Here [mind] and then here [body] or which way, definitely connected.’
	Obtaining self-awareness	‘[...] finding my inner voice and try to follow that a bit more that’s what I’ve got out of this session.’
	Developing coping skills towards pain	(about improvising on the piano) ‘it helped probably with the hand issue’
Factors that influenced Areti’s pain	Others’ and self-expectations	‘It’s just a thing that I have that I always have to please other people.’
	Significant others	(about her fiancé) ‘he makes me feel whole and safe’
	Personality/Behavioural factors	‘I’m really good at taking control like that but inside I’m like totally broken.’
	Stress factors	‘[...] I can stress like that and probably the tension also launches the pain’
	Factors of everyday life	‘It’s sunny outside, it’s helping me not feeling so tired’

for a therapeutic process.

Sessions 1-3 Music listening with Areti sitting on the Physioacoustic chair was used for the first time in the second session. The music choice was made by me (only for this session) and it was Barber's Adagio for strings (second movement of Barber's String Quartet op.11). Areti found the chair's vibration '*a bit intense*'. However, she felt relaxed on her body and said that she '*didn't pay so much attention on the vibration*'. After the intervention, she reported feeling sleepy and relaxed as the piece was already familiar to her: ('*my grandmother's favourite*').

In the beginning of the third session, before the intervention, Areti claimed that '*for some reason even though the chair thing it felt fine, maybe like one day after then I got like huge pains all over my body, hands actually even in my legs and in my back and that went on for some days and now I just have the migraine*'. She was willing though to try again because she was not absolutely sure about her previous statement. After listening to her chosen music¹ (Dvorzak - Symphony No. 9 in E minor, "From the New World", Op. 95, B. 178) she was pleased saying that '*the vibration was much milder than the last time [...] so it was kind of very different experience from the physical sight. It didn't make the pains worse or anything*'. The music listening created both '*happy and powerful negative emotions*' and she reported that she feels like that '*many times*'. As she said, this musical piece brought a lot of '*mixed emotions*' like going *back and forth, feeling happy then feeling sad or anxious in a way*'. However, she stated that she was not completely ready to experience this kind of powerful transitions.

Sessions 4-9 On the fourth session, listening to various pieces of Sigur Ros², created her pictures from the first time she listened to this band. Those pictures were nature related and feelings of peace and relaxation emerged. Regarding her bodily sensations, she realised that the pains probably had '*nothing to do with the chair*' and she became aware that the vibration made her recognize a tension in her shoulders and neck. This realisation made her consciously relax her muscles. Her safe place was a summer cottage in Iceland, picturing herself either alone or with her fiancé.

On the fifth session she willingly chose to listen to the music of Bonnenberg. This experience resulted in sensing her hands more and wanting to move them. As in the previous session, she felt relaxed and her safe place was her fiancé's summer cottage where she

¹ Barber's composition was intense for a first session, indication by supervision

² a contemporary band from Iceland

found herself either alone or sharing these moments with him. During the sixth session, she reported feeling discontent about the chair *‘the last time we went to the chair again I got some pretty bad reactions to it. I was pretty sore for maybe two or three days but yeah that was kind of.. I don’t know if it’s just too intense, that you just have to use the lower intensity for me not to get that kind of reactions to it’*, guiding me to search for other ways to use the vibration or to not using it at all.

Finally, in session 7 we used the Oasis device and not the Physioacoustic chair while we listened to Amelie’s soundtrack. The new device proved more sufficient for her: *‘Yeah, my back is getting warm, very nice. Yeah, it’s different than the chair because the chair was kind of wow and this is the same area so it doesn’t surprise you. - - The chair, it came a bit more intense. So this is pretty relaxing’*. In this session we had a discussion at the same time of the intervention. While listening to the soundtrack, she recalled the impact it had on her the first time she had listened to it. In particular, she changed completely the way of perceiving music and playing the piano. In addition, some fantasies of living at an older time emerged along with a criticism on modern times and thoughts of her maturing because she has dealt with some situations that were not *‘so easy’*.

Effects of clinical music improvisation on the client³

This intervention was Areti’s most preferred one. She had been already improvising and composing music on the piano she used to have at home before attending music therapy so this was a more natural and familiar way to express herself.

