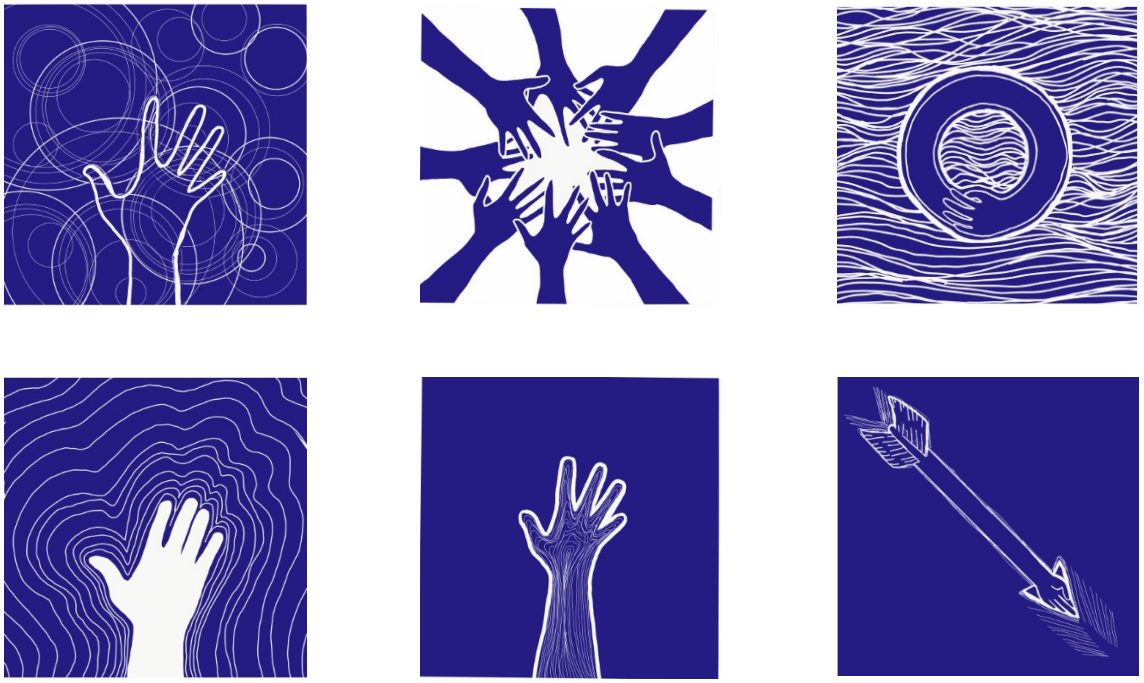
Zürcher Hochschule der Künste in Kooperation mit der Interkantonalen
Hochschule für Heilpädagogik, Upgrade MAS Klinische Musiktherapie

BEING KIND TO ONESELF

MINDFUL SELF-COMPASSION IN MUSIC THERAPY AS A RESOURCE FOR INDIVIDUALS WITH CHRONIC PAIN

A PILOT-STUDY



Theoriearbeit zur Erlangung des Titels
Master of Advanced Studies Klinische Musiktherapie

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ABSTRACT (ENGLISH VERSION)

The practice of mindful self-compassion (MSC) has gained increasing interest in chronic pain treatment. This mixed-method pilot study, explored the use of MSC techniques in the context of MTH, to investigate its influence on chronic pain acceptance (CPA) and pain reduction. Eight patients diagnosed with chronic pain attended eighth weekly successive individual MTH sessions. Qualitative data was gathered through focused interviews. Quantitative data by administering the Self-Compassion Scale and Chronic Pain Acceptance Questionnaire and pain perception through Numeric Rating Scale pre-and post-therapy. Qualitative results were analyzed using thematic analysis, quantitative results with descriptive and parametric statistics, comparing and correlating pre-post results. Results indicated that MSC and CPA both increased with a positive correlation and a reduction in pain perception. Qualitative results showed that patients evaluated MTH amongst others, under the aspects of relaxation and self-care. Implications about the use of MSC techniques in Music Therapy were discussed.

Key words: chronic pain, somatoform pain, music therapy, chronic pain acceptance, mindful self-compassion, mindfulness, pain reduction

TITLE & ABSTRACT (GERMAN VERSION)

Liebevoll Mit Sich Umgehen
Achtsames Mitgefühl in der Musiktherapie als Ressource für Menschen mit chronischen Schmerzen
Eine Pilotstudie

Die Praxis des achtsamen Selbstmitgefühls (MSC) hat in der Behandlung von chronischen Schmerzen an Interesse gewonnen. Die vorliegende klinische Pilotstudie, bediente sich einer quantitativ-qualitativen Forschungsmethodik und explorierte Techniken aus dem MSC im Kontext der Musiktherapie, um die Auswirkungen von MSC auf die Schmerzakzeptanz (CPA) und Schmerzreduktion zu erforschen und eine mögliche Korrelation aufzuzeigen. Acht Schmerzpatienten frequentierten wöchentliche Musiktherapiesitzungen im Einzelsetting. Qualitative Daten wurden mit fokussierten Interviews erhoben. Quantitative Daten mit den Fragebogen Self Compassion Scale, Chronic Pain Acceptance Questionnaire und Schmerzempfindung durch numerische Rating Skalas vor und nach Studienbeginn gemessen. Qualitative Daten wurden in einer thematischen Analyse evaluiert. Quantitative Daten wurden anhand deskriptiver und parametrischer Mittel ausgewertet und durch eine Korrelation verglichen. Die Resultate zeigten, dass MSC und CPA in einer positiven Korrelation stiegen und eine Schmerzreduktion nachgewiesen werden konnte. Qualitative Daten indizieren, dass die Patienten die Musiktherapie, unteranderem, unter den Aspekten von Entspannung und Selbstfürsorge evaluierten. Folgerungen für die Anwendung von MSC-Techniken im Kontext der Musiktherapie wurden diskutiert.

Schlagwörter: chronische Schmerzen, somatoforme Schmerzen, Musiktherapie, chronische Schmerzakzeptanz, achtsames Selbstmitgefühl, Achtsamkeit, Schmerzreduktion

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REMARKS ON LANGUAGE

The presented thesis is written in the English language, though at parts the reader may find German citations, as the participants in the clinical study were German speaking. The author paraphrased German appearances in the text to their best knowledge. The author wants to stress, that this presented paper used non-discriminative and non-sexist language. Statements in this paper are always inclusive of all genders, religions and ethnicities. Absolute statements in this paper are supported by research, whereas assumptions are pointed out as such. All the above remarks, were implemented to the authors best knowledge.

1. INTRODUCTION

You know quite well, deep within you, that there is only a single magic, a single power, a single salvation and that is called loving. Well, then, love your suffering. Do not resist it, do not flee from it. It is your aversion that hurts, nothing else. -Herman Hesse-

1.1 PREFACE: MOTIVATIONAL STATEMENT

There is a story from Buddhist teachings which has accompanied me for many years. The parable of the second arrow tells the story about how after being hit by a first arrow, one has the choice to accept a difficult life condition, or suffer from a second arrow through actions such as self-denial, self-judgment or shame. This second arrow is caused by one-self, potentially resulting in more suffering. The first time I heard this parable was during my music therapy internship in New Orleans, where I attended a day workshop about mindfulness in psychotherapy. It was led by a Buddhist monk, who works as a psycho-therapist. He stressed the importance of offering patients compassion, opportunities for mindfulness and easing the pain of the second arrow. Throughout my early experience in clinical work, I found that patients often indulge in second-outcome suffering, hitting themselves with a second arrow.

In my undergrad studies in music therapy I was always intrigued by the unconditional compassion that I, as therapist, could give patients in a therapeutic setting through verbal and nonverbal compassion. My personal definition of music therapy is still developing through clinical experience; however, a constant aspect is that it is a process-oriented form of treatment occurring within a therapeutic relationship between a client and a ther-apist springing from a sense of compassion and beneficence nurturing the growth of a client. I have attended multiple continuing education courses, enhancing Buddhist prin-ciples such as mindfulness and an extensive course on mindful self-compassion, for my own self-care as a clinician.

The topic for this master thesis developed while working in a private hospital on a special unit for individuals suffering from chronic pain. Music therapy is not part of their weekly treatment plan due to limited resources, and only indicated in special circumstances such as opportunities of relaxation and emotional regulation. In preparation and during this

underlying research study, I had the opportunity to study the positive effects of music therapy in the context of individual music therapy sessions, hoping to increase the resources for this population at the clinic where I work. Based on informal clinical observations these patients seem to have much empathy for others, but seem to lack directing this quality towards themselves. I observed this by their often-altruistic backgrounds and their empathetic interaction with other patients with similar stories. While researching this phenomenon, I found a preliminary answer. Interestingly, neuroscience found that empathy for other's pain and personal pain perception occur in the same brain areas. According to the perception-action model, the perception of actions and emotions activates the same neural mechanisms that are responsible for the actual generation of those actions and emotions (Preston & De Waal, 2002). The seeming lack of self-compassion, altruism, and the increased self-indulgence while living with a chronic pain condition eventually inspired this research paper. I wondered, how using the concept of mindful self-compassion within the context of music therapy, would affect their pain acceptance. The main objective is to research if the development of self-compassion during music therapy sessions will lead to increased pain acceptance, and consequently to pain reduction.

As a clinician, I find research questions that evolve out of a clinical observation, and when the purpose of the research is geared towards the improvement of patient's well-being, meaningful. Further, I am a strong advocate for increasing research in the field of music therapy, as it is still an evolving and advocacy is crucial in advancing our professional field. These two aspects were a great motivating factor throughout this master thesis. I feel privileged to be a young and learning researcher in this field.

1.2 OVERVIEW

The prevalence of people suffering from chronic pain is peaking and the need and quest for alternative intervention is rising (Bachmann et.al., 2015, pp.168-174).

Hoffmann (1997, pp. 73-75) noted that people with chronic pain are not only affected in their physical domains, but they also experience difficulties in their relationship with self and others, decreasing their quality of life, and often not rarely leading to suicide. An important role in the treatment of patients with chronic pain has been described as treating the whole person, therefore treating the physical, social, cognitive, emotional and psychological factors, since difficulties within any of these factors can not only cause chronic

pain but also foster the continuation of the pain (Hoffmann, 1997, p. 73). A main clinical goal is to "increase the subjective well-being" (Wormit, 2008, p. 38). Considering the general thesis that reality may be shaped by the factors to which we put our main attention, if individuals with chronic pain focus merely on the pain itself, it might persist as a main focus in their reality. "We suffer with pain because we bundle awareness of tissue trauma with complex schemata that have negative cognitive and affective features" (Chapman, 2012, N.A.).

The importance of self-compassion for individuals suffering from chronic pain has only recently found its way into research literature, since research in psychology is increasingly adapting Eastern traditional concepts. Compassion is one of those Eastern concepts and a skill that can be developed and strengthened (Germer, 2009, p. xi). According to Neff & Germer (2013), pioneers in the research on self-compassion developed a concept called mindful self-compassion, which encompasses six components structured in three pairs of opposing components: Self-kindness versus self-judgment, common humanity versus isolation and mindfulness versus over identification.

Self-kindness versus self-judgment, entails that an individual turn inward to give oneself unconditional acceptance, warmth and comfort towards a difficult aspect of one's life. Chronic pain sufferers often engage in self-judgment, since they may have encountered multiple rejections in their seemingly endless treatments. In traditional medical settings, chronic pain is often considered a somatic condition, however, the chronicity of pain persists when the psychological aspects of the condition are not treated (Reisch, 2002, pp. 551-553).

A second component is a sense of common humanity versus isolation, which involves adapting the belief that one's suffering, is universal and part of the shared human experience. The quality to do so may aid people to not feel isolated, and helping them to connect with others in similar situations. Chronic pain sufferers often live a life in isolation, due to decreased activity, the loneliness inherent experiencing pain, and commonly a yearlong path of trying to find the cause.

The third component is mindfulness vs. over identification (Neff, 2009, p. 562). Mindfulness involves "being aware of present moment experience in a clear and balanced manner so that one neither ignores or ruminates on disliked aspects of oneself or one's life"

(Brown & Ryan, 2003, N.A.). When living with a chronic pain condition, over-identification is common, as pain may become part of an individual's identity and purpose. The construct of mindful self-compassion is often utilized as a strategy for emotional regulation. "Thus, negative emotions are transformed into a more positive feeling, allowing a clearer apprehension of one's immediate situation and the adherence of actions that change oneself and/or the environment in effective ways" (Costa & Pinto-Gouveia, 2013, p. 1580). Developing self-compassion may alleviate that pain. Self-compassion is often associated with acceptance. Research has shown that acceptance may be used to lower pain intensity, lessen feelings of anxiety and avoidance, lessen depression, decrease physical and psychological disability, and provide more daily activity and better work status (McCracken & Eccleston, 2005). Accepting pain can be crucial when it "requires the recognition that avoiding and controlling pain are ineffective strategies" (Costa & Pinto-Gouveia, 2011, p. 293). Although there is growing research on how to acquire mindful self-compassion through regular practice, it has not found its way into music therapy research.

This underlying paper and clinical study will draw lines between music therapy and mindful self-compassion, as the author found that improving self-compassion for sufferers of chronic pain may increase pain acceptance and reduce pain perception. The author will rely on preexisting research to make connections and hypothesizes that through engaging in music therapy, mindful self-compassion and acceptance scores will increase predicting a direct correlation between the two. The potential of music therapy in helping patients acquire more self-compassion, from the perspective and experience of the author, has great potential. Music may draw a patient to the here and now, due to its immediacy of effect. Chronic pain sufferers have difficulties remembering comfortable emotions of well-being. Through music therapy intervention, positively associated memories can be reactivated, which in result decreases chronic pain (Hillecke, 2005, p. 47). Another important factor is the nonverbal nature of music therapy as an intervention, which is especially valuable for chronic pain sufferers; often those individuals who have long medical histories and have learned to verbalize and cognitively rationalize their pain (Hillecke, 2005, p. 51). Another advocacy for music therapy is the potency of the therapeutic relationship. Gilbert (2005) describes that self-compassion can be correlated with the attachment system and individuals who were raised in safe and caring environments will be

more likely to be caring and compassionate toward themselves. Using the MSC concept in a music therapy context may provide a safe space for patients to experience self-compassion. This research study will be enhanced by a mixed-method of quantitative and qualitative research methods.

To guide the reader through this thesis, in the first chapters you may find an overview of the current state of research on the topics of chronic pain, acceptance, mindful self-compassion and music therapy with chronic pain, followed by an overall summary. Following the literature review, the aims of the underlying clinical pilot-study will be stated, the guiding research questions introduced and the methods and procedures will be explained and elaborated. The results section of this theses will give you an overview of the quantitative and qualitative findings, which will lead you into the final chapters, where the results will be discussed, the methods will be reflected and an outlook for further research in this field will be illuminated. The conclusion chapter will summarize the content of this thesis through a critical and hopeful lens.

2. LITERATURE REVIEW ON CHRONIC PAIN

"There are few problems more worthy of human endeavor than the relief of pain and suffering" (R.Melzack).

The literature concerning chronic pain is as vast as the phenomenon of pain itself, and the ongoing research within the field. In the following chapter, the author will give an overview of the magnitude and complexity of the chronic pain problem and elaborate on diagnostic classifications of pain syndromes and introduce several key concepts to consider during treatment.

2.1 PREVALENCE OF CHRONIC PAIN

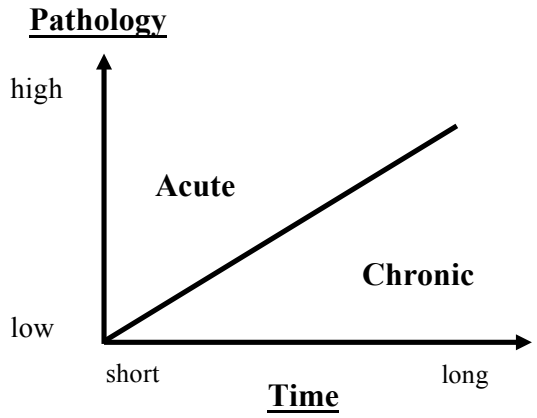
The effects of chronic pain are often cited within the literature as a multifaceted problem, occurring in astronomical proportions around the world, magnified by its influence on direct and indirect medical costs resulting ranging from lost daily life skills and productivity. According to the European Pain Federation (2017, N.A.) "pain is a major health problem, a disease in its own right". Pain appears to be a major healthcare problem in Europe. Although acute pain may be reasonably considered a symptom of disease or injury, chronic and recurrent pain is a specific healthcare problem, a disease of its own. The prevalence of chronic pain is difficult to define, "although comprehensive epidemiological data for the European Union are not available, chronic pain is clearly a very widespread condition" (EFIC, 2017).

Chronic pain is considered a biopsychosocial construct, as it gages different biological, psychological and social factors that interact with each other (Wahl et al., 2014). The difficulties in acquiring relevant statistical data on the prevalence of pain exemplifies the ambiguous phenomenon, since a majority of individuals don't report their pain, stop seeking treatment after receiving false diagnoses or the lack thereof. "Chronic pain prevalence increases with age, is greater among females than males, and among people with lower, compared with higher, socioeconomic status" (Katz, Rosenbloom, & Fashler, 2015, p. 162). According to the European Pain Federation (2017) "50 percent of adults sampled suffered from one or more types of pain at any given point in time, in a substantial proportion of those surveyed, the pain was both chronic and severe."