Sessions 1-3 During the first session we had four improvisations. Areti made some comments about the difference between a themed and a non-themed improvisation⁴. A significant difference for her was to improvise on a different theme than her feelings. To clarify, choosing a happy theme while having sad emotions effected on her feeling *‘relaxed and moved at the same time’*. She also found it easier to improvise on a different instrument than the piano. The improvisation made her feel like *‘up in the clouds and very relaxed’* and created a nice sense on her body: *‘Yeah, I’m not really concentrating on my pains at all. When I came here I had pains in my hands now it feels that I don’t so that’s kind of cool in a way.*

On the second session the theme she picked up was *‘sleep’* and that made her feel *‘very*

³ For a detailed description of the used instruments and the themes of the improvisations see Appendix4

⁴ The improvisations she had at home were non-themed.

relaxed, happy, positive feelings, relaxation, forgetting where you are, concentrating, nice feeling'. During the third session, after the improvisation we had on the djembes, she claimed that only playing the rhythm makes her forget about theory and is a good way of *'getting negative emotions out [...] some sort of anger or frustration because I've been having these headaches for a long while'*.

Sessions 4-9 On the fourth session she already started realising that music therapy is a noteworthy intervention regarding pain. In addition, she claimed that music therapy motivates her generally with her life. In this session we improvised on a theme related to nature as a continuation from the images the music listening brought her. As a result, she felt *'relaxed and nice'*. On the fifth session, even though we had two improvisations themed as *'super happy'*, the emotions and sensations she had were not just positive but negative as well: *'I just started getting this pain in my neck and it started kind of .. I got the remembrance of having some pain so this kind of interfere with my playing [...] It's not a headache but it's somekind of [...] [showing tense]. I couldn't be all happy. The whole way through, A bit of trouble with the theme'*. Exploring the ways Areti experienced the emotion of happiness was interesting for both of us.

During the sixth session we looked into things she does to cope with pain when she is with her fiancé compared to the things she does when she is alone. Thus, we had two improvisations. When we improvised on the first theme, she found herself feeling *'self-pity'* and *'empty'*. This made her hands feel cold. On the second theme, she played *'gentle, thoughtful tunes'*. So, when I asked her to compare the two improvisations on the means of bodily sensations, she admitted that in the first one she felt *'tired, agitative and negative emotions'* which made her body feel *'really heavy'*. In contrast, the second improvisation was *'hopeful and easy and not stressful at all, there was warmth and light into it'* and made her feel *'very easy and light so the weight came off [...] and it's definitely kind of here [showing her shoulders] but also like in my hands'*. It was again very interesting for her but also for me to realise these differences.

On the seventh session we improvised twice. I suggested that she plays something beautiful and I tried to musically challenge her in order to analyse her reaction to similar situations. On the second improvisation we had the same theme with the difference that I was playing in a structured way and she was trying to musically disturb me. She found both improvisations fun and challenging. The first one was *'hard'* for her and she characterised the second one as *'relieving'*. During the eighth session, we did more of an exercise than an improvisation. I was asking her questions on a djembe and she replied *yes* or *no* on a

djembe as well. This exercise resulted in feelings of guilt in Areti. She realised that it was difficult for her to say no in some occasions that she *'probably should have said it'*. After several musical questions she was struggling in order to communicate her own needs and she started feeling angry along with an increased heart beat. Afterwards, I encouraged her to reply negatively and I stressed the fact that we were in a safe environment. This intervention resulted in feelings of relief.

On the ninth session, we had a very long improvisation from which she made fruitful realisations about her way of being. I suggested to play something chaotic and without structure so we could both understand her responses and reactions. For once more, I stressed the fact that music therapy place is safe for her. She then gave me specific directions on the role she needed me to play *'you should definitely try to mess it up'* due to the fact that she wanted to be challenged. The improvisation turned out to be really important for the music therapy process. It was really *'hard'* for her to do something that she would not normally do and when in some parts I was playing in a structured way, she told me that she felt *'release and relief'*. However, it was really difficult for her to stop somehow the improvisation and let this *'creepy'* feeling go. These transitions made her feel *'tense'* and pains all over her body, her neck and shoulders which she linked with her feelings.