2.2 DEFINITION OF CHRONIC PAIN

The word pain derives from the Latin word "poena", which means penalty or punishment. A main differentiation in the literature is found in acute versus chronic pain. "Pain serves an important evolutionary function and is essential for survival, directing the organism's immediate attention to the situation, promoting reflexive withdrawal or active defense, instigating actions to prevent further damage, and thereby facilitating healing" (Flor & Turk, 2011, p. 3). Acute pain can be regarded as a life-sustaining function, which detects damaging stimuli upon which the organism can react (Hillecke, 2005). Tryba & Zenz (1993) define acute pain as an uncomfortable sensory, emotional and mental sensation, with accompanying vegetative, psychological behavioral reactions, which are caused through injury or illness. "This acute pain signal is useful and adaptive, warning the individual of danger and the need to escape or seek help, it is a direct outcome of the noxious event, and is reasonably classified as a symptom of underlying tissue damage or disease" (EFIC, 2017, N.A.). In the case of chronic pain, that persists, however, there is the prediction that pain serves no warning signal function. "Chronic pain is defined as continuous, long-term pain that has lasted for more than six months, or that prolongs after the time that healing would have been thought to have occurred" (Verin, 2012, p. 1). The below graph shows the conceptualization of acute and chronic pain considering pathology and time.

Figure 1: Two-dimensional conceptualization of acute and chronic pain (Flor & Turk, 2011, p. 15)



2.3 HISTORICAL PERSPECTIVES ON CHRONIC PAIN

An early example of the medical understanding of the phenomenon of pain is drawn from the French philosopher Descartes. It was in his understanding, that pain must be separated, in his terms "res extensa" and "res cogitans", the separation of a physical and spiritual world, that developed the concept known as "dualism" (Hausteiner-Wiehle & Henningsen, 2012, p. 19). Our medical understanding of pain, is based on this dualistic structure, namely the separation of a somatic and psychological pain differentiation, and is partially instilled to this day. Prior to the 1960's pain was ascribed to the domain of sensory physiology, and pain was not regarded as a main consideration for treatment in its own terms. As the cause of the pain was or wasn't detected, the patient with a pain problem would be declined service and no longer be considered for treatment (Katz et al., 2015, p. 5). Hausteiner-Wiehle & Henningsen (2012, p. 20) ascribe this understanding of mind-body separation to acute pain, since chronic pain may lack a somatic medical explanation and persists beyond medical understanding. This traditional medical view of pain has been referred to as a unidimensional, sensory-physiological model.

In the late 70's L. Engel influenced the understanding of chronic pain, by introducing the theories of the biopsychosocial model, applicable to chronic pain as it shaped the phenomenon on a multidimensional level. At the foundation of this theory is that the "Cartesian mind-body dualism is replaced by a postulation that 'mind' and 'body' are not distinct entities, but rather different levels of inquiry about the human condition"(Landa et. al., 2012. p. 3). Definitions of chronic pain, however, to this day are as diverse as the conceptualizations of the phenomenon that authors have decided to take. Treede et. al, (2015) on the subcommittee on Taxonomy further defines pain is always subjective. The importance of this addition to the definition is crucial, since it indicates that the emotional component of pain is part of the pain experience and not "as a separate and secondary reaction to the pain" (Katz et al., 2015, p. 10). Anand and Craig (1996, p. 5) stated "The assumed congruence between self-reported and subjective experience may not be valid because response biases, motivational factors, and situational variables can influence the report of pain." This view is considered, as self-reporting pain is always context-dependent based on cultural, social and psychological reasons for eliciting the expression of pain.

2.4 NEUROBIOLOGICAL MECHANISMS

Since pain perception activates several neuronal, cortical and sensory processes in the brain, the neurobiological mechanisms are essential to the understanding to chronic pain. Two approaches to explain medically unexplained disorders are the psychological and neurobiological explanatory models. The latter is well researched on a micro level. For the purpose of this study, the author selected significant concepts that will also be relevant in later chapters.

The detection of pain is a type of somatosensory stimulus noticed by cutaneous (skin) and organic (internal) sensors. Taylor (2010, p. 136) describes the activation of sensory transduction, which result in the perception of pain as nociception, which serves a positive function, since it notices when something is not right in an area of the body. Nociceptors (pain receptors) are a part of the central nucleus of the amygdala. "Its primary function is to integrate nociceptive information with a variety of other information arriving from both internal and external sensory sources" (Taylor, 2010, p. 136). Chronic pain with a medically explained somatic root can be divided into two classes, nociceptive and neuropathic pain (Hausteiner-Wiehle & Henningsen, 2012, p. 19). Nociceptive pain is caused by a stimulus of the pain receptors distinguished by thermic, mechanical or chemical stimuli (Hillecke, 2005). Neuropathic pain has is rooted in the nerve pathways, "which means the way that the nerve sends pain messages to the brain is affected" (Verin, 2012, p. 1). The latter pain is a perceptual phenomenon based on the integration afferent and efferent processes requiring a conscious organism (Katz et al., 2015). Persistent pain can result in plastic changes in the central and peripheral nervous system, "a complex integrated response consisting of sensory, emotional, cognitive, and behavioral components that may be described on the verbal-subjective, motor-behavioral and physiological levels" (Katz et al., 2015). Birbaumer et. al. (1995) researched the imagery of electrical signals in the cortex after the sensation of a pain signal, with which they contributed to evidence of a pain memory. After administering the same pain stimulus to a control group and a group of patients with chronic back pain, the pain patients reacted much stronger to the signal than healthy individuals did. Stimuli that are transported from our main five senses each have a reserved location in the cortex. Jones et. al. (1991, pp.39-44) found that not only the cortex is active when inducing a pain signal but also the Cingular cortex, which is part

of the limbic system. Hebbian theory defined that "neurons that fire together, wire together" and this is relevant in this context as the more a signal fires the bigger the synapses grow and with it its location in the cortex. “Neural plasticity may be defined as the capacity of neurons to change their function, electrophysiological properties, biochemical profile, or structure” (Neugebauer et. al., 2004, p. 551). This model becomes especially applicable in somatoform pain (see below). Melzack (1999) established the pain matrix, which defined two separate systems, the lateral system (sensory perception) and medial system (affective & cognitive) pain perception. “Regardless of the presence or absence of an identifiable etiological trigger, when neuroplasticity goes awry in certain at-risk people, the pain becomes the disease” (Katz et. al., 2015, p. 161).

The International Association for the Study of Pain (IASP), launched a taskforce to advocate for a diversified classification within the International Classification of Diseases (ICD-10) to diagnose chronic pain. Pain categories are variably defined based on the perceived location (headache), etiology (cancer pain), or the primarily affected anatomical system (neuropathic pain). Some diagnoses of pain defy these classification (Treede et al., 2015). Since the phenomenon of pain is dependent on subjective perception, the “self-report” of patients is desired when assessing chronic, while acute pain, evoked potentials (SEP), can be measured similarly to other sensory processes (visual, tactile, aural), this kind of measurement has not been proven in the case of chronic pain (Hilleke, 2005, p. 21). Current literature indicates that there are no reliable physiological indicators or measurement procedure to measure pain (Egle, 1993).

2.5 Attachment Styles And Chronic Pain

Nociception is the reaction of neurobiological mechanisms within different systems, however there are several concepts that elaborate on the psychology of pain. The interplay between these concepts presented in the following, assist in understanding the multidimensional aspects of chronic pain. “The mere absence of somatic findings should never qualify as a precondition for the diagnosis of a psychologically determined pain problem” (Flor & Turk, 2011, p. 47).

“Adult attachment style is a psychological representation of self and others, determined by early childhood experiences of relationships with primary caregivers” (Davies et. al., 2009, p. 201). The same authors further researched those early experiences could be

closely related to how individuals deal with threatening situations, and specifically in relation to chronic pain. Often insecure styles are predetermined to increase pain-related fears, reduced pain threshold, hypervigilance to pain, poor pain coping, negative appraisal of pain, increased pain perception and disability. "Individuals with insecure attachment style are more likely to develop pain, and once pain has developed they are more likely to perceive it as more intense, disabling and distressing" (Davies et. al., 2009, p. 202).
In the following table the four adult attachment styles are defined:

Table 1: Four adult attachment styles (Bartholomew & Horowitz, 1991, pp. 226-244)

Secure:	Positive model of self and other in a relationship
Preoccupied:	Negative model of self, positive model of other
Fearful:	Negative model of self and other
Dismissing:	Positive model of self, negative model of other

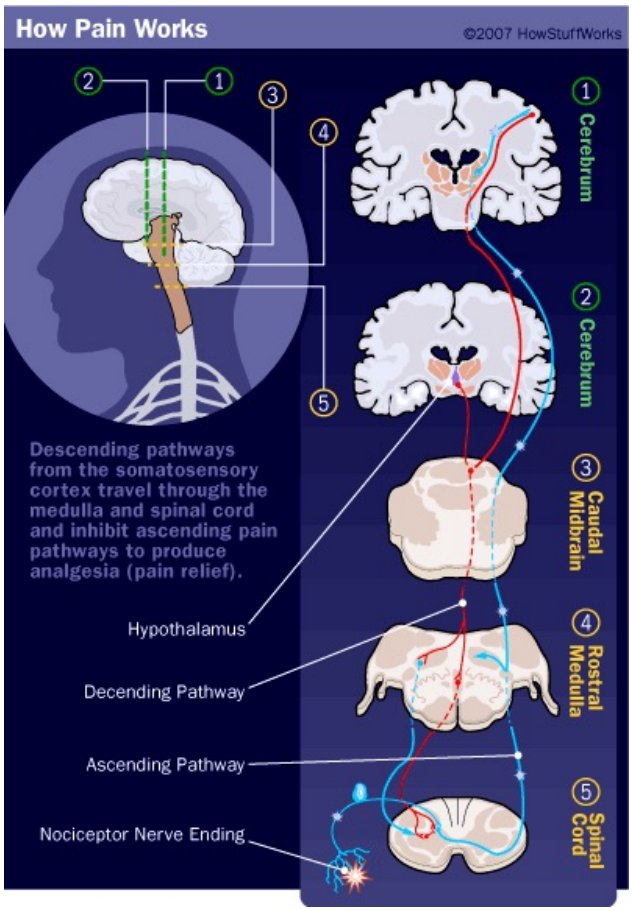
These attachment styles may play a role in a biopsychosocial approach to treatment. Nociception was long researched by sensory input that inhibits pain sensation, however, research of psychological mechanisms that intensify pain sensation were historically neglected and often providers don't consider these factors. "The essence of this developmental theory is that suboptimal early interpersonal experiences with caregivers may interact with one's genetic predisposition, leading to disrupted maturation of neural circuits involved in affect regulation and interpersonal functioning, yielding the persistence into adulthood of developmentally earlier tendencies to experience distress somatically" (Landa et. al., 2012, p. 3). Additionally, diverse studies support the findings that Post Traumatic Stress Disorder (PTSD) has a common comorbidity in chronic pain patients (Wahl et al., 2014), bolstering the relationship between psychological mechanisms and pain perception.

2.6 STRESS INDUCED HYPERALGESIA

The term stress induced hyperalgesia was introduced in the past decades and refers to pain that is intensified by stress-related impact and adult attachment styles. The research of Melzack & Wall (1965) challenged the regular stimuli-reaction concept, stating that

the sensory system in the spinal cord can be modulated through a "descending inhibiting" control system. The descending pathways are initiated in the somatosensory cortex, which report to the thalamus and hypothalamus for information to move thalamic neuron information downwards forward the midbrain. The inhibition occurs in the midbrain where the descending and ascending nerve signals coincide and pain relief occurs (analgesia). Those inhibiting mechanisms stem from the stimulation of neurotransmitters, that stimulate natural pain-relief called endorphins and enkephalins.

Figure 2: How Pain works (Taylor, 2010, p. 138)



Conversely Egle et. al. (2016) argue that inhibiting pain mechanisms take on a protagonist role in pain treatment, though they overshadow stimuli that enact pain reinforcement, which were long not considered in the understanding of chronic pain. New research shows that pain sensitivity can be induced by neuroendocrine (hormone-producing) factors

(Rivat et al., 2007). These lead researchers introduced the term "stress induced hyperalgesia" (Egle, 2016, pp.411-413). There is still a misunderstanding in the medical community when considering trauma, stress and early childhood attachment experiences for many chronic pain patients. Neurobiological research found that negative affect such as anxiety or the insecurity resulting from living in pain with an unexplained medical explanation, influence the periaqueductal grey matter (Egle, 2016). Consequently, this increases pain perception, as it affects the descending inhibiting system. Ongoing and lasting stress inhibits neuropeptide Y (NPY) and choleztokinin (CCK), which act as pain reducers in the areas of the Amygdala, PAG and the spinal cord (Egle, 2016, pp. 412-413). To summarize, stress and pain are processed in the same brain areas and therefor act upon each other (Egle, 2016, pp. 415-417). Additionally, in insecure attachment styles oxytocin levels are reduced. Oxytocin is a neurotransmitter whose influence has been ascribed to attachment and stress resistance. The importance of oxytocin is crucial in pain sensation, as it supports pain tolerance and reduced pain sensibility. Engel (1959 as cited in Egle, 2016) in this context introduced the term "pain-proneness", hypothesizing that pain is revived more intensely based on psychological experiences (Egle et. al., 2016, p. 420).

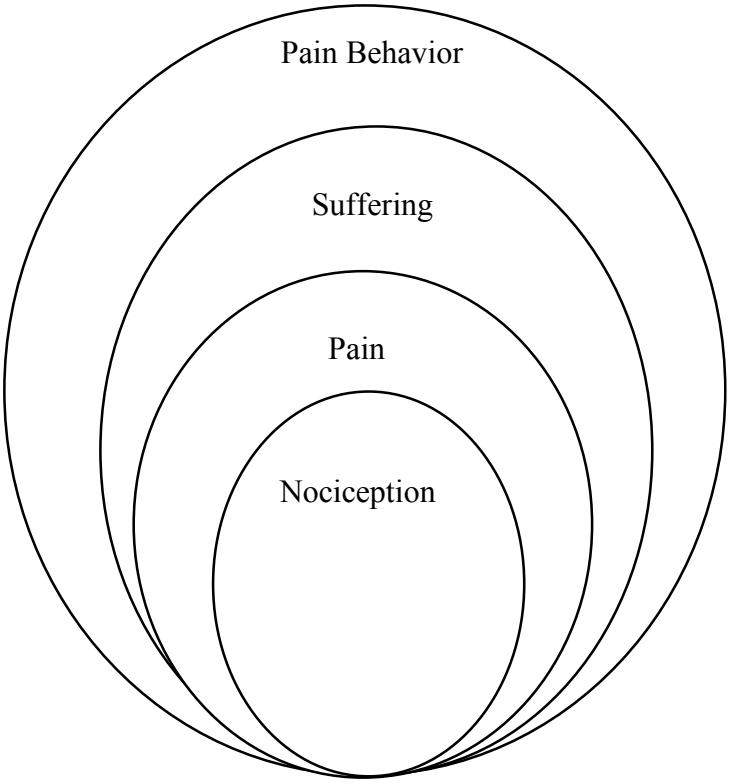
2.7 Suffering And Pain Behavior

There is a distinction between pain and suffering as "suffering is the reaction to a physical or emotional pain with a feeling of uncontrollability, helplessness, interminability, intolerability, and meaninglessness" (Flor & Turk, 2011, p. 17). These contributing factors may cause an immediate threat to an individual's self-concept, leading to anxiety anticipating future consequences and a myriad of other stressors that come with the magnitude of the pain perception.

The consequences of this immense suffering may show in typical pain behavior such as malingering, defined as "conscious fabrication of symptoms to achieve some form of benefit such as attention, to be relieved of undesirable activities, to obtain prescription medication or to qualify for disability compensation" (Flor & Turk, 2011, p. 18). Symptom magnification, another typical behavior, potentially driving to convince others of their suffering by exaggerating their symptoms. "Such behaviors may be non-conscious modes of communicating pain and distress" (Flor & Turk, 2011, p. 19), resulting in false

believes about limited ability, activity levels and control over pain. “Such negative, maladaptive appraisals about the situation and about their personal efficacy may reinforce these patients’ experience of demoralization, inactivity, and overreaction to nociceptive stimulation” (Flor & Turk, 2011, p. 71). The below figure illustrates the interplay between these factors.

Figure 3: The Loeser model of nociception - pain - suffering-pain behavior (Flor & Turk, 2011, p. 16)



2.8 CLASSIFICATION & DIAGNOSTICS OF CHRONIC PAIN

According to McCaffery (1989), pain can be defined only by whatever the person in pain says it is. This holds true to this day, through a review of subsequent literature as evidenced by the widely controversial past and present classification systems. A synopsis of this controversy will be summarized, followed by the current available diagnostic criteria. As chronic pain is considered a multidimensional phenomenon, the diagnostic criteria for chronic pain is not easily defined and varies depending on diagnostic manuals, treatment

context and perspectives of the providers. To compound this complex problem, "the classification system can only be as reliable and valid as the knowledge about a certain disease permits to be" (Flor & Turk, 2011, p. 19). As mentioned above, chronic pain is characterized and distinguished from acute pain by its duration and persistence past normal healing time, which is regarded to be between 3 to 6 months, and used as the most distinct and measurable criteria. Most individuals with chronic pain have medically unexplained symptoms. "Bodily symptoms can be the manifestations of some changes in the inner world of the individual, the delicate changes in some parts of the brain result in changes in bodily sensation, movement and the functions" (Ghanizadeh & Firoozabadi, 2012, p. 353). Although the reciprocal relationship between these two entities is recognized, the medical and psychological fields have not found a consensus on an etiological explanation for medically unexplained symptoms. In a dualistic perspective, the conclusion would lead to the assumption that medically unexplained symptoms must have a psychological cause. Medically unexplained symptoms is therefore an inappropriate term for these patients (Hausteiner-Wiehle & Henningsen, 2012). At the same time, "Attributing pain to a psychological disturbance is damaging to the patient and provider alike [...] it is demoralizing to the patient who feels at fault, disbelieved, and alone" (Katz et al., 2015, p. 163). Diagnosing a patient by exclusion proves critical and instead a biopsychosocial perspective is more inclusive and leads to the process of finding an appropriate treatment. As evidenced by the previous synopsis, the problem evolving around chronic pain is complex, as Nöcker-Ribaupierre (2008, p. 14) stated that pain and its corresponding pain perception are to be individualized, difficult to objectivize and not to be generalized. "There has been insufficient collaboration between the biomedical and behavioral sciences in basic research in the integration of psychological and physiological knowledge, although more recently there have been some signs of greater integration in a neuroscience context" (Flor & Turk, 2011, p. 21). The attempt for collaboration can be found in the two predominant and latest classification manuals the International Classification of Diseases, which is predominantly used in Europe and the Diagnostic and Statistical Manual of Mental Disorders, which is used internationally.