Sessions 10-12 During the tenth session we had three improvisations. This was the session that I challenged her the most. The improvised music did not flow the way she expected and this created a ?feeling of frustration?. We tried different musical responses to the same scenario from her life. There was a phone call the same morning that made her late for the session. On this phone call it was a friend of hers frequently calling to discuss the same topic over and over again (a man was making her life difficult but she was not deciding to take a distance). Areti felt frustrated due to the fact that she could not convince her friend to make the correct decision and this frustration formed the first improvisation of the session in which she realised her way of being angry: *'I was thinking I would play angry but then [...] it was like kind of passive-aggressive'*. This frustration made her feel *'hectic and kind of stressed, de-oriented'*. After the second improvisation where she decided to act differently regarding the phone call and just refuse to listen her friend, she had mixed feelings of both *'good and bad at the same time'*. In the third improvisation, I gave her an option regardless of what I was playing to just focus on herself. She found this improvisation *'not as complex as the previous ones'*. Additionally, she said that when she concentrated on herself *'it wasn't that negative'*. After the improvisations, she felt *'warm out'* in her body as it took *'a lot of energy'* from her *'to flip to from one version*

to another'. In regards to the pain, she happily answered that it went away and that she got a different feeling of *'no pain but high energy'*. At the end, she entitled the session and the improvisations as *'controversial'*.

On the eleventh session she was describing me a situation that happened some days before the session and made her feel unpleasantly. During the Vappu⁵, there was an injured bird in front of her. People around were staring and nobody was doing something to help the bird. She decided to gently take the bird to the woods but there was nothing she could do due to the fact that the bird was already dying so she started feeling helpless: *'I can't help this creature [crying]'*. This long and emotionally charged conversation guided us into discussing about responsibilities and expectations. Hence, she suggested that we play *'the feeling of having to leave the situation'*. It was *'hard to leave, [...] hard to find the boundaries on what's my part in something and what's not'* as she realised afterwards. This made her feel guilty. Finally, in the last session when we played the ending of the process she said: *'That's kind of like kind of sad but then again I felt happy, it's like a safe feeling. I'm sad to go but yeah, the sense of security.'* Music therapy made her feel safe and that was really important for both her and me.

Obtaining awareness that there is a connection between mind and body

During the whole process, I was trying to guide her in realising the mind-body connection and accepting herself as an entity consisting from different parts that each one affects the other ones. This premise was supported in the clinical supervision as well and I believed it would be of great benefit for her.

Sessions 1-3 The first time she started obtaining awareness about the connection between mind and body was at the second session where I asked her whether some specific feeling is causing the pain. Areti said that if she is very tired or stressed and have negative emotions *'often the pains are worse at this time'*. After the music listening in the third session, I asked her to interpret the connection in a more holistic way including thoughts, emotions, bodily sensations and images. This resulted in the following statement: *'I felt more relaxed like here [showing her shoulders] and also I didn't really notice my headache at the time and then when the music went more aggressive then I maybe got the tension back and then my shoulders and then I also remember or felt the pain in my head more so yeah definitely if I have positive emotions I don't feel the pain as much'*. Therefore, in the first instance she became aware about the way that positive but also negative emotions

⁵Finnish holiday

are related to her body being in pain.

Sessions 4-9 In the sixth session we developed the theme of expectations; either self-expectations or expectations other people have from her. Regarding this theme, she was aware that expectations don't *'make the pains easier'*. Furthermore, she continued realising that *'It definitely has a connection [showing her mind and body] because when I get frustrated like I'm getting a migraine or whatever and then it gets worse [...] till I stop and just relax and stop doing stuff'*. In addition, she acknowledged that she thought her hands are the problem and that she was not realising that the mind-body connection existed even though she knew it.

In the eighth session we were discussing about her parents' divorce and the migraines and sleeping issues she had at that period of her life. This dialogue resulted in pains on her hands and back. Areti thought that *'probably they're pretty much connected [her mind and body] because [...] it's often [sic] it's already a part of your history'*. In the ninth session we explored her reaction towards a chaotic situation. This was creating stress and by extension *'if I'm super stressful [...] then I usually get like migraines or something easier cause I can stress like that and probably the tension also launches the pain'*. Regarding her need to have control she realised *'just not being in control of everything somehow I react with my body. I don't know which one is first. Here [mind] and then here [body] or which way, definitely connected.'* and once more the connection between her mind and her body arose.