2.8.1 Diagnostic And Statistical Manual Of Mental Disorders (DSM V)

In the DSM V the chapter on somatic symptoms and related disorders categorizes disorders with prominent somatic symptoms. The disorders in the chapter share a common feature "the prominence of somatic symptoms associated with significant distress and impairment" (APA, 2013, N.A.). This new criterion adapts a multidimensional view on chronic pain, as it incorporates affective, cognitive and behavioral components. The DSM V was recently published and the changes made to the previous version help providers to understand diagnostics. In the previous version, the term somatoform disorders may have encumbered understanding as many categorizations lacked definite boundaries. Another problematic aspect of the previous classification was the overemphasis of medically unexplained symptoms and could be difficult as it implies that a diagnosis is given on the absence of an explanation inferring mind-body dualism. It is not advised to give an individual a mental diagnosing on the mere absence of a medical explanation (APA, 2013). Previously these individuals were left with the impression that implying that their symptoms are not real. The new classification defines the major diagnosis of somatic pathology based on positive symptoms. A broad spectrum of contributing factors to somatic disorders are considered to create a broader perspective on the disorder, including "genetic, biological vulnerability, early traumatic experiences, and learning, as well as cultural and social norms that devalue and stigmatize psychological suffering as compared to physical suffering" (APA; 2013, p. 310). The role of social and cultural influences treatment as, "differences in medical care across cultures affect the presentation, recognition, and management of these somatic presentations, thus somatic presentations can be viewed as expressions of personal suffering inserted in a cultural and social context" (APA, 2013, p. 310).

Figure 4: DSM V-diagnostic criteria for somatic symptom disorder (APA, 2013, p. 311)

Somatic Symptom Disorder

Diagnostic Criteria 300.82 (F45.1)

A. One or more somatic symptoms that are distressing or result in significant disruption of daily life.
B. Excessive thoughts, feelings, or behaviors related to the somatic symptoms or associated health concerns as manifested by at least one of the following:
    1. Disproportionate and persistent thoughts about the seriousness of one's symptoms
    2. Persistently high level of anxiety about health or symptoms
    3. Excessive time and energy devoted to these symptoms or health concerns
C. Although any one somatic symptom may not be continuously present, the state of being symptomatic is persistent (typically more than 6 months)

Specify if:

With predominant pain (previously pain disorder): This specifier is for individuals whose somatic symptoms predominantly involve pain.

Specify if:

Persistent: A persistent course is characterized by severe symptoms, marked impairment, and long duration (more than 6 months)

Specify current severity:

Mild: Only one of the symptoms specified in Criterion B is fulfilled.
Moderate: Two or more of the symptoms specified in Criterion B are fulfilled.
Severe: Two or more of the symptoms specified in Criterion B are fulfilled, plus there are multiple somatic complaints (or one very severe somatic symptom)

*2.8.2 International Classification Of Diseases (*ICD-10)

Through literature review and informal exchange with experts the author found the diagnostic criteria in the DSM V more appropriate than that presented in the outdated version of the ICD 10, as it presented similar problems as in the earlier version of the DSM IV. A new version of the ICD (11), which is currently being published in which new categories concerning the etiology of pain are considered (Treede et al., 2015). However, most clinics in Europe use the current version of the ICD 10 as a basis for diagnosis and therefore will be mentioned in the context of this paper. Chronic pain with psychological factors is found under category F45 and will be describes as follows.

F45 Somatoform Disorders

"The main feature of somatoform disorders is repeated presentation of physical symptoms, together with persistent requests for medical investigations, in spite of repeated negative finding and reassurances by doctor that the symptoms have no physical basis" (WHO, 2016, p. 129). In the case that the onset and or continuation of the symptoms closely tied to unpleasant life events patients often don't consider a psychological causation. Investigation of the cause, presents itself to be frustrating and difficult for both client and doctor. "In these disorders there is often a degree of attention-seeking behavior, particularly in patients who are resentful of their failure to persuade doctors of the essentially physical nature of their illness and of the need for further investigations or examinations" (WHO, 2016, p. 129).The subcategories in the ICD 10 are detailed and will not be further discussed in this chapter.

F45.0 Somatization Disorder
F45.1 Undifferentiated somatoform disorder
F45.2 Hypochondriacal disorder
F45.3 Somatoform autonomic dysfunction
F45.4 Persistent somatoform pain disorder
F45.8 Other somatoform disorders
F45.9 Somatoform disorder, unspecified

2.9 CONSEQUENCES OF CHRONIC PAIN

"Although few people die of pain, many die in pain, and even more live in pain" (EFIC, 2018, N.A.).

Most pain patients have no physical source of pain with tissue damage at its root. These individuals classify under section F of the ICD-10 as Somatoform Pain (SP). Chronic pain patients can either have "a tendency to experience and communicate somatic distress in response to psychosocial stress" or also "exacerbate an existing medical condition or comorbidity with other psychiatric disorders such as depression, anxiety, and hypochondriasis" (Landa et al., 2012, p. 2). This presumes that there is a correlation between psychological and biological processes and that each process is experienced subjectively,

therefore self-reporting is integrated in determining the etiology of a clinical problem. Somatization is a mechanism on communicating distress. There is an obvious vicious cycle sufferers face as they seek help from medical doctors. They often won't get the help needed, and yet they face another interpersonal rejection, which further fosters the cycle of pain (Dworkin, 1994, pp. 77-80). Anne Francoise Allaz as mentioned in Hilleke (2005, p. 144) from the Geneva University Hospital observed that thirty percent of all patients who expressed suffering from chronic pain without a proven medical explanation, were diagnosed by their doctors as simulators. Often, those patients receive pharmaceutical pain medication, which can result in long-lasting side effects.

2.10 TREATMENT APPROACHES FOR CHRONIC PAIN PATIENTS

In these previous sub chapters the complexity of chronic pain has been discussed. Treatment approaches are carefully selected depending on the individual needs of the patients. A focus in treatment goals is the perspective of "successful rehabilitation, a shift from beliefs about helplessness and passivity to resourcefulness and ability to function regardless of pain" (Flor & Turk, 2011, p. 75). Treatments that improve self-efficacy in patients give them a sense of control over aversive stimuli. "This variable has been demonstrated as an important mediator of therapeutic change" (Flor & Turk, 2011, p. 75). Treatments then are not curative, but rather rehabilitative. Treatments requiring lifestyle changes are self-reinforcing so that change can be permanent. Regardless, the utmost goal is the reduction of pain perception.

The reciprocal relationship of pain and psychological entities requires psychological intervention, due to its immense impact on intra and interpersonal difficulties. The determination of effective therapy is especially important in the chronic pain field, since it could have an impact on not only patient's satisfaction and quality of life, but also the economic burden on society that the magnitude of the problem causes. Due to this multidimensional complexity, treatment approaches that have been proven most effective are of multidisciplinary nature. "Its aims are to maximize pain improvement, quality of life and psychological well-being" (Bagdi et. al., 2014, p. 4). In the following table several approaches are listed.

Table 2: Psychotherapy approaches on Pain Reduction (Bagdi et. al., 2014, p. 4)

Sensory component	Guided imagery, hypnosis, auto-suggestion, relaxation, bio-feedback, distraction/displacement of attention, music ther-apy, meditation
Affective component	Supportive therapy, meaning-based control of negative emo-tion, dynamic psychotherapy, art therapy
Cognitive component	Psycho-education, didactic, information-based techniques, cognitive attitude-based therapy, cognitive coping therapy
Behavioral component	Operant conditioning, environmental therapy, behavioral therapy

In summary, the consequences for individuals suffering from chronic pain, despite its root and/or cause, can be generalized. Hoffmann (1997, pp. 73-75) noted that people with chronic pain are not only affected in their physical domains, they also experience difficulties in their relationship with self and others, and decreased quality of life, often and not rarely leading to suicide. An important aspect in the treatment of patients with chronic pain is to treat the whole person, therefore treating the physical, social, cognitive, emotional and psychological factors, which not only cause chronic pain, but also foster the continuation of the pain (Hoffmann, 1997, p. 73).

Based on the above findings, the author will elaborate and focus on two elected approaches relevant for this study. The first approach is associated with the cognitive component and involves the concept of accepting chronic pain.

3. LITERATURE REVIEW ON ACCEPTANCE

The following chapter will introduce the use of Acceptance-based approaches in therapy with chronic pain patients, an approach that is associated with the cognitive component of pain. As mentioned in the previous chapter, psychological approaches are widely recognized in treatment for chronic pain. Predominantly, cognitive-behavioral methods (CBT) have found clinical effectiveness. CBT method incorporates two main principles. Firstly, the persuasion that the interplay between the factors impaired due chronic pain and the feelings of chronic pain itself are separable, which means that the dysfunction related to pain could be treated without directly targeting the pain itself. Secondly and evidently, that the improving of psychological factors can influence the experience of pain (McCracken & Vowles, 2014). Due to ongoing research in the field of chronic pain, new therapy approaches have been defined. According to Vowels et. al. (2014), this new wave of therapies challenge normal thought processes, view suffering and pain as part of the human experience, and lay an emphasis on experiential rather than didactic methods. "They also question the utility of normal thinking, believing, analyzing, and problem solving as predominant means for successfully addressing this suffering" (Vowels et. al., 2014, p. 178).

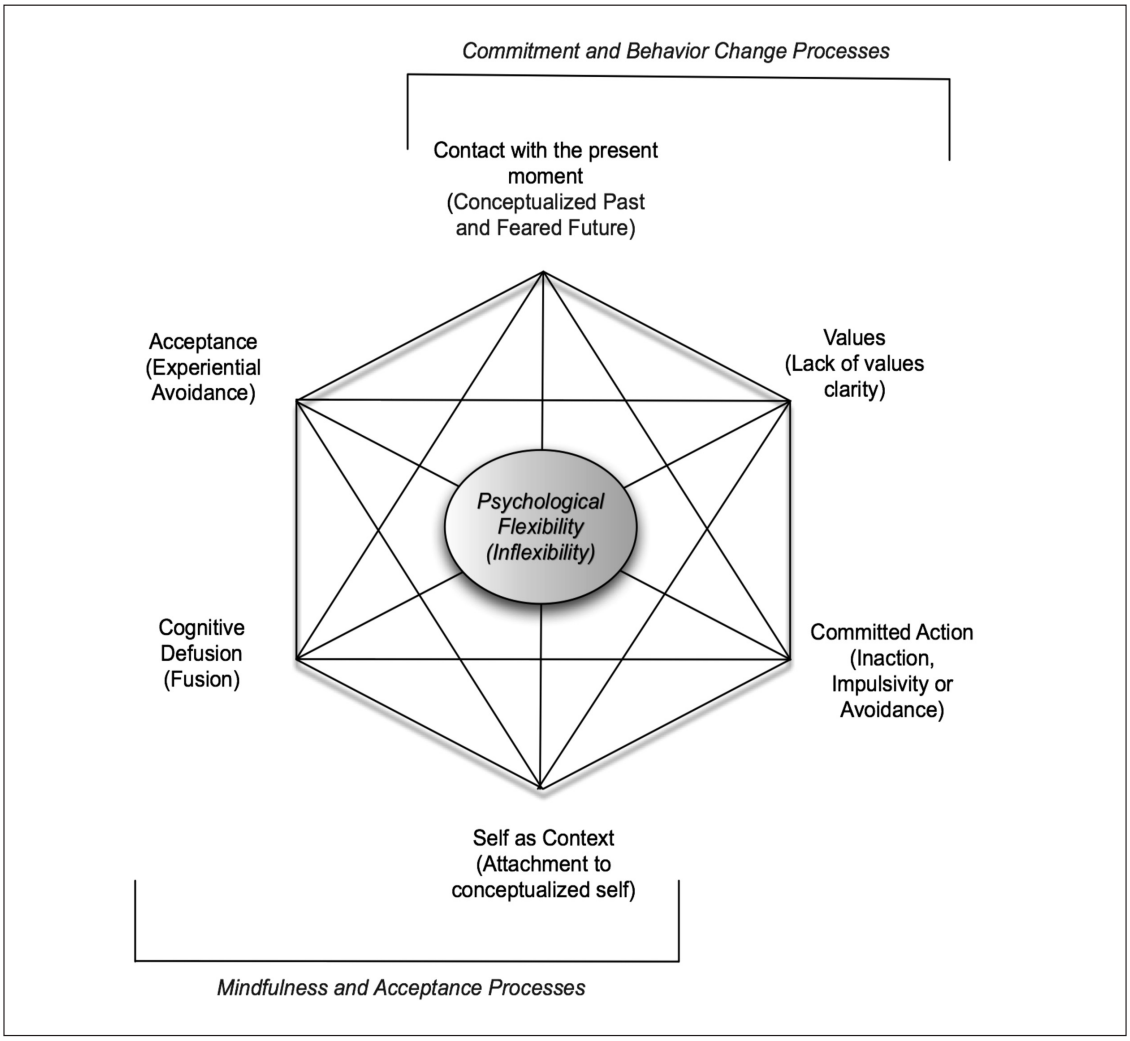
Approaches relevant for this paper are based on acceptance and mindfulness, which will be shortly explained in the following.

3.1 ACCEPTANCE AND COMMITMENT THERAPY (ACT)

The concept of acceptance of pain comes out of Acceptance and Commitment Therapy(ACT), which is an approach within the CBT family. The methods of ACT include acceptance and mindfulness interventions and interventions, targeting activation and behavior changes (McCracken & Vowles, 2014). ACT has been researched and treatment success has been defined, and the acceptance of pain correlated especially in the domains of reduced anxiety, depression, emotional distress and fear of movement (Wicksell et. al., 2010). The main goal in ACT is the achievement of psychological flexibility in "the capacity to continue with or change behavior, guided by one's goals, in a context of interacting cognitive and direct non-cognitive influences" (McCracken & Vowles, 2014, p. 181). Additionally, ACT also stresses its aims on increasing "the ability of an individual

to persistently pursue goals in his/her valued directions, using experiential strategies" (Prevedini et. al., 2011, p. 55). ACT as a therapeutic work inherits six interconnected processes that constitute the general goal of psychological flexibility. In the following figure the processes of mindfulness and acceptance are represented on the left site incorporating: acceptance, defusion and contact with the present moment and self as a context). On the right site the processes underlying the commitment and behavior change are listed (values, committed action, contact with the present moment and self as a context). The interventions in the ACT work are geared towards these processes.

Figure 5: The Hexaflex model of ACT for psychological flexibility an inflexibility (Prevedini, 2011, p. 56)



One of the processes to obtain psychological flexibility is acceptance (Hayes et. al., 1999). "Acceptance methods aim to promote qualities of engaging and refraining, where engaging requires action when unwanted feelings arise, and refraining from the attempt to control such feelings" (McCracken & Vowles, 2014, p. 181). Acceptance may also be understood as the "willingness to make room for and embrace the inner unwanted experiences, leaving the fight against them without attempting to change nor eliminate them" (Prevedini et. al., 2011, p. 56).

Opposing to the concept of acceptance is the experiential avoidance and can be described as a behavioral pattern that causes unwillingness to remain in touch with the present moment and further avoiding painful experiences (Prevedini et. al., 2011). In the case of chronic pain, avoidance, could augment the experience of pain, since it may remind the person of these very thoughts and consequently bring up memories and worries that within itself are painful. "Experiential avoidance predicts poorer long-term outcomes in a wide variety of psychological problems" (Dahl et. al., 2005, p. 54). The above model is used in ACT to conceptualize patients, and to assist them in working towards acceptance versus avoidance of their often-controlling agenda of their past experiences (Prevedini et. al., 2011). In ACT the therapists use experiential interventions oriented by the above six processes of psychological flexibility, where the therapist aids the patient in defining personal values that may have been disregarded due to a chronic condition and may be reintroduced to result in committed actions. The process of acceptance has been a valid asset in the treatment of chronic pain and as a prerequisite to engage in therapeutic change.

3.2 Acceptance And Chronic Pain

"The curious paradox is that when I accept myself just as I am, then I can change" (Rogers, 1954 as cited in Neff, 2011, p. 159).