Sessions 10-12 Finally, this sub-theme emerged again in the last session in which she fruitfully said *'I've kind of dealt with the physical and the mental as separate maybe and because you kind of always gave me kind of "What happens in your body when you do this?" so that's like I've actually started to pay more attention like they're connected'*. She also found that music therapy helped her in being more aware: *'I actually did get tensed here or in how it affects my head'*. I felt really proud for her that the most important thing she learned from the process was to help herself by listening to herself more. Additionally, she credited that music therapy *'can also physically help the pain and it's a fact'*. She has learned to pay more attention on her body and mind by frequently asking herself: *'What am I doing here [mind] and here [shoulders] what am I doing here [hands]'*. In this sense, the inner relationship with herself has evolved during the process.

Obtaining self-awareness

Obtaining self-awareness is a goal in almost every therapy process with neurotypical adults. Focusing in *here and now* is an excellent opportunity to observe oneself and as a consequence to develop awareness. In the following section I describe how this premise helped Areti cope with fibromyalgia on everyday life. She obtained awareness on various aspects like personality and behavioural traits. This ability is very helpful when someone is coping with a chronic pain condition like fibromyalgia.

Sessions 1-3 The improvisations of the first session helped Areti to focus and be aware of herself at that particular moment. In the second session, she observed that when she does something she likes she is usually *'just not concentrating on the pain'*. The use of music could work as a distraction from a painful situation. During the third session, some emotions she thought she got over with, came to surface and she found the session *'mind-opening'*.

Sessions 4-9 On the seventh session, Areti had already become more thoughtful and conscious about the ways she could cope with pain. In particular, her *'kind of thinking has probably changed a bit'*. She realised that her parents, but herself also, have great expectations from her and this was making her putting more pressure in her work life. In the following session, she showed some indecisiveness according to how the session would flow. She let the decision to me but I subtly reminded her that I am not a better expert for herself than she is so we explored the topic of decision making together. She claimed that she usually made decisions in a fast way but she was struggling with refusing something, due to the fact that she wanted to please other people. She said characteristically *'not being open to yourself because you want to be nice to other people'*. This was one of the first steps for her in realising that taking care of oneself is more important than being nice to others. In session 9, she did not want to end the long improvisation we had and she found this *'really strange somehow'* like it caught her and she *'couldn't get out of it'*. She found the whole experience intense as she got *'caught up in the moment'*.

Sessions 10-12

In session 10, we improvised on a frustration that emerged in her during the verbal interaction we had. After the long improvisation, she noted that *'it wasn't like the kind of frustration I was maybe thinking I would play, I was thinking [...] angry but then [...] it was like kind of passive-aggressive.'* It was really interesting to see her realising that she sometimes responds to situations in a passive-aggressive behaviour and that she is showing her aggression often with making sarcastic comments. This discussion, triggered

by the improvisation, concerned alternative choices to respond to frustration. Afterwards, we had two improvisations trying different ways to respond to such a frustration. On the first one, she suggested that she does nothing and we explored her feelings. On the second one, she tried to just focus on herself irregardless of the frustration I was musically interpreting on the piano. She found this response *‘much nicer’* and she found out that when she concentrated on herself *‘it wasn’t that negative, it was like “here I am” sort of [...] chilling’*. Whatever I was doing in order to destroy her structure was just like *‘Huh, cool but doesn’t affect me that much’* for her.

Developing coping skills towards pain

Areti was very conscious about her fibromyalgia condition. She was constantly searching for natural ways to ease her pain and make her life easier. She had the possibility to take some sleeping pills but she was trying to avoid them. Instead, she noticed that improvising on the piano helped her with the migraines and *‘probably with the hand issue’*. Additionally, listening to music helped her sleep. On the time of music therapy she was trying to exercise and develop healthy dietary habits. She was finding it therapeutic to entertain herself as well and not doing only school work. Every night she used to write on her diary as a way to understand better some feelings she might have or some incidents from her life. The process of music therapy triggered Areti to improvise more at home. A goal she set was to play the piano more as she realised it helped her in various ways. After the long dialogues we had, she challenged herself in real life also by saying no and put her own needs first without necessarily avoiding people.