As the quote of Rogers implies, change may occur based on acceptance. Chronic pain patients tend to fear and avoid unpleasant events, attempt to control difficult emotions and often spend their daily lives finding ways to get rid of the pain, and in doing so the pain amplify its dominance, presence, and disruption (McCracken & Yang, 2006, pp. 137 - 144). "As the avoidance agenda grows, the person loses flexibility and life quality and the individual's activities and thoughts become organized around prevention of pain or short-term alleviation" (Dahl et. al., 2005, p. 55). The preoccupation with wanting to

abolish the pain often magnifies not only the pain experience but also blurs the focus in the sufferer's life goals. "This unfounded search for the cure often results in a complete abandonment of meaningful life pursuits" (Costa & Pinto-Gouveia, 2011, p. 191). The concept of acceptance does not focus on "the removal of pain but the abandonment of the struggle to avoid, reduce pain" (Costa & Pinto-Gouveia, 2011, p. 293). It may appear somewhat counterintuitive to suggest acceptance of these often-debilitating aspects of chronic pain, however there is increasing support that acceptance of chronic pain may lead to less disability, distress and usage of healthcare resources (Dahl et. al., 2004; McCracken et. al., 2005 & Wicksell et. al., 2007). The domain of acceptance inherits two main components: Firstly, the pursuit of life activities in a normal manner even while pain is being experienced, which is not just a mental process but requires concrete action from the patient, engaging in activities despite the experienced pain. Secondly, that the "recognition that avoiding and controlling pain are ineffective strategies" (McCracken & Vowles, 2008, p. 182). A prerequisite for acceptance is the openness to the reality of the present moment, which may include that chronic pain is part of this reality and refocusing the energy spent fighting the pain into the improvement and attainment of life quality (McCracken, 2008). A tool that has been developed to assess the acceptance is the Chronic Pain Acceptance Questionnaire (CPAQ), which has been developed by McCracken et. al. (2004). The questionnaire is constructed in 20 items, which asses for two subscales. Pain willingness assesses "the extent to which respondents are willing to have pain without engaging in attempts to control it" (McCracken & Vowles, 2014, p. 160). The activity engagement subscale "assesses the degree to which effective functioning occurs in a way that is not markedly restricted by pain" (McCracken & Vowles, 2014, p. 160). Further explanation and use of the tool, will be elaborated upon by the author in the method chapter of this paper.

In a qualitative study, LaChapelle et. al. (2008) interviewed 45 women living with a chronic pain condition (fibromyalgia and arthritis) on their viewpoint of acceptance of their chronic conditions. The results indicate that the majority of the women rejected the term acceptance, however viewed acceptance as a constant process requiring action of receiving social support, educating self and others about their condition, practicing self-care as contributing factors promoting acceptance. The women in this study further described the importance of receiving a diagnosis as an initial impulse towards acceptance.

Whelan (2007) noted that diagnosis for individuals with a chronic condition may contribute to validating their individual experience and supporting credibility.

In this line of approach avoidance of apprehensive emotions is an adhering factor in the experience of chronic pain, and demands interventions targeting emotional regulation. One of those strategies is the concept of mindful self-compassion, in which painful emotions are not suppressed but consciously brought to awareness and met with kindness. The next chapter will introduce the concept of mindful self-compassion as a potential tool for chronic pain sufferers.

4. LITERATURE REVIEW ON MINDFUL SELF-COMPASSION

In this chapter the concept of Mindful Self-Compassion (MSC) is introduced. Compassion as a therapeutic demeanor has become almost self-evident and patients seeking therapy might expect a therapist to have a compassionate countenance. To understand the concept of mindful self-compassion, the author will elaborate on compassion first, as there is a difference between the two, though a correlation does indeed exist. "When qualities of kindness, common humanity and mindfulness are applied toward the suffering of others, they manifest in compassion. When they're applied to our own suffering, they manifest as self-compassion" (Neff, 2011, p. 271).

4.1 DEFINITION OF COMPASSION

"Compassion is often thought of as akin to pity, but whereas pity may be condescending, compassion springs from a sense of the equality and interconnectedness of life. Genuine compassion is about empowering others, helping them unlock strength and courage from within their lives to overcome their problems" (Ikeda, 2014, N.A.).

In the main religious traditions of the world, the concept of compassion is the core of their belief systems. However, predominantly Buddhist perspectives have been represented in psychological literature. Researching the importance of compassion in health care, the author has found compassion to be represented in several codes of ethics of different vocational fields. The American Medical Association in their code of ethics, for example, records, "A physician shall be dedicated to providing competent medical services with compassion and respect for human dignity" (American Medical Association, 2001, N.A.). The etymology of compassion stems from the word "compati", which means "to suffer with" (Oxford English Dictionary & Online, 2015). There are many different definitions on the meaning of compassion, the author has chosen the words of the Dalai Lama (1995) as the words chosen in his definition are most relevant to this study. He speaks, "An openness to the suffering of others with a commitment to relieve it" (p. N.A.). In Buddhist psychology compassion is described as the force that heals suffering, "compassion makes direct contact with our pain" (Desmond, 2016, p. 16). In their meta-analysis, Strauss et.

al. (2016, pp. 19-21) gathered different definitions of compassion and summarized the predominant factors that reoccur and are consistent within most definitions. In the predominant factors defining compassion that they found addressed cognitive, affective and behavioral processes.

Table 3: Predominant factors in defining compassion (Strauss et. al., 2016, p. 19)

• Recognizing suffering • Understanding the universality of suffering in human experience • Feeling empathy for the person suffering and connecting with the distress (emotional resonance) • Tolerating uncomfortable feelings aroused in response to the suffering person (e.g distress, anger, fear) so remaining open to and accepting of the person suffering • Motivation to act/acting to alleviate suffering

The correlation between compassion for others and self-compassion, is not settled in research yet. Buddhist perspectives argue that both concepts are intertwined, due to the importance of the aspect of commonality and not drawing a line between others and the self. Recent research explored the relationship between the two constructs and couldn't find a correlation (Strauss et. al., 2016, p. 17). In this next subchapter, mindful self-compassion will be introduced, and the reader might find parallels to aspects of the definition of compassion.

4.2 MINDFUL SELF-COMPASSION

In the following, mindful self-compassion will be defined. Similar to compassion in its root, self- compassion is the desire to alleviate one's suffering, being touched by it, and treating it with understanding and concern (Neff, 2003).

4.2.1 Components Of Mindful Self-Compassion

As mentioned above, mindful self-compassion is comprised of six components, with a set of two correlating components, which will be described in further depth. Neff (2003) notes that the positive and negative components are not mutually exclusive and can be considered as separate but correlating entities. Therefore, MSC acts as an "overarching factor emerging out of the combination of subscale components rather than an underlying factor" (Neff, 2003, p. 234).

Self-Kindness vs. Self-Judgment

Self-kindness as the word implies, refers to the act of being caring and understanding with oneself rather than being overtly critical. This is directly connected with the inner dialogue one holds and the general attitude towards oneself. Towards a disliked aspect of one's personality or life-circumstance, for example, the tone of language is kind and supportive, the self is offered warmth and unconditional acceptance (Neff, 2011, pp. 48-49). This might imply trying to control and/or fix a problem as it arises, however, a self-compassionate response entails an unconditional acceptance of these emotions, despite being comfortable or uncomfortable, as it is about offering oneself soothing and comfort. Neff & Germer (2013, p. 858) state, "With self-compassion, instead of replacing negative feelings with positive ones, positive emotions are generated by embracing the negative ones." The other side of self-kindness is self-judgment. At the beginning of the MSC program the distinction is also made between self-compassion and self-esteem, as individuals with increased self-judgment are suggested to struggle with self-esteem. Self- esteem often is based on so called near enemies, self-enhancement, social comparisons and can consequently lead to prejudice, ego-defensive anger, and narcissism (Crocker & Park, 2004, pp. 391 - 424). In contrast, self-compassion doesn't imply feelings of superiority, but rather provides emotional stability when confronting failure or personal inadequacies (Neff, 2009). Self-esteem is often attributed to self-evaluation, comparison and the success of performance. Whereas self-compassion comes into play when negative feelings arise, "its source is internal rather than external and because it avoids processes of self-judgment and evaluation altogether" (Neff, 2009, p. 569). Bandura introduced the term "self-efficacy", which is the concept of believing in one's own abilities to achieve goals (Neff, 2011, p. 162). Self-judgment has been researched to undermine self-efficacy.

Common Humanity vs. Isolation

In humanistic psychology Maslow defined self-actualization as the most important need, however individual growth and happiness may not be met without also meeting the preliminary need for human connection (Neff, 2011, p. 64). The sense of common humanity in self-compassion involves recognizing that all humans go through difficulties in their lives, and that all people suffer pain in one way or another. Self-compassion connects one's difficulties to the shared human condition. "In recognizing the shared nature of our imperfection, self-compassion provides the sense of connectedness needed to truly thrive and reach our full potential" (Neff, 2011, p. 76). Pain can have an isolating attribution as individuals often feel lonely due to disconnection. "People with higher levels of self-compassion had more perspective on their problems and were less likely to feel isolated by them" (Neff, 2011, p. 123).

Mindfulness vs. Over identification

Mindfulness, in the context of self-compassion, holds an awareness of one's painful experiences, without ignoring nor ruminating on them, but rather with the recognition of the difficulties may be important. "To give ourselves compassion, we first have to recognize that we are suffering […] we can't heal what we can't feel" (Neff, 2011, p. 80). Neff (2003) used the term "over-identification" on the other side of the spectrum of mindfulness, as she found importance in not being carried away by one's suffering "This type of rumination narrows one's focus and exaggerates implications for self-worth" (Neff & Germer, 2012, p. 2). As mentioned above, although mindfulness is required to experience self-compassion, these two concepts are not the same. First, the type of mindfulness entailed in self-compassion is narrower in scope than the main concept of mindfulness. "We cannot have mindfulness without compassion, and the practice of compassion always begins with compassion towards self" (Thich Nhat Hanh as cited in Desmond, 2016, p. 3). Although there is a mindfulness component in the practice of self-compassion, in the later the focus is on the sufferer instead of the suffering. "For example, in the case of lower back pain, mindful awareness might be directed at the changing pain sensations, perhaps noting a stabbing, burning quality, whereas self-compassion would be aimed at

the person who is suffering from back pain" (Neff & Germer, 2013, p. 2). The mindfulness component of self-compassion refers to balanced awareness of the negative and positive thoughts and feelings involved in personal suffering remembering that such experiences are part of being human (Germer & Neff, 2013). "Mindfulness brings us back to the present moment and provides the type of balanced awareness that forms the foundation of self-compassion" (Neff, 2011, p. 85).

4.2.2 THE MSC PROGRAM & THE SELF- COMPASSION SCALE (SCS)

In the past two decades Buddhist principles have found their way into research and have been adapted in multiple therapies (Anderssen-Reuster, 2013). Mindfulness training, for example has been developed by Kabat-Zinn (1982), which entails an 8-week experiential learning course, that focuses on meditation practices. Mindfulness focuses on one's internal experiences, whereas self-compassion "emphasizes soothing and comforting the "self" when distressing experiences arise" (Neff & Germer, 2013, p. 2) Mindfulness meditation has been shown to be helpful with chronic pain (Kabat-Zinn, 1982). Although it is common to want to escape and distract oneself from pain, it won't disappear by ignoring it. By using mindfulness in pain management the main goals is to increase awareness of the pain while accepting it if possible, or at the least letting it be, recognizing the underlying thoughts and emotions that accompany that pain (Burdick, 2013, p. 194). Researchers have proposed that self-compassion may be added to improve wellbeing in mindfulness-based interventions (Baer, 2010). "Self-compassion is intimately related to the practice of mindfulness, both of which have garnered deep respect from some of the most influential voices in the mental health field" (Neff, 2011, p. 91). Gilbert and his colleagues developed a therapeutic approach that enhances self-compassion, which is called compassion-focused therapy (CFT) (Gilbert, 2014). The main goal of CFT is "to help patients develop a sense of warmth and emotional responsiveness toward themselves as they engage in the therapeutic process" (Neff & Germer, 2013, p. 3). Leaning on CFT & MBSR and due to the above reasons, Neff & Germer (2013, p. 3) suggested an intervention that specifically targeted the development of mindful self-compassion, which they came to call MSC. MSC is not considered an approach like CFT, but more of a resource-building course, with formal meditation practices and exercises to be implemented in daily life. In their pilot study and additional randomized controlled trial study, Neff & Germer (2013)

tested their 8-week Mindful Self-compassion program and tested for potential increase of self-compassion. To test the validity of the 8-week course, a randomized controlled trial succeeded an initial pilot study to test for validity in a control group. In both studies participants were given the 26-item Self-Compassion Scale (Neff & Germer, 2013), which assesses the positive and negative aspects of the three main components of self- compassion: Self-Kindness versus Self-Judgment, Common Humanity versus Isolation and Mindfulness versus Over-Identification. The responses consist of five choices ranging from "almost never to almost always". The questions are divided in two sub-factors, arranged in "positively" worded versus "negatively" worded items. Neff (2013) advocates to use this three-factor model, since the three proposed components and their balance are the foundation for mindful self-compassion. Researchers can choose if they want to analyze subscale scores separately or use a total SCS score. More details about the questionnaire will be described in the methods chapter of this paper.

The results of both studies showed the enhancement of psychological wellbeing, and lower levels of depression, anxiety and stress after completion of the MSC course. The researchers summarized that the MSC program was effective at increasing self-compassion and with it psychological resilience. Further studies complement the findings of this launching study (Neff, 2013, p. 155). The MSC 8-week program raised self-compassion scores by 43 % (Neff & Germer, 2013). The program consists of two core meditations and eighteen informal practices, where participants ask themselves "What do I need?", with the reason being that self-kindness is more important than becoming a good meditator (Neff & Germer, 2013, p. 866).

Germer (2012, p. 866) offers encouragement to use MSC techniques and adapt them in the context of therapy stating that, "Self-compassion is both the path and the goal.". Elaborating on each individual MSC technique would expand the limits of this paper. The author will give a short overview of the topics covered during the 8-week course in the following table.

Table 4: MSC 8-week program (Neff & Germer, 2013)

• Session 1	Discovering mindful self-compassion
• Session 2	Practicing mindfulness
• Session 3	Practicing loving-kindness meditation
• Session 4	Finding your compassionate voice
• Session 5	Living deeply
• Session 6	Managing difficult emotions
• Session 7	Transforming relationships
• Session 8	Embracing your life

4.2.3 THE SCIENCE OF SELF-COMPASSION IN THE LIGHT OF CHRONIC PAIN

Bowlby's (1969) theory on attachment is an important factor in the study of self-compassion. He found that when parents meet their children's needs, the development of a secure attachment bond is more likely, however, if parents don't provide that support children are more prone to develop the opposite, an insecure attachment bond. These attachment bonds may have an influence on our "internal working model" and how individuals relate to themselves and to others. "This creates a pervasive feeling of insecurity that can cause long-term emotional distress and affect the ability to form close, stable relationships later in life" (Neff, 2003, p. 45). Neff (2011, p. 46) further states that "people who are insecurely attached have less self-compassion than those who are securely attached." As a skilled therapist, one could serve and "help change insecure attachment bonds by providing unconditional support to their clients" (Neff, 2011, p. 46).

As described in the chapter on chronic pain, individuals often lack those secure attachment bonds, which in return exacerbates their pain perception. Chronic pain sufferers have further experienced distorted relationships in their often described long and exhausting medical treatment path, due to medically unexplained symptoms. Mindful self-compassion may be a tool where those patients strengthen their relationship with themselves. Panksepp (1998) as referred to in Desmond (2016) is the originator of the term "affective neuroscience" and the focus of his research are seven primary emotional circuits in the

brain, which each produce basic emotions. The one relevant for the practice of self-compassion is the "Care Circuit", which "extends from the hypothalamus to the ventral tegmental area, it generates oxytocin and endogenous opioids that have been shown to soothe negative emotions "(Desmond, 2016, p. 22). The increase of oxytocin increase feelings of calm, trust, safety, generosity, connectedness and reduces fear and anxiety (Chanda & Levitin, 2013).

Gilbert & Proctor (2006) indicate the increase of emotional resilience by increasing self-compassion, as it deactivates the threat system and activates the caregiving system instead. The threat system consists of the lateral prefrontal cortex and dorsal anterior cingulate (the problem solving & error processing areas of the brain). It further activates the oldest part of the brain, the amygdala, which responds to threatening or unpleasant situations resulting in fight-flight-freeze or fight responses. Activation of the amygdala increases blood pressure, adrenaline and the hormone cortisol. The caregiving system, activates the left temporal pole and insula, those areas are associated with compassion and positive emotions and the release of oxytocin inhibiting cortisol (Neff, 2011, pp. 48-49).

LeDoux and his colleagues researched the lability of memories "when memory is retrieved, it enters a state of being changeable […] during that time it makes new associations with whatever is happening in the present" (Schiller et al., 2010). In an experimental setting Hupbach et. al. (2007) asked their subjects to remember lists and found that by repeating a list before learning a new one the subjects had difficulties putting the objects into the correct list. They found that every time the lists were recalled, all memories were reconsolidated (Nader et. al., 2000). In neuroscience, these memories are called "implicit memories", that are described as making up core beliefs and schemas, because they affect individuals without explicit awareness. How this relates to therapy is quite relevant, for as therapists it is a challenge to help patients transform "symptom-generating implicit memories through the process of reconsolidation" (Desmond, 2016, p. 26). Research found that the more vividly a memory is remembered, the more changeable it becomes (Debiec et. al., 2006). Relating this back to Panksepp (1998), who found that "if distressing memories are reconsolidated while the Care Circuit is active, they become less distressing" (Desmond, 2016, p. 26). In chronic pain patients, these findings might be crucial, as chronic pain most often is prolonged because of its aspect of explicit memory. Benson & Friedman (1996) teach the concept of remembered wellness, and found that

brains don't recognize the difference between feeling well and the memory of a past time when felt well, by doing so the brain is ascribed to recreate the internal condition of what was present at that time. "Painful feelings are, by their very nature, temporary. They will weaken over time as long as we don't prolong or amplify them through resistance or avoidance. The only way to eventually free ourselves from debilitating pain, therefore, is to be with it as it is. The only way out is through" (Neff, 2011, p. N.A.).