5.2.2 Theme II: Factors that influenced Areti’s pain

In an attempt to understand what makes her pains worse or soothes them, this theme discusses her interpretations and observations regarding this subject.

Others’ and self-expectations

In the first session after the improvisation with the happy theme we had, Areti asked me *‘Happy enough for you?’*. I interpreted this question as an indication that she was already believing from the beginning of our relationship that I was expecting something from her. On the third session, she commented about a characteristic trait of people with fibromyalgia *‘it’s just a thing that I have that I always have to please other people and I’ve been told that fibromyalgia patients often have these kind of really high standards to please other people’*. She already knew from the beginning of the process that she still

had to work with being *‘more understanding’* of her situation and not feeling that she was doing something wrong when she was not physically capable to do something.

On the sixth session, she mentioned that she has great expectations from herself as she *‘usually demands [...] to to do all kinds of stuff’*. Because of the pains, she was feeling *‘disappointed’* on herself not being able to do things she would have done otherwise. On the following session, she noticed she was feeling better due to the fact that she had less work to do. In school she used to be an excellent student and her parents, but also herself, expected this from her. If she got a grade that was not so good she would keep wondering what has happened. She was used to succeed in every goal she set.

On the eighth session, we had a long conversation about her way of making decisions since decision making is closely related to the expectations theme. Usually, she was making decisions for other people pushing her to do so but she was struggling making decisions for herself. I encouraged her to make a decision on that session. There was an intense fight happening inside her between hers’ and other people’s needs. When she was refusing to someone she reported that *‘you get the kind of negative but then you get oh I know like not being open to yourself because you want to be nice to them’*.

During the tenth session, this theme emerged again in the same morning before coming to see me. It was for her *‘me struggling to do what I want instead of what they’re wanting me to’*. In eleventh session, this theme appeared again and she realised the extreme emotions it caused her *‘So, I don’t like - we’ve talked before - I don’t want to make people feel sad or angry or whatever so.. even though I’d feel like “No I just want to start” [crying] but then I’m like “It’s Vappu I have to be happy instead of sad and angry at people”. So I’m like [happy face on] “let’s just do the Vappu”*. This internal fight was of great matter to her and made her struggle in everyday life.

Significant others

Grandparents Her grandparents were both diseased at the time of the therapy. Creating images of them and their house while listening to music in the third session made her feel sad.

Fiancé Her fiancé was one of the most important people in Areti’s life. They had been together and sharing the same house for the past seven years. He was making her pains go away, and was relaxing her. He made her feel *‘whole’* and *‘safe’* and most importantly

he did not ‘*demand stuff*’ from her.

Parents Areti’s parents had gotten a divorce when she was twelve years old. It was at that time that the first sleeping issues and migraines appeared. In the whole process she referred to the relationship with her father once. Although she was usually avoiding conflict, in this relationship she has ‘*always never not avoid conflict*’, a behaviour that her father did not approve of.

Personality/Behavioural factors (the need to have control and structure, keeping things inside, the fear to be left alone)

Areti during the therapy process has shown a great need for structure and control in her life. This need was illustrated into the music that we created while improvising. The majority of improvisations were well-structured and in specific tones (major, minor) and measures (4/4, 2/4). I have tried to challenge her in order to go out of her comfort zone in the safe environment that music therapy offers. This challenge was made musically by playing melodies out of tune and context but always in a gentle and mindful manner.

This process seemed to have a positive impact on her as she started willingly talking about the theme of control in the ninth session after the improvisation: ‘*if we were talking about the sense of control and doing things the right way which was why I had problems with trying to play badly or uglier they all are some way connected. Wanting to have harmony in your life and not negative stuff*’. The theme was related also with her struggling to say no as something new for her that she has not much experienced before and consequently something she ‘*can’t control*’. Commonly, she was used to ‘*plan ahead*’ and she admitted that her life is ‘*pretty well-planned and organised*’.

In an attempt to explore more this topic with her, I asked how she was interpreting chaos in which she replied that ‘*chaos it’s kind of like no idea of what’s happening. You don’t know what to do and all these other stuff happening before you even know there is another thing and that’s chaos for me*’. Therefore, we started discussing the reasons for her being bothered when a chaotic situation appears in her life. During this conversation, she mentioned that she does not know ‘*how to react properly to different scenarios*’ and that leads her to ‘*freak out [...] or to start to feel anxious, dive way to negative feelings*’. This was the only time she linked the lack of control with the negative bodily responses she had: ‘*just not being in control of everything somehow I react with my body*’.