4.3 Relevance Of Mindful Self-Compassion Practice For Patients With Chronic Pain

More research on mindful self-compassion within the population with chronic pain is needed. As of today there seems to be only one study that has been conducted in correlation with increased acceptance of pain (Costa & Pinto-Gouveia, 2011; 2013). Diverse studies have been conducted in individuals with mood disorders, whose results have found better life quality and overall well-being (Wrent et. al., 2012). Germer found resistance, to be inadequate in lowering suffering stating that "what we resist, persists" (Germer, 2009, p. 15). His formula is an addition to the practice of self-compassion as it may decrease suffering.

Figure 6: Suffering equation (Neff & Germer, 2003)

Pain is described as "any uncomfortable factors that evokes discomfort either cognitively, emotionally or physically", whereas resistance means "any effort to ward off pain, such as tensing the body or ruminating about how to make pain go away" (Germer, 2009, p.15) Suffering may be a result of how individuals relate to pain, therefore minimizing resistance may alleviate suffering (Germer, 2009, pp. 13-20). Neff (2011, p. N.A.) posed an important question when working with chronic pain patients "Are they being compassionate primarily because they want to be emotionally healthy, or because they mainly want to eliminate their pain"?

4.4 CORRELATION BETWEEN SELF-COMPASSION & ACCEPTANCE

New therapy approaches challenge new healing mechanisms for potential successful therapy outcomes. Rather than pinpointing problems and finding ways to change them, patients aim "establishing a new relationship with thoughts and feelings, rather than directly challenging them" (Germer, 2009, p. 31). The opposite of resistance is referred to as acceptance, which is observed to alleviate suffering instead of creating more suffering (Germer, 2009). Acceptance in the context of self-compassion is described as a conscious choice to fully experience sensations, feelings, and thoughts and to be with them in the present moment. Self-compassion and acceptance are correlated in a sense that "acceptance of ourselves while we're in pain" (Germer, 2009, p. 33). Indication of self-compassion may therefore be especially relevant for chronic pain sufferers, as it might increase their tendency to have an accepting attitude towards their limitations and emotional experience. Self-compassion then may become the notion of self-acceptance "Past research on acceptance among patients with persistent pain has shown that pain acceptance is associated with better adjustment […] and are prone to adopt an accepting stance toward all aspect of oneself and one's life" (Wren et al., 2012, p. 767). Commonly the want to escape and distraction from pain is strong but it won't disappear by ignoring it. By using mindfulness in pain management, the main goals might be to increase awareness of the pain while accepting it, if possible, or rather letting it be, recognizing the underlying thoughts and emotions that accompany that pain (Burdick, 2013, p. 194).

4.5 MINDFUL SELF-COMPASSION IN THERAPY

Although Neff & Germer (2009) introduced the 8 week MSC course as a resource building practice, it has been suggested to be integrated in therapists' own practices. In Buddhist psychology compassion is viewed as the energy that heals suffering (Hanh as cited in Desmond, 2016). Desmond (2016) established several guidelines to consider when using MSC techniques in therapy. The most important factor, he describes, is that compassion makes direct contact with pain, which may be an intervention for chronic pain patients. MSC practices don't have to follow a script, they can arise naturally out of a therapeutic relationship. Researchers in the field of MSC agree that compassion is a driving

force in a therapeutic relationship, through the discussion about how to increase and cultivate the feeling of compassion lacks literature. Desmond (2016, pp. 43-53) recommends practicing self-compassion as a therapist to strengthen compassion. He further declared principles on how to integrate MSC in therapeutic settings.

1. Connect with client's goals: Asking the client what they would like to be different in their lives instead of setting a set agenda for the client.

2. Maintain motivational boundary: Noticing if the client has a desire to change and seeks help, instead of wanting to change the client for one's own reasons.

3: Improvise and experiment: Acknowledging the individualism of each client and adapting and changing MSC techniques to meet client's needs.

The presented chapter defined the practice of mindful self-compassion, highlighted key research in this new approach to therapy, and its potential relevance for chronic pain sufferers. It further touched on how to incorporate techniques of MSC in other therapeutic settings. Its relevance is crucial for the research questions of this paper. In the next chapter, the author will introduce the applications of music therapy for individuals with chronic pain and recommend the use of MSC techniques in music therapy to address the needs of these individuals.

5. LITERATURE REVIEW ON MUSIC THERAPY AND CHRONIC PAIN

The following chapter is dedicated to an overview on the current state of research concerning the implementation of music therapy in the treatment of chronic pain. Antecedent, the author will give a short synopsis of the historical connotation that led to current approaches. Based on the relevance to the underlying clinical study, treatment approaches will be introduced and clinical goals will be discussed.

5.1 HISTORICAL DEVELOPMENTS OF MUSIC THERAPY

Though one could argue that music as a healing force has been used since the dawn of mankind (Peters, 2000). Music healing practices date back from shamanic traditions in early tribes to the ancient Hebrews, Egyptians, Chinese and Hindu civilizations. The Greek and Roman cultures could be considered as the forerunners of music therapy characterized by Apollo, the Greek god of music and medicine. The belief that a disease was due to disharmony in an individual's being could be healed using music, bringing a person back into harmony. Into the late eighteenth century music was embedded in the philosophy of medical treatment, and was prescribed for diverse psychological and physical conditions (Peters, 2000). As the knowledge of human physiology increased, so did the considerations of music on physical parameters such as respiration, blood pressure and digestion (Weldin & Eagle, 1991). In the early nineteenth century, the groundwork for music therapy in the treatment of pain was laid in print, by Samuel Matthews (1806) in his dissertation On the Effects of Music in Curing and Palliating Diseases. He stressed the ability of music to counteract pain (Peters, 2000). In Europe, therapeutic use of music was introduced in hospitals, for example in London musicians were called to hospitals to reduce pain, anxiety and induce sleep by playing sedative music to the patients (Peters, 2000). In 1899 Davis ascribed the benefits of music on hospital wards to its quality of what later became known as the iso-principle, where music matches the patient's mood upon which bodily functions adapt to the quality of the music. Music Therapy in the United States for example, was founded based on addressing the phenomenon of pain with music. When soldiers returned from World War II, professional musicians played music in the hospital for the veterans, and it did not go unnoticed that music had a calming

and pain-reducing effect (AMTA, 2018). Music therapists around the world base their approaches on long traditions of music healing practices, and deliver music and/ or music experiences in a "planned, prescribed, goal-directed process of interaction and intervention, based on assessment and evaluation" (Peters, 2000, p. 20). In summary, the beginnings of music therapy as a treatment modality for pain reduction, goes back to ancient times and up to this day is still a vocal point of interest to researchers. Music therapy in the treatment of chronic pain does not necessarily follow a specific intervention technique nor is there a unified treatment manual, as it consists of diverse approaches through the lens of different school of thoughts. In the following, the author will elaborate on the most relevant, significant approaches to date. As a consensus throughout the literature search, the author found that the music therapy literature lacks evidence-based quantitative studies in the treatment of chronic pain. In a meta-analysis in the context of a Cochrane Review, Cepeda et. al. (2006) researched studies that up to that point had an effect on pain relief and opioid requirements. Out of the included 31 studies, only three included subjects with chronic pain. These studies amongst others, per the authors, did not result in significant outcomes considering pain relief. "Listening to music reduces pain intensity levels and opioid requirements, but the magnitude of these benefits is small and, therefore, its clinical importance unclear" (Cepeda et. al., 2006, p. 8). The authors further noted that music is not recommended as a primary method for pain relief, however it is important to note that they only considered pain relief and did not test the effects on other aspects such as anxiety and/or depression, which especially in chronic pain are often accompanying factors as described in previous chapters.

5.2 MUSIC THERAPY APPROACHES

The use of music therapy with chronic pain sufferers has been widely researched, and the author found that the approaches are just as diverse in nature as the phenomenon of pain. The diversity is found in active and receptive methods within the context of music therapy, however, research goes beyond the field of music therapy and some sources stem from other professions within the medical field. To categorize the approaches, the author relied on Bruscia's categorization of the distinction of music *in* therapy versus music *as* therapy (Bruscia, 1998, pp. 37-40). In music *as* therapy, music functions as the main agent

for therapeutic change, acting as the primary medium. The therapist is considered a facilitator, engaging and prescribing the client in appropriate musical experiences to procure change. In music *in* therapy, on the other hand, music is used for its own healing properties, however, is not the primary agent in therapy. Music contributes to the therapeutic relationship and other modalities in therapy, depending on what medium (music, relationship or other therapeutic modalities) the therapist defines as most relevant to facilitate change. Because music therapy is a powerful and physically non-invasive medium, unique outcomes are possible when interventions are directed to reduce pain, anxiety, and depression. These outcomes appear to be mediated through the individual's emotional, cognitive and interpersonal responsiveness to the music and/or the supportive music therapy relationship.

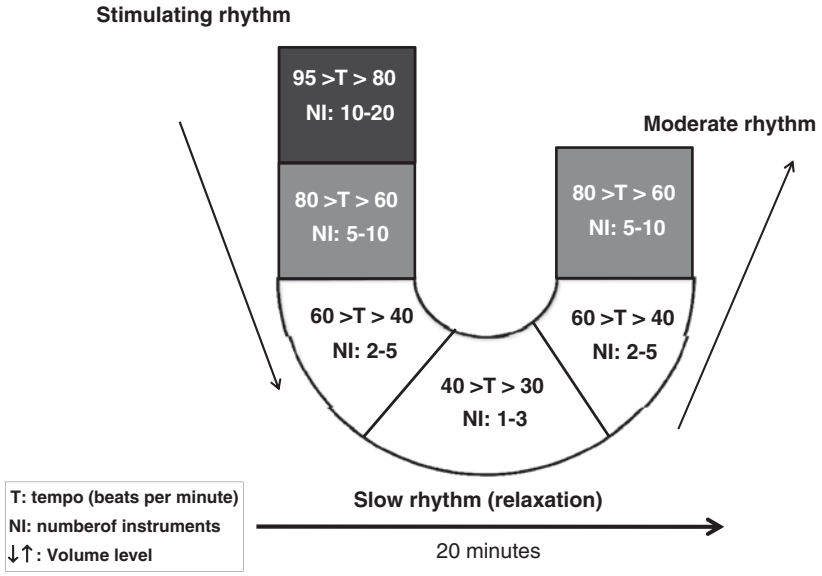
5.2.1 Music As A Pain Distractor, A Biomedical Perspective

When music is used as therapy, music is considered as the main agent of therapy, therefore music acts directly on the defined therapeutic change. When Music is used as therapy in chronic pain treatment, it may act as a main distractor, acting on the distraction of the pain perception.

A common indication of why music is used in chronic pain patients follows the concept of the distracting hypothesis, which elaborates that music is used as a distracter that draws the attention to the music instead of the pain stimuli (Mandel, 1996; Bradt, 2010). The hypothesis has been proven through the lens of the biomedical perspective of music as therapy. Taylor (2010, p. 135) hypothesized "Because all sound stimuli are accessed by all parts of the brain, sound as music affects pain perception through its direct effect on the ability of the somatosensory cortex to receive pain sensations ascending through the spinothalamic tract following reception by sensors in the peripheral nervous system". Pain perception can be modified by a variety of stimuli in the environment. Music is often used throughout medicine due to having analgesic effects. In short, music as a complex stimulus has the potential to occupy the somatosensory cortex, for the pain perception to be distracted. In "analgesia-producing neural circuits, these stimuli induce the release of endogenous opiates, which then stimulate opiate receptors on neurons in the periaqueductal gray matter of the thalamus" (Taylor, 2010, p. 141). Music affects those parts of

the brain that "connect with brainstem pathways that descend to the spinal cord to inhibit synaptic conduction of pain" (Taylor, 2010, p. 141). Multiple studies, as described in chapter 1, show that descending pathways from the somatosensory cortex travel through the medulla and spinal cord to inhibit ascending pain pathways to produce pain relief (analgesia). Bacher (2014) describes that brain regions that process pain intensity are also active when listening or actively making music. He mentions the amygdala as an area that increases activity with persistent pain, upon which the effects of music reduce its activity. Music can affect the direct path to the centers that are active during pain perception. Another important area is nucleus accumbens, which is activated when learning something new and during pleasurable activities. In other words, music, can break through the affective and stress related systems of pain perception. These offers the patient learning new coping mechanisms in a safe and anxiety reduced space (Bacher, 2014 p. 138). Hilleke (2005) describes the diversion effect of music as a short-term effect of music therapy in chronic pain, as it competes with the fixation on pain. Research demonstrates that tension increases the perception of pain, whereas relaxation has the potential to reduce the pain experience (Moreno, 2004). Receptive music therapy techniques such a listening to preferred music or live music played by the therapist, lead to short term pain reduction as reported on pre & post visual analogue scales (Guétin et al., 2012; Hilleke, 2005). In a single-blind, randomized, controlled trial Guétin et. al. (2011) researched the effects of a music listening intervention in the management of chronic pain considering pain perception, anxiety/depression and the consumption of anxiolytic medication. The music intervention was of receptive nature and consisted of a 20-minute music listening session following the technique of the "U" Sequence (see figure below). This sequence gradually decreases in tempo, texture and volume, which is described as the phase of maximal relaxation and increasing to a redynamizing phase (Guétin et. al., 2011, pp. 2-3). The music selection was the subject's preferred genres, who were instructed to listen to the music twice per day during hospitalization and during their 3-month's post hospitalization period. 87 subjects took part in the randomized control study and results show a significantly decreased pain perception as measured on a visual analogue scale during different points pre-during and post-study. The music intervention group (MG) versus the control group (CG) had a significantly reduced pain perception (MG -3.1 vs. CG -1.5).

Figure 7: Music listening technique: The "U" Sequence (Guétin et. al., 2011, p. 3)



The analgesic effects induced by music-listening are considered a central type of analgesia, due to its occurrence in parts of the brain stem via neurotransmitters (dopamine) and not via cognitive emotional processes (Garza-Villarreal et al., 2014). "Distraction is a well-known cognitive analgesic mechanism that is present when listening to music" (Garza-Villarreal et. al., 2014, p. 1). In receptive approaches to music therapy in pain management, the music is often an agent that delivers distraction, providing relaxation and overriding sensory stimuli. Moreno (2003) described four levels in which music affects pain.

Table 5: Four levels in which music affects pain (Moreno, 2003, p. 176)

Level	Treatment considerations
1. Affective level	Music to alter mood
	Promote relaxation
2. Cognitive level	Distraction of pain
	Music choices for locus of control
3. Sensory level	Music as counter stimulation of nerve fibers
4.Endogenous level	Pain modulation through alteration of response to pain stimuli

The analgesic qualities of music have been researched and are often ascribed to result in the reduction of pain perception. Music listening for example was used during surgery and patients in the music listening vs. white noise condition required significantly less sedation (Ayoub et. al., 2005). Another study researched pain intensity ratings using a patient-preferred music vs. experimenter selected music and a white noise condition, showing that preferred music resulted in significantly reduced pain intensity (Mitchell & McDonald, 2006).

On the contrary, in a multimodal perspective on chronic pain, there are more clinical goals to consider for therapy. McWilliams (2015, pp. 199-205) for example, stated that the expression of pain can be an indicator of attachment styles. The relationship with the therapists may be an important factor in treatment, and consequently the goal ought to reduce dependency and strengthen autonomy. Bacher (2014) further ascribed music as a catalyst in the relationship of patient and therapist. In the act of music making, patients may observe their patterns of interaction and inner mental states can be vocalized, and this can lead to synchronization and attunement. Active music making in a clinical setting occurs in relationship to one another (Bacher, 2014, p. 140). Due to the multimodal complexity of chronic pain, the diversion theory and using music as therapy may not approach the long-term therapy goals for sufferers, therefore a broader approach to therapy ought to be considered, such as the concept of regaining psychological flexibility, as explained in previous chapters (See chapter on Acceptance).

5.2.2 Heidelberger Model Of Music Therapy And Chronic Pain

To refer to Bruscia's categories, music in therapy approaches consider different therapeutic goals and view chronic pain from a multimodal perspective. In the following, a condensed but significant selection of approaches will be introduced.