During the tenth session, we had a very interesting improvisations and an introspective dialogue afterwards. During the phone call, Areti felt frustrated due to the fact that she could not convince her friend to make the correct decision. After the third impro where she reacted by not trying to control her friend's decision, she felt *'both good and bad at the same time because this is not the way it should go but then again sort of like hopeful that well it might lead to some better situation still even though it's morally incorrect maybe'*. She was constantly struggling with her need for having control not only in her own life but also in her friends' life as well.

On the eleventh session, keeping control of the situation during Vappu made her realise all the negative feelings she used to store inside her: *'I'm really good at taking control like that but inside I'm like totally broken and that's why I probably started tearing up like this cause I didn't tear up back then so'*. Additionally, she could not control the fact that the bird was already dying and this lack of control made her feel guilty. This way of being was taking a lot of energy making life situations exhausting for her so she started searching for a balance between logic and emotions.

Another theme that emerged was the fear to be left alone. Being with her fiancé made her feel safe and before she met him she *'felt very alone'*. In addition, during the sixth session where she pictured herself alone without him, she started feeling *'sort of like self-pity'* realising also that she had to be *'strong more'* if she was alone. Finally, this theme emerged regarding friendships as well during the eighth session: *'I'm afraid if that kind of friendship is destroyed I won't get friendships like that anymore'*. However, by virtue of the short therapy process, we did not have the time to delve deeply into this one.

Stress factors

Areti discussed various times the relationship between stress and pain. On the second session, when I directly asked her whether she observes some feelings that may cause the pain she replied *'often when I 'm very stressed out and I 'm already feeling like - yeah.. - if I 'm very tired and stressed and have negative emotions often the pains are worse at that time'*. Additionally, she reported that various times during the session if she is doing something she has to make an effort this is stressing her and she *feel the pains more*. This also happened in the fifth and sixth session and she admitted that mostly the problems appear when she is very stressed out and *the pains come stronger'*.

In the ninth session, we explored the reasons leading to a stressful situation and the coping

skills she had towards these events. She used to have a ‘*sense of panic at first*’ and then she tried different reactions in order to cope with the situation. Not knowing the result of these attempts was stressful enough for her. Regarding these thoughts she commented ‘*If I’m super stressful [...] then I usually get like migraines or something easier cause I can stress like that and probably the tension also launches the pain*’. To conclude, she started realising the connection between stress and pain and this realisation was of great meaning for her.

Factors of everyday life (*sleeping issues, dietary issues, wheather/time of the day*)

These factors were sparsely discussed during the process. In general, sunny weather made her feel better regarding the fibromyalgia condition. Having a good night sleep and following a healthy diet were also helpful. In contrast, rainy weather, jet-lag and changes on the daily schedule resulted in migraines and bodily pain.

6 DISCUSSION

Fibromyalgia can be a very challenging condition for the patients. Everyday life could become a real struggle since pain and other comorbidities could create feelings of insecurity and inadequacy. Nevertheless, more and more patients are seeking for alternative choices to the biomedical model in order to treat the pain. Music therapy is gaining ground amongst these choices since evidence-based practice is increasingly supported.

In this case study, music acted as an analgesic in ways that Mitchell et al. (2007) have already described: either as distraction, relaxation, perceived control or enhancement of well-being. The improvisations we had with Areti induced strong emotional reactions and feelings, guiding her into an explorative path of self-awareness and recognition of her fibromyalgia. There is a quote credited to Nathaniel Branden¹ that says “the first step towards change is awareness”. Areti identified her emotions and bodily reactions and as a consequence, the way these responses are connected into a common framework. Quoting her own words: *‘this (music therapy) had been very helpful to recognise that (the connection between mind and body) even more. Listen to my body more and also listen to what’s happening here [showing her mind]. Does it have something to do with the pains today? [...] So yeah, it’s been very helpful!’* Using music, she looked her own behavioural habits in the eyes, trying to understand them and shift the nature of the malicious ones for her own sake.