Hilleke and his colleagues (2005) are pioneers in the German speaking research field of music therapy and chronic pain, and developed a treatment manual titled the "Heidelberger Modell der Musiktherapie bei chronischen Schmerzen". These researchers propagated that in music therapy literature the interventions are not documented, comprehensible and specific. To fill this void, they created a manual that incorporates different treatment phases. The theoretical framework in their manual follows the perspective of the

biopsychosocial model (Engel, 1977). They hypothesized that chronic pain sufferers have difficulties in their emotional expression ("inhibited expression"). Music Therapy is therefore indicated for use due to its ability to address emotional regulation. The concept of "inhibited expression" was translated into music therapy as "Errstartes Bezugskorrelat". Inhibitions affect different domains, which will be listed in keywords in the following:

Table 6: Inhibitions in different domains (Hilleke, 2005, p. 42)

• Motor Domain:	Limitation of mobility and motor control
• Sensory Domain:	Attention to the hurting body parts
• Behavioral Domain:	Isolation, somatization, inhibition of behavior
• Intrapersonal Domain:	Inability of conflict
• Cognitive Domain:	Fixation on negative thoughts
• Emotional Domain:	Increase of negative emotions and suffering
• Motivational Domain:	Reduced motivation and goal achievement

The inhibited emotions may be observable in the emotional expression during the active music making process. The main goal in the treatment is described to resolve the inhibitions and transfer them to the individual's nonmusical goals (Hilleke, 2005). The manual is divided into three phases which follow the further goals of subjective well-being, reduction of the symptoms and finally the increase of daily living functioning. Hilleke's music interventions focus on relaxation, distraction, but also incorporate techniques that express the emotional aspects of pain perception. The phases of the Heidelberger manual are based on psychotherapeutic models that advocate for linear therapy implementation for therapeutic change to occur (Hilleke, 2005). The phase-oriented model that Hilleke and his colleagues based their manual on, stems from Frank et. al. (1991). The three phases are named as follows:

Table 7: Three phases of chronic pain treatment
(Frank et. al., 1991 as cited in Hilleke, 2005)

• **Remoralization:** Rebuilding well-being
• **Remediation:** Symptom improvement
• **Rehabilitation:** Improvement of functional levels in areas of life

The three phases were adapted and formed into a music therapy manual addressing the improvement of the different domains incorporating active and receptive music therapy techniques. It was created in an ambulant therapy setting and therefore clinicians are advised to not replicate it in a different therapy context, however, Hilleke et. al (2005, pp. 131-162) concluded that the manual addresses long term therapy outcomes in a variety of domains of chronic pain and could therefore serve as a guideline for other music therapy contexts. For further interest, the reader may find the summary of the manual in German in the Appendix C, as an English translation could not be located. The phases indicate the goals:

Phase 1 concerns the rebuilding of well-being

Phase 2 targets the reduction of the symptoms

Phase 3 is constructed to improve functional levels in areas of life

Underlying those phases, the authors ascribed specific music therapy goals, factors of effect and music therapy techniques. The Heidelberger manual was quantitatively studied in the context of diverse studies. The study by Hilleke et. al (2005) resulted in a significant reduction ($p < 0.001$) in pain perception in the 31 subjects with chronic non-malignant pain. The patients in the music therapy intervention group vs. the control group indicated significantly less pain post study in the past 4 days as measured on a VAS scale (- 1.04, $p= 0.01$). Wormit et. al. (2008, pp. 98-102) replicated the study of the previous authors with chronic pain patients and found similar results and found a success rate when considering reduction of pain perception in 70% of the patients (-0.77, $p = 0.002$)

5.2.3 ENTRAINMENT

Another approach in the line of music in therapy was drafted under the direction of Dileo & Bradt (1999). Procedures of entrainment with music have been researched by multiple authors, however, in the context of chronic pain, entrainment is considered, as a way to address pain as a multidimensional phenomenon. Entrainment, per DiLeo & Bradt (1999) is based on "interrelated principles":

Table 8: Procedures of entrainment (DiLeo & Bradt, 1999, p. 183)

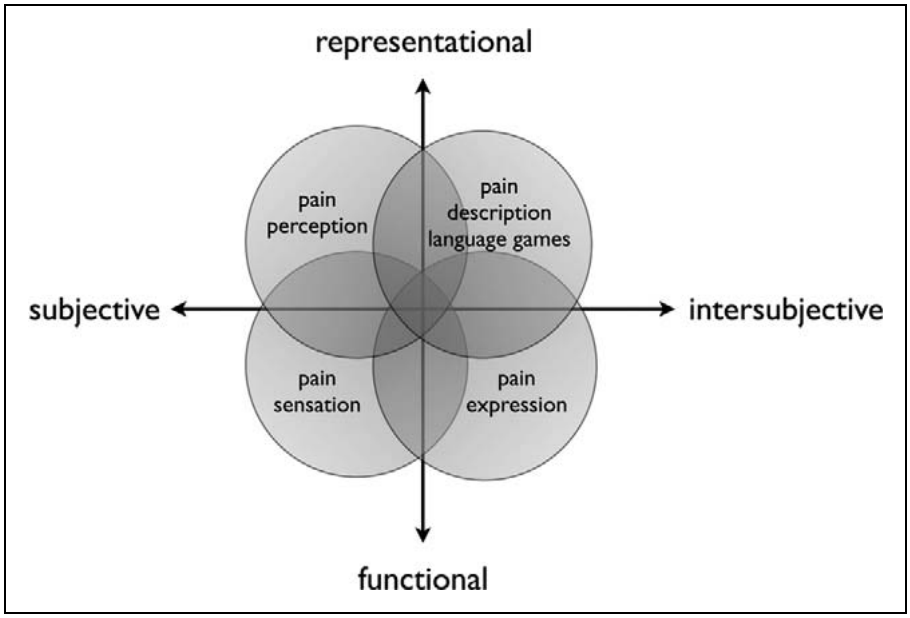
1.	The iso-principle, which states that after having matched music to the existing mood of a person, the mood can be altered through gradual changes in the music.
2.	The concept of resonance or sympathetic vibration, in which a system capable of vibrating at a certain frequency is acted upon by another system vibrating at the same frequency causing vibration in the former.
3.	Entrainment, wherein there is a "pull" exerted from one vibrating object to another vibrating in close frequency.

These principles form the application of music entrainment in the treatment of chronic pain, a method that entails four long consecutive music therapy meetings. "Often, patients in pain employ various means to avoid getting into touch with their pain directly, consequently denial, resistance, and distortion are common reactions to having pain. These reactions may further exacerbate the pain experience, during the assessment phase and following, the patient begins to acquire an awareness of their relationship to the pain and its various manifestations" (Dileo & Bradt, 1999, p. 185). During the first meeting, the therapist builds a relationship and the patient is intensively interviewed about the current life situation, the pain story, and current perception of pain in its duration, localization, intensity and quality. Further, the patient is asked about previous treatment experiences, expectations and goal setting. In the following three sessions of the treatment, music-imaginative techniques are applied, the composition of "pain music" and "healing music" are created and to round up the therapeutic process, a reflective session is held. Dileo & Bradt (1999, p. 183), defined some of the following functions as ways that music therapy may support individuals with chronic pain in managing and/or eliminating their pain experience. Music therapy may serve the function as a stimulus for comfort and relaxation, as a conditioned stimulus, as a provider of sensory stimulation, as a means for mood

enhancement, as a means for providing choice and control, as an outlet for self-expression, as a method for cognitive reframing and as a vehicle for social support.

Metzner (2012) researched the method of entrainment from an angel of aesthetic-theoretical framework and complements the method through a philosophical lens. “A basic anthropological assumption of music-imaginative pain treatment is that the human being requires a medium that enables a capacity to cope with what is experienced” (Metzner, 2012, p. 166). Metzner stresses the importance of using music as a medium for expression, on one side to find relieve from the pain and on the other side to have a mode of expression for the pain experience (Metzner, 2012, p. 296). She elaborated on processes involved in the pain phenomenon, distinguishing between subjective and intersubjective processes and between pain sensation (functional) and pain perception (representational). In the figure below, these processes are represented. Using music as a medium to aid a patient to have a mode of expressing the subjective pain, “music appears to mean something and to give an individual the feeling of being mirrored, accompanied, or even personally understood” (Metzner, 2012, p. 163).

Figure 8: Overlapping processes connected to the pain phenomenon (Metzner, 2012, p, 165)



Metzner (2012) concludes the approach of music-imaginative pain treatment within an aesthetic-theoretical framework, stating that through expressing pain through the qualities

of music, the affective-sensory feeling of not wanting the pain turns into an aesthetic experience involving self-reflection. “The aesthetic becoming aware of an object at first contrasts with other forms of consciousness, in particular with self-reflection” (Metzner, 2012, p. 168).

The method of “entrainment” has been quantitatively studied and pain reduction has been proven (DiLeo & Bradt, 1999; Bradt, 2001). In his study Bradt (2001) researched the effects of music entrainment in postoperative pain perception in paediatric patients. 32 patients with ages ranging from 8-19 were allotted in three different groups of which two were entrainment conditions and one was a control condition. The results support the effectiveness of music entrainment as a pain management technique as pain intensity was decreased significantly.

5.3 Clinical Goals In Music Therapy

Clinical goals are difficult to generalize in the chronic pain population due to its complexity. However, considering different sources, the clinical goals seem to be similar and can be generalized as to “increase the subjective well-being” (Wormit et. al, 2008, p. 38). The author summarized the goals represented and mentioned in the different approaches in the following table:

Table 9: Sample clinical goals in music therapy with chronic pain patients

Source	Stated Clinical Goals for chronic pain sufferers
(AMTA, 2018)	To direct attention away from pain or anxiety, distracting the listener with comforting music. To provide a musical stimulus for rhythmic breathing. To offer a rhythmic structure for systematic release of body tension. To cue positive visual imagery. To condition a deep relaxation response. To change mood. To focus on positive thoughts and feelings and to celebrate life
Taylor (2010)	Distraction and Diversion from pain perception
Hilleke (2005)	Goals: Reduction of Pain symptoms Reduction if psychological strain Objectives: Rebuilding well-being Symptom improvement Improvement of functional levels in areas of life

As demonstrated in this overview, a common factor between all the different approaches is the perspective of chronic pain as a multidimensional phenomenon, addressing goals within different domains, whereas the ultimate goals are stated as the reduction of pain perception. In this past chapter, music therapy has been introduced as a possible treatment approach for chronic pain. Although there is vast research within the field, more diversified and quantitative studies are needed.

To conclude the literature review section of this paper, the author will summarize the most pertinent presented research highlights. To transition over to the underlying clinical study of this thesis, the theoretical ideas will be synthesized to introduce the aims, purpose and research questions of this study.

6. LITERATURE REVIEW SUMMARY & OUTLOOK

The astronomical proportions of the personal and societal/ financial lost that chronic pain is causing around the world has been demonstrated in these past chapters, and the evolving knowledge about the phenomenon asks for improved and diversified intervention. Chronic pain has been described by diverse authors as a biopsychosocial construct, and underlying factors that intensify the pain sensation have been defined. One of them is the experience of stress, which is described as stress-induced hyperalgesia. In current times, where stress is an omnipresent factor in our society, chronic pain is growing linearly to a peak. The multidimensional perspective and magnitude for each sufferer of chronic pain has led to interdisciplinary treatment approaches. Chronic pain sufferers often decompensate in areas in their lives where relationships are affected, therefore interventions that strengthens the relationship with self and others are relevant. In reviewing the literature on chronic pain and its different treatment concepts it has become evident that the report and severity of the chronic pain is dependent on self-report of individual's perception of the pain. The reciprocal relationship of pain and psychological entities calls for additional psychological intervention, due to its immense impact on intra and interpersonal difficulties, and consequently in the treatment of patients with chronic pain, the whole person is treated, addressing physical, social, cognitive, emotional and psychological factors, which not only cause chronic pain but also foster the continuation of the pain.

As seen in these previous chapters, new approaches have emerged in the past century, that address these multidimensional needs. The concept of using mindful self-compassion and an accepting attitude towards chronic pain has been demonstrated with the possible outcome, not only decrease the pain perception but also increase the pursue of life activities. Instilling a mindful countenance in the patients may lead to long-lasting therapeutic outcomes, instead of only treating the symptom of pain. Mindful self-compassion may be a tool where patients strengthen their relationship with themselves and acquire a resource that they can implement as difficulties arise and may meet adversities with acceptance instead of resistance, lowering the overall suffering. Suffering results from how individuals relate to pain, therefore minimizing resistance may alleviate suffering.

To date, there seems to be no published literature on the combination of music therapy and Mindful Self-Compassion, this could be due to fact that the concept of MSC is relatively new (2009). In this subchapter, the author will draw parallels between MSC and MTH on how they could potentially become integrally related in the treatment for chronic pain. This subchapter can be understood as an introduction to the underlying clinical study of this paper, which emerged from clinical experience working with chronic pain sufferers.

Although, mindful self-compassion can be a powerful intervention for chronic pain sufferers, incorporating non-verbal creative approaches might add to the efficiency of the method. Music therapy and its analgesic qualities are evidently an indication used for chronic pain patients, as it acts as a distraction from the pain. Further approaches hypothesized that chronic pain sufferers have difficulties in their emotional expression, and interventions geared towards emotional domains may decrease pain perception. Music therapy has the innate quality of acting as a nonverbal intervention, which for sufferers of chronic pain might be an outlet to find new alternate ways of expressing their pain. Music therapy intervention could be utilized in a prescribed process to target the components of MSC, addressing and foster the increase of self-kindness, mindfulness and common humanity and lower self-judgment, over identification and isolation. Combining MSC and music therapy could be an asset to the field of chronic pain, as music has the quality to lower anxiety and to be able to hold difficult emotions as they arise. Through a biomedical perspective MSC combined with music therapy may have an altering impact on the brain, strengthening and rewiring new behaviors and recreating memories of well-being (Taylor, 2010).

Mindful Self-compassion, as mentioned in previous chapters, is not considered an approach per se, but rather as an intervention and therefore it can easily be adapted to multiple treatment approaches, as suggested by Desmond (2016). As seen in previous chapters, when applying MSC in other treatment modalities, it could be defined as an intervention. When applying MSC in music therapy, the function of music is considered as used *in* therapy versus *as* Therapy. The author assumes that using MSC concepts in music therapy for chronic pain, music does not act as a distractor but rather opposing it as a medium to soothe the multidimensional facets of pain and make direct contact with the pain (Desmond, 2016, p. 16). MSC could then be directly compared to other techniques

such as Entrainment (DiLeo, 1999). Using MSC as an intervention in music therapy, the author hypothesized that a direct correlation of increased pain acceptance might result. The goal might be psychological flexibility as in "the capacity to continue with or change behavior, guided by one's goals, in a context of interacting cognitive and direct non-cognitive influences" (McCracken & Vowles, 2014, p. 181). Acceptance might be addressed by the diverse components enhanced in MSC specifically the innate quality of using music to improve flexibility, as described by Hilleke et. al. (2005).

The following study follows these above principles and enquires to fill the need of improved and diversified new treatment approaches, from a multidisciplinary perspective, for the complex phenomenon that chronic pain is.

7. CLINICAL STUDY & METHOD

In the following chapter, the purpose, aims and rationale for this underlying clinical study will be stated and the research questions and hypothesis introduced. Further it will explain the methods used in this clinical study with elaborations on the design, recruitment of the participants, reliability and validity of the measurements and procedures taken in the study. The study was conducted by the author who had multiple roles as researcher, music therapist and author of this paper, which will further be explicated during the discussion. The study followed the conduct of ethical standards of the clinic where it was conducted.

7.1 AIMS

The purpose of this clinical study is to investigate the use and effectiveness of Mindful self-compassion techniques in the context of Music Therapy for patients suffering from chronic pain. The main rationale of conducting this study follows along the lines of new treatment approaches for this population, due to the fact that the chronic pain problem is not only being a burden for the sufferers, but also on an economic global level. Using new approaches that take on the perspective that chronic pain is a multidimensional phenomenon requiring interdisciplinary treatment approaches. The research questions intend to investigate if the increase of mindful self-compassion might also increase the acceptance of chronic pain and a correlation between the both could be drawn. The effectiveness of using MSC as an intervention in the context of Music Therapy to increase pain acceptance is the main aim of this study. According to Anand & Craig (1996) self-reporting is crucial in the research of this population, therefore the author used mixed quantitative-qualitative research methods to approach the following research questions.

7.2 RESEARCH QUESTIONS & HYPOTHESIS STATEMENTS

An important role in the treatment of patients with chronic pain has been described as treating the whole person, therefore treating the physical, social, cognitive, emotional and psychological factors, since difficulties within any of these factors can not only cause chronic pain but also foster the continuation of the pain (Hoffmann, 1997, p. 73). Research has further elaborated, that acceptance may be used to lower pain intensity, lessen

feelings of anxiety and avoidance, lessen depression, decrease physical and psychological disability, and provide more daily activity and better work status (McCracken & Eccleston, 2005). Improving self-compassion for sufferers of chronic pain may increase pain acceptance and reduce pain perception. A common indication of why music is used in chronic pain patients follows the concept of the distracting hypothesis, which elaborates that music is used as a distracter that draws the attention to the music instead of the pain stimuli (Mandel, 1996; Bradt, 2010). Bacher (2014) further ascribed music as a catalyst in the relationship of patient and therapist. In the act of music making, patients may observe their patterns of interaction and inner mental states can be vocalized, and this can lead to synchronization and attunement. “Music therapy is the "goal-directed process in which the therapist helps the client to improve, maintain, or restore a state of well-being, using musical experiences and the relationships that develop through them as dynamic forces of change” (Bruscia, 1998, p. 20). In the case of chronic pain music therapy and MSC could act as complementing entities to achieve therapeutic goals. Mindful Self-compassion can be considered an intervention from the cognitive-behavioral approach of psychology. Using the intervention in a music therapy context, it might become multidimensional as music affects multiple domains such as sensory, affective, behavioral and cognitive. Due to these findings in the literature the following research questions guided the underlying study.

7.2.1 Research Questions Examined Through Quantitative Research Methods:

The author was interested in evaluating if the use of MSC techniques in music therapy would result in increased mindful self-compassion scores and chronic pain acceptance scores asking:

1. Does music therapy intervention have an effect on mindful self-compassion and chronic pain acceptance?
   - **1.1.** Do mindful self-compassion and chronic pain acceptance scores increase after music therapy intervention?
   - **1.2.** Is there a correlation between mindful self-compassion and acceptance of chronic pain?

Hypothesis 1:
Patients engaging in music therapy treatment with the use of mindful self-compassion techniques, increase their mindful self-compassion and chronic pain acceptance, stating that there is a direct correlation between mindful self-compassion and the acceptance of chronic pain.

The author was further interested, if the potential increase in self-compassion and chronic pain acceptance would reduce the perception of pain. As findings in the literature show, treatment goals for chronic pain patients is the perspective of "successful rehabilitation, a shift from beliefs about helplessness and passivity to resourcefulness and ability to function regardless of pain" (Flor & Turk, 2011, p. 75). Treatments that improve self-efficacy in patients give them a sense of control over aversive stimuli. Treatments then are not curative, but rather rehabilitative. Treatments requiring lifestyle changes are self-reinforcing so that change can be permanent. The same authors also emphasized that the utmost goal is the reduction of pain perception. Due to this guidance in goals setting, the following research question further guided this pilot-study:

2. Are the patients in this study experiencing a reduction in their perception of pain?

Hypothesis 2:
Patients in this study experience an overall reduction in their pain perception through practicing MSC and engaging in music therapy.

As previously mentioned, there seems to be no published literature on the combination of music therapy and Mindful Self-Compassion and therefore a mixed-method approach was chosen. The intention of the following research question was to evaluate the methods through the perspective of the patients in this conducted pilot-study.

7.2.2 Research Questions Examined Through Qualitative Research Methods:

3. What is the potential of music therapy in the practice of mindful self-compassion?

3.1. Based on self-report of the patients who engage in music therapy intervention during this study, how do they evaluate their development of mindful self-compassion after music therapy intervention?

3.2. Based on self-report of the patients who engage in music therapy intervention during this study, how do they evaluate their acceptance of pain after music therapy intervention.

7.3 DESIGN

To investigate the leading research questions, the design of the study required a mixed-method research approach. To research the effect of the independent variable (Mindful Self-compassion in Music Therapy) on the dependent variable (chronic pain acceptance), the author chose an experimental longitudinal within subject research design, where MSC & CPAQ & NRS scores were measured pre- and post-treatment and compared within subject and an overall group mean for both variables was determined (Wheeler, 2005). Due to the low number of patients enrolled and the limited resources of this study, the author defined it as a pilot study, which could potentially lead to a greater randomized control study. The qualitative data of this study, was investigated through focused interviews using an open question format. The purpose of the interviews was to research how using MSC techniques in Music Therapy were evaluated as helpful through self-report by the patients. To avoid answer biases towards the researcher, the interviews were conducted by another professional at the clinic (music therapist), who was considered neutral as she was not part nor involved in the research and therapeutic process.

7.4 FACILITY

The study was conducted at a private rehabilitation clinic in the German-speaking part of Switzerland. The clinic specializes in the field of Psychosomatic medicine with a special unit for patients with a main diagnosis of chronic pain using the International Classification of Diseases (ICD-10) as a reference, though other somatic or psychological comorbidities are common in the overall hospital patient population and in the unit. The patients of the chronic pain unit engage in a multimodal treatment program that consists of diverse therapies with a focus on group & individual physical therapy sessions, group psychoeducation and individual psychotherapy. In a weekly meeting the interdisciplinary team discusses progress, sets therapy goals, objectives, evaluates treatment progress and adjusts

the treatment plan. Upon therapeutic indication, the creative arts therapies such as movement, art, recreational and music therapy are added to the individual program of the patients. Music therapy is therefore not part of their weekly treatment plan. Coincidentally and in the light of ongoing research and treatment adjustment with the chronic pain population, just as this study was planned the unit introduced Acceptance and Commitment Therapy as a new therapy approach for the unit, and therefore the topic of this study was especially accepted and supported by the clinic and the unit where it was conducted.

7.5 Population And Sample

The population in this clinical study were individuals hospitalized in the special unit for chronic pain at the previously mentioned private clinic in the context of the multimodal treatment program. The population on the unit is diverse considering sex, age, cultural background, severity of chronic pain, medical needs and social status. The sample of the patients for this clinical study was purposive, since the patients on this unit is presumed to be representative of the chronic pain population (Wheeler, 2005). The researcher could not control for diversity in the participant sample as sampling was limited to individuals that were hospitalized during this 10-month study and fulfilled all the recruitment criteria.

7.6 Recruitment & Participants

Study participants were recruited through dialogues with the treatment team and predominantly with the case-leading psychologists on the unit that were briefed on the inclusion criteria. During the weekly interdisciplinary rapports, the music therapist decided in accordance with the team which patients would be eligible for individual music therapy treatment and participation in the study. Inclusion criteria were the following:

1. Written consent by the patient to participate in the study (See Appendix J)
2. Aged 18 years or older
3. A main diagnosis or reason for hospitalization due to chronic pain
4. A minimum stay at the hospital for seven to eight weeks
5. Verbal skills in the German language

A total of 17 patients were considered for participation in the study during the 10-month period of the study. Some patients were excluded from the study due to reasons of early

voluntary and / or involuntary discharge (n=5), lack of sufficient language skills (n=3) and due to the lack of regular commitment to therapy (n=1). Eight patients were included in the study (n=8), who fulfilled all the inclusion criteria. The diversity in the sample was given in some aspects, though due to the small sample size statements about diversity are limited. Descriptive analysis of the study sample demonstrates that the age range in the group was between 47 - 62 years, with an average age of 52 years. There was only one male participant (n=1) and seven female participants (n=7). None of the participants had previous experience with music therapy. All participants had the same main diagnoses of F-45.41 chronic pain with somatic and psychological features (n=8), while seven participants had comorbid psychological diagnoses (n=7). Five of the subjects were married (n=5), while three out of the five reported major marital difficulties (n=3) two divorced (n=2) and one participant in a relationship (n=1). The ethnical diversity was given while three were of Swiss nationality (n=3) and five participants had other European backgrounds (n=5). The socioeconomic diversity in the sample was distributed equally, as two attended up until the mandatory school (n=2), four participants worked in the service and administration industry (n=4), and two participants attended higher education (n=2). In the following table, an overview of the relevant demographic and personal data of the patients is demonstrated. Information was gathered through the medical history files and through verbal information given during treatment.

Table 10: Data of participants in the study

PATIENT	SEX	AGE	MAIN DIAGNOSIS (ICD-10)	OTHER PSYCHOLOGICAL DIAGNOSES (ICD-10)	MARTIAL STATUS	NATIONALITY	EDUCATIONAL BACKGROUND / PROFESSION	# OF MTH SESSIONS
IW	**F**	**57**	**F 45.41**	**F33.1 DD (Depression) 10 Z 61 (childhood trauma) 10 Z 61 (accentuated personality traits)**	**Divorced**	**German**	**Apprenticeship training Administration Mother of 3**	**8**
ID	**F**	**53**	**F 45.41**	**F40.01 (agoraphobia with panic attacks) F42.1 (Obsessive compulsive Disorder)**	**Married**	**Italian**	**Apprenticeship training Administration Mother of 2**	**8**
AV	**F**	**50**	**F 45.41**	**F33.1 DD**	**In a relationship**	**Dutch**	**Apprenticeship training Administration**	**7**
OD	**M**	**49**	**F 45.41**	**F 41.9 (Anxiety Disorder)**	**Married**	**Swiss**	**Applied Sciences Caregiver**	**8**
RB	**F**	**47**	**F 45.41**	**F33.1 DD (Depression) F 61.0 (Histrionic Personality Disorder)**	**Divorced**	**Swiss**	**University Education**	**7**
RF	**F**	**62**	**F 45.41**	**F33.1 DD (Depression) F 41.9 (Anxiety Disorder) F 50.0 (Anorexia Nervosa)**	**Married With marital difficulties**	**Swiss**	**Apprenticeship training Sale**	**7**
CS	**F**	**47**	**F 45.41**	**Multiple other somatic complications**	**Married With marital difficulties**	**Czech**	**High School Mother of 2**	**8**
OM	**F**	**50**	**F 45.41**		**Married**	**British**	**University Manager**	**8**

7.7 PROCEDURE

The implementation and procedure of this clinical study will describe the preparation, sequential course of the study, and finally music therapy in combination with MSC techniques will be exemplified.

7.7.1 PREPARATION OF THE STUDY

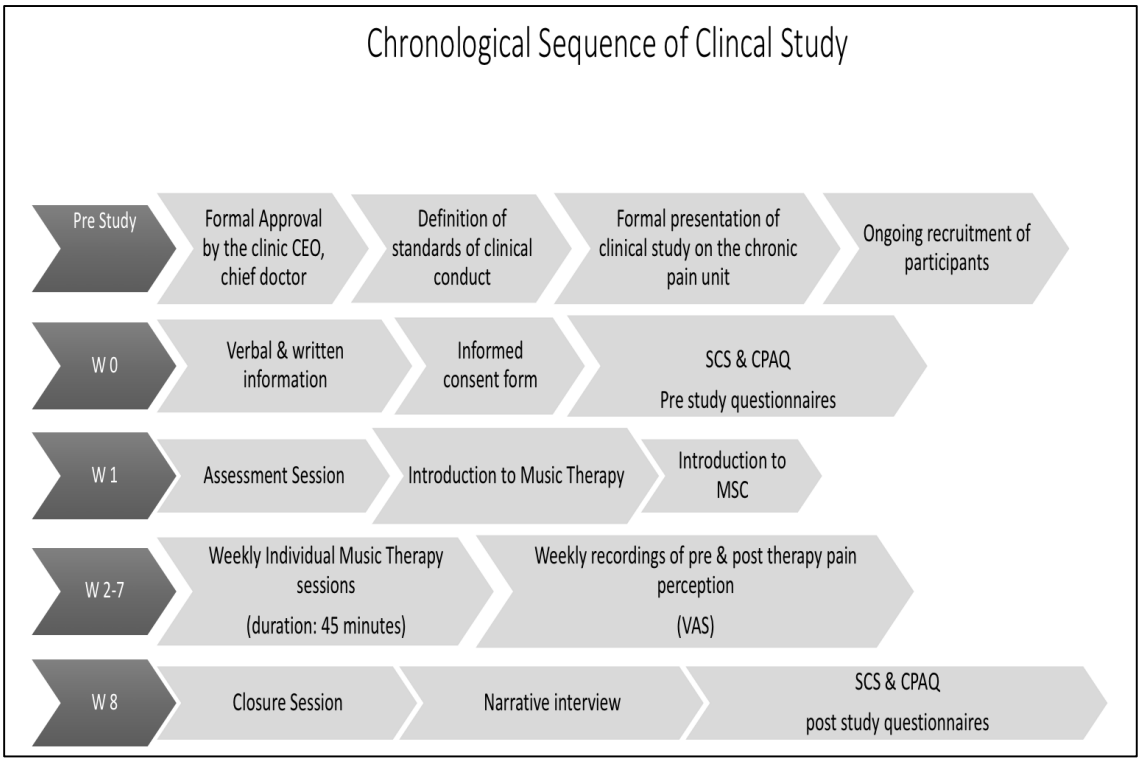
In preparation of the clinical study, the researcher attended and graduated from an 8 week MSC course held in Switzerland led by two experienced and certified MSC guides. As described in the literature of MSC, self-experience in this method is important if used in a therapeutic context. The implication of the study at the clinic was discussed and approved by multiple professionals at the clinic. The main chief doctor and the main doctor of the unit approved the study and ethical standards of conduct for the study as defined. As it was relevant for the interdisciplinary team to be involved in the recruitment of the participants, the researcher oriented the team in advance and introduced the content and course of the study.

7.7.2 COURSE OF THE STUDY

Participants of the study were preselected for recruitment in correspondence with the treatment team and through studying their medical files, checking for inclusion criteria. Once preselected and compliance with inclusion criteria was guaranteed, they were scheduled for an informal meeting session with the music therapist. During this meeting, the participants were verbally oriented about music therapy, the content of the study by explaining what MSC is, the purpose and need of the study and its potential relevance for sufferers of chronic pain. Further, the sequence of the study was explained, protection of their privacy was guaranteed, and what could be expected if they decided to take part in the study was communicated. They were also informed that if they decided not to take part in the study, that they would still be invited to attend music therapy sessions as part of their treatment program. Patients who expressed an initial interest in participation were given a written information sheet, the informed consent form and the two-baseline questionnaire (See Appendix D to J). They were asked to bring these documents back to their

first scheduled music therapy session. The treatment phase of the study followed a semi-structured sequential protocol as every patient was treated based on individual needs and subscale MSC scores. The music therapist evaluated their baseline questionnaire of the Self Compassion Scale (SCS) and assessed for the six subscale components. Treatment plans were designed per outcome of the subscale scores, which determined a focus area. However, there were three core methods from the MSC 8-week program that all participants were introduced to. Each participant had 7 to 8 weekly individual music therapy sessions lasting 30 to 45 minutes. Before and after each therapy session the pain perception was recorded on a sheet using a numeric rating scale (NRS) ranging from 1 – 10, where participants were asked verbally or then asked to circle a number on the prepared sheets. During their last scheduled session, they were given the analogue SCS & CPAQ questionnaires that measured post treatment scores and were asked to bring them to the scheduled interview. Interviews were scheduled during their last week at the clinic and were held by a colleague music therapist, who was considered a neutral person in the context of the study.

Figure 9: Chronological Sequence of Clinical Study



7.7.3 Description Of Music Therapy Interventions

Mindful Self-compassion, as mentioned previously, consists of six different components and the formal 8-week course enhances formal and informal practices addressing the different components. In this context, it is important to note that the researcher attended a self-experience course and did not attend a formal training as an MSC practitioner. The music therapy interventions were designed with a music-centered focus, incorporating MSC techniques and practices. For this clinical study the author used different practices for each set of components. The researcher designed these interventions herself and combined music therapy techniques, found in the music therapy literature with the chronic pain population combined with techniques from the mindful self-compassion program. The weekly individual music therapy sessions did not follow a manual and were semi-structured, to meet individual's needs. Three interventions (MSC in daily life, compassionate voice, dealing with difficult emotions) were used with all eighth participants whereas the other practices (soft touch, sentences of kindness, serenity, confronting the inner critic, giving and receiving compassion) were chosen based on individual's preference, clinical goals and needs. The researcher made a conscious decision not to follow a manual, since this would counteract the practice of mindful self-compassion, and it would have further counteracted the clinical goals of increasing self-care, verbalizing needs and reducing pain perception. The music therapy interventions allowed to not only target the MSC components, but also adhered to patient's clinical goals.

Table 11: Sequence of individual 45-minute music therapy sessions

- Check in: NRS Scale Score to assess for pain perception pre-therapy
- Music Ritual: Receptive music played by therapist and self-compassion break
- Main MSC in Music Therapy Intervention
- Examples:
    - MSC in daily life
    - Finding the compassionate voice
    - Dealing with difficult emotions
    - Soft touch
    - Sentence of kindness
    - Finding Serenity
    - Confronting the inner critic
    - Giving and receiving compassion
- Check out: NRS Scale Score to assess for pain perception post-therapy

In the following table for each patient one of the interventions will be described and the translated protocols (German to English) from the therapy sessions are inserted. For further detail and interest, one example (script) of the intervention "Self-compassion break in music therapy" is found in the Appendix N.

Table 12: Sample Descriptive Music Therapy Interventions & Session Protocols

Patient	MSC components	Music Therapy Intervention Short Description	Descriptive Therapy Protocol (translated from German to English)
IW	Common Humanity vs. Isolation	Using mindful self-compassion to confront difficult emotions. Using the music to create connection from isolating emotions and physical pain to the outer world.	Following the self-compassion break pat. verbalizes the need to act upon increased pain perception, she says that she tends to isolate in those situations and would like to try an alternative. She verbalizes that drumming would be appropriate for this need. The drumming improvisation is dynamic and rhythmical; pat. closes her eyes during playing. In reflection, she verbalizes that she felt her inner force coming out. Where in her body she located that force? In her abdomen. She associates this force with her femininity, which has been suppressed by her family (mother) and evokes emotions of shame. She expresses being touched to let that force out and having somebody witness this force. How this force is related to her chronic pain? Suppressing the force relates to increased pain.
ID	Common Humanity vs. Isolation	Patient is on the monochord bed, the therapist leads a meditation with the focus on mindfulness, using body scan techniques with self-compassion, choosing sentences of good will to bodily parts. Examples: "May I be calm", "May I be strong", "May I accept myself"	Pat. expresses need for isolation due to it being the day when her daughter died. She expresses deep sadness and increased pain perception. After a self-compassion break with receptive music, pat. realizes need to experience calmness on the monochord bed. Guidance with image of earth as an unconditional force of acceptance and invitation to form sentences of good will. Pat. verbalizes in reflection that she visualized a cherry tree connecting the earth and the sky where her daughter is. Allowed herself to be sad and defined sentence of good will as "May I be calm". Pat. verbalizes less pain and calmness in her body.

AV	Self-Kindness Vs. Self-Judgment	Using the Self-compassion break to approach difficult life situations with self-kindness. Practicing this in a music therapy context using the music to reinforce self-kindness through choosing soothing instruments that represent self-kindness.	Pat. expressed that she felt increased pain perception after last music therapy session in reaction to monochord bed. Explanation of concept of "backdraft" when using self-compassion. She agrees that she is not used to being kind to herself yet, elaborates on situation at the office with annoying and dominating co-worker, she feels powerless in those situations and feels increased pain. While elaborating on situation at the office much self-judgment observable. Active music therapy intervention through ascribing instruments for co-worker (loud djembe drum). Pat. sits on chair and is guided to observe bodily sensations and emotions that arise during the music. Pat. describes anger that arises and pain perception increases. What she could do? Chooses to play big gong drum, which she plays with great intensity and immediately stops as she is startled by her anger. She realized that this intensity of the drum brings her even closer to the co-worker and expresses need to set boundaries. She chooses self-compassion break to feel what she needs. Finds a singing bowl soothing in this situation and the sentence "it is ok to feel anger, what do I need in this moment".
DO	Mindfulness vs. Over identification	Patient is on the monochord bed. The therapist leads the experience with a meditation focusing on acceptance of the moment. Using the serenity prayer.	Pat. expresses need for relaxation on the monochord bed. Guidance with serenity prayer on things he can change and things he can let be. Patient appears calmer than weeks before as observed by deeper breathing and longer sequences of eyes closed. Reflecting on the experience he ascribes that things he can change is to find more moments of calmness through mindfulness practice in his daily life. Serenity is important to him and he describes that he wants to take work life more easily.