Cassell (2004) suggests that suffering from pain could be encountered if the sufferer gains an understanding of the noxious stimulus and shifts its meaning. During the process, we reached the point of understanding but unfortunately due to limited time we have not reached the second objective that Cassell describes. Hopefully, Areti continues her journey towards pain healing since music therapy showed her one of the paths to follow by creating a mental bridge between her mind and body.

Besides the fact that the process was relatively short, it was conducted for completing my

¹Nathaniel Branden (1930-2014) was a a Canadian-American psychotherapist and writer known for his work in the psychology of self-esteem.

internship as a music therapist. Hence, I was not an experienced music therapist at the time of the therapy (with all the limitations that this could imply). This could justify the excessive use of music listening (with VAT equipment) that could have possibly been more narrow. Perhaps an experienced music therapist could have acted differently towards the situation. However, this admission does not diminish the positive effect that the process held for the client. Furthermore, due to the lack of time, we did not delve deeply into significant themes that emerged during the sessions (i.e. keeping things inside, fear to be left alone).

While conducting the literature review, I was able to find a decent number of articles regarding music and chronic pain. However, the majority of these articles concerned music listening as an intervention and most of the research was conducted in an experimental setting. This did not happen in the case of music and fibromyalgia where the articles were noticeably less and concerned only music listening; in none of them there was a clinical setting involved but they rather were experiments with a moderately small sample (See Table 3 in chapter 2.1.5).

This case study attempted to fill this lack in research regarding music therapy (and in particular, active music therapy interventions) and fibromyalgia. Music therapy uses a wealth of music methods apart from music listening, like improvisation, songwriting and so on, which all need clarification and further fieldwork. Inside a clinical setting, the therapist creates a safe environment in which the client is free enough to explore oneself. This is one of the reasons that the clients keep coming back to complete the treatment cycle. Moreover, music therapy (like chronic pain) is an individualised experience and this individuality can be reflected effectively in single case study designs.

The outcome of this research could be useful for therapists, researchers but also individuals suffering from fibromyalgia in a variety of ways. It provides a new aspect on how a client acted and took advantage of music for her own benefit and well-being. It would be interesting to see case study designs regarding longer treatment cycles, research on the therapist, on the music that was used or even on psychodynamic concepts like the therapeutic relationship. Research on the field could also turn to other disciplines in order to gain essential information about the topic under study. Additionally, there is a great diversity in regards to ethnicity, age and gender in the existing literature stressing the need for more qualitative and quantitative research. Only future research could shed some light on the multifaceted effects of music therapy on people suffering from fibromyalgia or other bodily issues.

7 CONCLUSION

This study was triggered by my desire to enquire into the ways that music therapy could help regarding a chronic pain condition. While focusing on the specific client, I attempted to explore the effect that chronic pain had on her as seen inside the therapy room, the ways that music therapy affected her condition and whether the identification of the connection between mind and body would prove beneficial for her.

Areti was struggling with her fibromyalgia as chronic pain was creating feelings of frustration, anger, guilt and dissatisfaction. Music therapy guided her to learn herself better and interpret her existence as a whole. These interrelated elements are forming an entity that makes the human individuality even more interesting and elegant. Most importantly, she developed coping skills in handling the factors which made her pains worse as she showed an enhanced ability in discovering both herself but new strategies as well. During the process, both of us discovered only a single aspect of the dynamics of music therapy by joining an explorative journey that made me realise that:

The therapeutic power of music is infinite.

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A APPENDICES

A.1 Insomnia Severity Index (ISI)

Insomnia Severity Index

The Insomnia Severity Index has seven questions. The seven answers are added up to get a total score. When you have your total score, look at the 'Guidelines for Scoring/Interpretation' below to see where your sleep difficulty fits.

For each question, please CIRCLE the number that best describes your answer.

Please rate the CURRENT (i.e. LAST 2 WEEKS) SEVERITY of your insomnia problem(s).

Insomnia Problem	None	Mild	Moderate	Severe	Very Severe
1. Difficulty falling asleep	0	1	2	3	4
2. Difficulty staying asleep	0	1	2	3	4
3. Problems waking up too early	0	1	2	3	4

4. How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern?

Very Satisfied Satisfied Moderately Satisfied Dissatisfied Very Dissatisfied
0 1 2 3 4

5. How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life?

Not at all
Noticeable A Little Somewhat Much Very Much Noticeable
0 1 2 3 4

6. How WORRIED/DISTRESSED are you about your current sleep problem?

Not at all
Worried A Little Somewhat Much Very Much Worried
0 1 2 3 4

7. To what extent do you consider your sleep problem to INTERFERE with your daily functioning (e.g. daytime fatigue, mood, ability to function at work/daily chores, concentration, memory, mood, etc.) CURRENTLY?

Not at all
Interfering A Little Somewhat Much Very Much Interfering
0 1 2 3 4

Guidelines for Scoring/Interpretation:

Add the scores for all seven items (questions 1 + 2 + 3 + 4 + 5 + 6 + 7) = _____ your total score

Total score categories:

0–7 = No clinically significant insomnia

8–14 = Subthreshold insomnia

15–21 = Clinical insomnia (moderate severity)

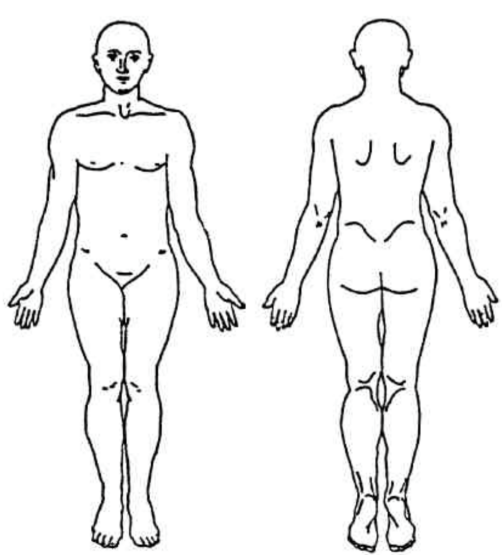
22–28 = Clinical insomnia (severe)

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A.2 Pain drawing

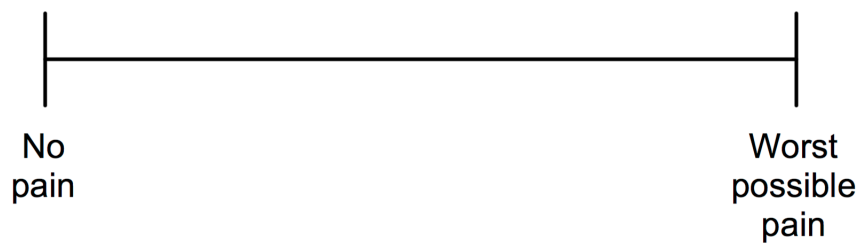
Where is Your Pain?

Please mark, on the drawings below, the areas where you feel pain. Write “E” if external or “I” if internal near the areas which you mark. Write “EI” if both external and internal.



A.3 Visual Analogue Scale (VAS)

Visual Analog Scale



A.4 Themes and instruments used in the improvisations

Session	Improvisation	Instruments	Theme
1	a	T: Djembe C: Metallophone	-
	b	T: Small Metallophone C: Big Metallophone	-
	c	T: Piano bass register C: Piano high register	-
	d	T: Piano bass register C: Piano high register	Something more energetic
	e	T: Piano bass register C: Piano high register	Fun and happy (T)
2	a	T: Small metallophone C: Bigger metallophone	Getting ready to go to sleep
	b	T: Small metallophone C: Bigger metallophone	Having to wake up again, something more energetic
3	a	Djembes	-
4	a	Stage pianos	Something to do with nature, water elements, raindrops
5	a	Malletkat	Super happy
	b	Malletkat	The same theme (super happy)
6	a	Stage pianos	Coping with pain alone
	b	Stage pianos	Coping with pain with fiancé
7	a	Malletkat	Beautiful vs Ugly: She plays something nice and I interfere (T)
	b	Malletkat	Beautiful vs Ugly: I play something nice and she interferes (T)
8	a	Djembes	Exercise in saying no
9	a	Stage pianos	Chaos and structure
10	a	Malletkat	Her actual reaction to the phone call
	b	Stage pianos	Refusing to listen
	c	Stage pianos	Staying focused on herself
11	a	Stage pianos	The feeling of having to leave the situation
12	a	Stage pianos	Happy ending of the process

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