RB	Self-Kindness Vs. Self-Judgment	Using the Self-compassion break to approach difficult life situations with self-kindness. Practicing this in a music therapy context using the music to reinforce self-kindness through choosing soothing instruments that represent self-kindness. Receptive music playing while patients formulates sentences of good-will.	Pat. expresses tiredness due to increased medication (Trittico) and indulges in self-judgment, why her therapy doesn't show progress. Introduction to self-compassion break with receptive music. She verbalizes that her pain causes her body to sink in. I invite her to find a sound that she finds pleasant and soothing. While exploring the room, she chooses the singing bowls. In an active improvisation with six singing bowls Mth instructs her to find sentences of good will. She chooses "May I laugh and be happy" "May I allow myself to sleep" "May I find calmness". To close the session, she asks if I can play the singing bowls to her. In the moments of silence, she expresses an increase of pain, the sentences helped her to distract her from the pain.
RF	Self-Kindness Vs. Self-Judgment	Using the Self-compassion break to approach difficult life situations with self-kindness. Using soft touch with an instrument to self-soothe difficult emotions.	Pat. freezes (like past weeks) as she enters the room. She doesn't know where to sit down or stand. Invite her to listen to the music and follow her instinct while practicing self-compassion break, she finally sits down on chair. Pat. verbalizes that through this process of deciding to sit down and listening to the music, she was reminded of her childhood, as she was not allowed to show emotions and was silenced by her parents at home so that neighbours wouldn't hear her. Topic of taking up space is difficult for her and causes stress and pain. As an example, she mentions situations with her husband: When she gets mad she isolates, leaves the situation, feels shame and cries and feels helpless. Invite her to try out an intervention with soft touch. As I guide her she chooses to put her hand on her heart. If she could choose something in the context of music therapy that manifests this feeling? She asks to sing. Initially self-judging expressions, sings timidly though with increased power. She remembers that singing in a choir was a passion that she lost due to her chronic pain. Next session: Finding compassionate voice.

CS	Mindfulness vs. Over identification	Reinforcing mindfulness through music experience allowing patient to focus on the here and now, engage in a nonverbal experience, allowing space for physical and emotional sensations.	Pat. checks in with pain perception 10 on NRS scale while talking without a pause focusing on convincing Mth that she has that much pain. Validation of her pain experience and empathy towards her expressed mistrust. Much resistance from pat. to engage in therapy. Invite her to arrive in the present moment and if she would like to find something that might ease her pain, to use this time in music therapy to practice self-compassion? She verbalizes that she would like to try the monochord bed. Guidance with deep breathing and self-compassion towards feelings that may arise. Has difficulties allowing mindfulness, expresses that "bed is too hard, difficulties accepting that Mth plays for her, breathing is difficult". Invite her to allow space to these difficulties in the here and now and to focus on the sounds. Pat. seems to increasingly relax, continually less talking, closed eyes and relaxed face. Pat. reflects that experience was pain reducing, warm and hurtful to realize that she doesn't allow times for herself and is preoccupied with anger towards her husband. At the end of the session pain perception on NRS 7.
OM	Common Humanity vs. Isolation	Using the self-compassion break as a lead way to approach difficult and isolating life situations with awareness and kindness. Giving compassion to an old self, while using the music to manifest the compassion in the here and now.	As an introduction listening to preferred song by patient "Imagine by Herbie Hancock" with a guided mindfulness of the body exercise throughout the duration of the song. The patient expresses that she hasn't listened to a song in full length for a long time. What she experienced during the exercise? She expressed that she felt her pain and was more aware of it, however she felt connected through the message in the music and the memories connoted with it (childhood, moving from country to country with her family, being rootless, low empathy and care from busy parents). She described that she often feels and felt isolated enough by her pain, due to not finding words for it, that she has difficulties being with the pain (emotional & physical pain). Describes that she tends to distract herself by caring for other people and not acknowledging and ignoring her pain. →Giving self-compassion to her inner child guided by therapist, what does the child need? A song played by Mth to feel heard and connected.

7.8 MATERIALS

For purposes of replication, this section will introduce materials used and measures will be described.

The music therapy sessions were held in the music therapy room at the clinic, which is equipped with a diversity of good quality instruments and a monochord bed. Since instrument choices were open and up to individual's preference in the study, no further description is necessary, however diversity of instruments in dynamic ranges and playing style (drums, strings…) was important. Therapy sessions were recorded for later reference with the voice memo application on an I-Phone 5s, for data security reasons were then exported to a separate USB external hard drive. Following each therapy session, the content was documented descriptively in the clinics documentation software (SAP-Phoenix). Documentation at the clinic is used descriptively to report back to the interdisciplinary team and to implement, evaluate and adjust goals and objectives.

7.9 MEASURES

To approach the quantitative oriented research questions of this study, existing validated questionnaires applied in previous studies were used. Since the participants in this study were German-speaking, the study borrowed the validated German versions of the scales.

7.9.1 THE SELF-COMPASSION SCALE (SCS)

The SCS is a self-report inventory consisting of 26 items. The questions are all ascribed to one of the components of Mindful self-compassion, self-kindness vs. self-judgment, common humanity vs. isolation and mindfulness vs. over identification. Items are rated on a 5 point Likert scale, ranging from 1 (almost never) to 5 (almost always). The questions are worded in a reversed correlation within the opposing components, which is important for the data analysis of the subscales to calculate the total mean score and for SCS the negative components get coded in reverse.

Table 13: Sample SCS Questions

Positive Component Sample Question	Opposing Negative Component Sample Question
Self-Kindness "I try to be understanding and patient toward aspects of my personality I don't like"	Self-Judgment "I'm disapproving and judgmental about my own flaws and inadequacies"
Common Humanity "I try to see my failings as part of the human condition"	Isolation "When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world"
Mindfulness "When something painful happens I try to take a balanced view of the situation"	Over-identification "When I'm feeling down I tend to obsess and fixate on everything that's wrong"

The six subscales mean scores add up to a total mean SCS score, with higher results signifying higher self-compassion. Mean subscale and total SCS scores range from 1 to 5. Neff (2013) suggested a three-factor model of self-compassion, as each of the six subscales leads up to an overarching self-compassion score, as well as their subscale scores. A single higher order factor of self-compassion reveals the valid inter-correlations of the subscales. Content validity of the SCS, was administered after four different piloting tests. The initial test enhanced 71 items and was reduced to 26 items through exploratory factor analysis, to assess for relevance for the components, with items lower than 0.40 not included. The final version was analyzed using confirmatory factor analysis to explain the inter-correlation between the subscales and total overarching self-compassion factor. Internal consistency resulted in a Cronbach's Alpha of $\alpha = 0.90$ and retest variability of rtt= 0.93 for total scale and subscales of the components with consistency between α=0.75 – 0.81 retest variability between rtt=.80 und rtt= .88 (Neff, 2009).

The German version of the SCS-D, was validated by Hupffeld & Ruffieux (2011). Their validation process was based on the hypothesis of replicating the original form of the

questionnaire, using the similar methods for analyzing the German version of the questionnaire for reliability & variability. Internal consistency for the SCS-D resulted in a Cronbach's Alpha of $\alpha = 0.91$ and retest variability of rtt= 0.92 for total scale and subscales of the components with consistency between α=0.66 – 0.83 retest variability between rtt=.72 und rtt= .80 (Hupfeld & Ruffieux, 2011). The authors summarized that the German version of the SCS indicated a high and significant reliability, like the original version and is therefore a recommended, reliable and valid instrument to assess for self-compassion.

7.9.2 CHRONIC PAIN ACCEPTANCE QUESTIONNAIRE REVISED (CPAQ-R)

The CPAQ-R, developed by McCracken and his colleagues (2004) assesses for the acceptance of chronic pain, which encloses two subscales, the pain willingness subscale with nine items and the activity engagement subscale with eleven items. The questions are constructed in reverse formulation.

Table 14: Sample CPAQ-R questions

Activity Engagement Sample Question	Pain Willingness Sample Question
"Despite the pain, I am sticking to a certain course in my life"	"I would gladly sacrifice important things in my life to control this pain better"

A seven point Likert scale ranging from 0 (never) to 6 (always) is used for the 20-item inquiry. Adding both sub scores of the subscales calculates the total score, the higher the number the greater the acceptance scores. Total CPAQ-R Scores range from 0-156 and subscale scores of pain willingness range between 0 – 54 and subscale scores of activity engagement range between 0 to 66. The questionnaire is internally consistent with a Cronbach's alpha ranging between $\alpha = 0.78$ (pain willingness) α =-0.82 (activity engagement) (McCracken et al., 2004).

The German version of the CPAQ-R (CPAQ-D) was validated by Nilges and his colleagues (2007)) and is based on the revised version of McCracken's original questionnaire (2004). The questionnaire was tested on 150 chronic pain patients based in a pain center in Germany. Both main authors of the CPAQ-D collaborated with McCracken to

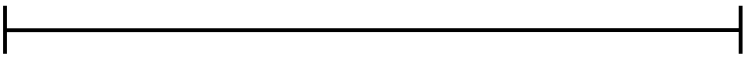
translate the questionnaire to German and were then read by a translator and reversed back into English to compare the two questionnaires, where items were then adjusted. The CPAQ-D is internally consistent with an α = 0,84 (pain willingness) –0,87 (activity engagement). The authors concluded that the CPAQ-D is closely related in reliability and validity with the theoretical model and a useful instrument to assess for chronic pain acceptance (pp.58 -72).

7.9.3 NUMERIC RATING SCALE (NRS)

As mentioned in previous chapters a common way to assess for pain intensity, is through the self-report of patients, as pain perception is based on subjective experience (Anand & Craig, 1996). Visual analogue and numeric rating scales are widely used in experimental research designs as well as in clinical settings as a pain measurement (Flor & Turk, 2011, pp. 220-226). The author used a numeric rating scale (NRS), as it has been proven to be generally valid and reliable (p.225). The NRS asks an individual on a 10-point Likert scale on the severity of their pain perception with 0 meaning (no pain) to 10 (worst pain ever). The NRS has the advantage of being a relative simple measurement to assess for current pain level, which can also be reported verbally. VAS and NRS are highly correlated and therefore either method is recommended (Flor & Turk, 2011, p.226). The author chose to use an NRS, since it is predominantly used on the pain unit at the clinic and patients were already familiar with reporting their pain on an NRS.

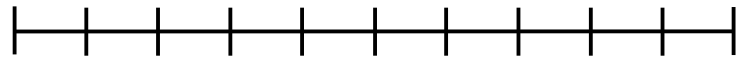
Figure 10:Rating Scales to asses for pain perception (Turk & Flor, p. 225)

Visual Anlaogue Scale (VAS)
Please mark your current level of pain on the scale below



No pain — The worst pain I can imagine

Numeric Rating Scale *(NRS)*
Circle the number below that indicates your current level of pain



0 1 2 3 4 5 6 7 8 9 10
No pain — The worst pain ever

7.9.4 FOCUSED INTERVIEWS

To approach the qualitative oriented research questions of this study, the author designed a focused (semi-structured) interview with focused interview questions (See Figure 11). The interview was structured into introductory questions that were not assessed for. Since the interview was conducted by a third and neutral person, these questions served to establish rapport. The focused questions were piloted with colleagues of the author and with a pilot patient before they were used as a method in this study. The focused questions were geared towards patient's experience and evaluation of the treatment process, methods used, perception of relevance and / or changes in mindful self-compassion, and chronic pain acceptance in the context of music therapy.

Figure 11: Interview Guide

Interview Guide

The goal of this interview is to evaluate the individual experience of patients, who are affected by chronic pain and took part in the underlying study. The focused questions serve the qualitative evaluation of the therapeutic process and the patient's subjective view on their potential development of mindful self-compassion and chronic pain acceptance.

Introductory Questions:

1. How are you feeling at the moment?
2. How was your experience in music therapy in these past weeks?
   2.1. Which specific experience comes to your mind?

Focused Questions

3. What does the term self-compassion mean to you?
   3.1. In hindsight, how do you experience your own self-compassion?
   3.2. How did you perceive music therapy in relation to your self-compassion?
4. What does chronic pain acceptance mean to you?
   4.1. How did you perceive music therapy in relation to your chronic pain acceptance?
5. How did you perceive the methods chosen in music therapy?

Concluding Questions

6. What do you take away from music therapy for your future path?
7. Are there other thoughts you would like to add?

7.10 DATA ANALYSIS

For reproduction purposes, the following elaborations are geared towards understanding what means were used to analyze the quantitative and qualitative data.

7.10.1 QUANTITATIVE DATA ANALYSIS

Statistical Analysis was evaluated with the version 23 IBM software "Statistical Package for Social Sciences" (SPSS).

As the underlying study used exclusively questionnaires that were already validated and researched in further depth and applied by multiple authors, validity was not tested for separately. The reliability has already been proven as sufficient by previous authors. However, to test for the reliability in the data set of this underlying study the data was tested with a Cronbach Alpha, which measures internal consistency, meaning that the items in the measures are interrelated and measure the same concept.

The sample size of the underlying pilot study was small (n=8), so descriptive and parametric statistics were used to infer trends within subject. To describe within subject results in the context of the group, descriptive statistics were used (range, standard deviation). To test the correlating hypothesis if increased self-compassion scores would lead to increased chronic pain acceptance scores, the Pearson Correlations was applied, additionally statistical significance for the changes in pre-post results were tested using paired sample t-tests. Inferences on pain reduction were approached with descriptive statistics (mean, range) and to test for statistical significance in pre-post treatment results, a paired sample t-test was conducted.

7.10.2 QUALITATIVE DATA ANALYSIS

To analyze the qualitative aspects of this study, the interviews were evaluated using a Thematic Analysis approach according to Braun & Clark (2006, pp. 7-8). The active role of a researcher in identifying themes and patterns and the importance of reporting the process of how these themes were identified to the readers is defined as an important factor in qualitative research. A thematic analysis is a qualitative method to extract themes from a given data set and is especially recommended in individual case study formats. An

advantage of using thematic analysis is that there are diverse options on how to extract themes, stressing the importance of transparency and consistency, and explaining what the process was explicitly.

Per Braun & Clark (2006) a thematic analysis follows a protocol of different phases that are recursive in nature, advising to leave time and space to go back and forth between the phases. To extract themes from the focused interviews in this underlying study, the author followed the six phases, which are visualized and represented in the following table.

Table 15: The 6 phases of the Thematic Analysis as adapted from Clark & Braun (2006)

Phase	Description of the process	Comments, criteria and selection
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.	
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.	Criteria: Prevalence, Commonalities, Relevance across data set
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.	
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic „map" of the analysis.	Latent, interpretative level
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.	
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.	

To establish and define what counted as a theme, the author used some guidelines from Braun & Clark (2006, pp.15 - 24). To become familiarized with the data, the interviews were listened to at different times over the course of a week to get a first impression on the mood, length and content. The interviews were then transcribed literally. As a second step the interviews were listened to again and initial passages were marked in initial

codes. Criteria were the prevalence and commonalities of answers given between the subjects and relevance and nuances of answers regarding the topic of this thesis. A code is described as a "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Braun & Clark, 2006, p. 18). As a third step the initial codes were compared and laid out on a flipchart, categorized by commonalities to form subgroups of potential themes. The author took a theoretical thematic analysis approach in finding potential themes, since the author was looking for aspects in the data concerning the main topics (Chronic Pain Acceptance, Mindful Self-compassion, Music Therapy) in this study. At a fourth step the initial codes and corresponding text passages were ascribed to potential themes, which formed into a thematic map. The interviews were then listened to again and passages were added to the potential themes. When defining the themes in the fifth step, the author chose a latent analysis level, which indicates that "a thematic analysis at the latent level goes beyond the sematic content of the data, and starts to identify or examine the underlying ideas, assumptions, and conceptualizations and ideologies" (Braun & Clark, 2006, p. 13). A latent approach therefore implies interpretation of the data and while it is not just described, it already relates to the underlying theory. As the interviews were used to answer the qualitative aspects of this research, a latent approach was chosen.

8. RESULTS

In this next chapter, the results of the described clinical study will be introduced in two parts. In the first section the reader will find out about the quantitative research of the study, enhancing statements about reliability, correlation and descriptive statistics concerning pre-and post-test results of the SCS & CPAQ-R questionnaires. In the second section the thematic analysis of the conducted interviews will be summarized and presented.

8.1 QUANTITATIVE RESULTS

The following presentation of the quantitative results is structured in sections of overall group results and individual within subject results.

8.1.1 SCS & CPAQ-R: OVERALL GROUP RESULTS

In the following table, the reader will find reliability measures to show internal consistency of the presented data set, analyzed with a Cronbach Alpha. The Cronbach Alpha scores range from $\alpha = 0.82\text{-}0.91$, which is comparable to the validated German version of the SCS of by Hupfeld & Ruffieux (2011) whose analysis resulted in a range from $\alpha = 0.66 - 0.83$.

Table 16: Reliability Statistics - Cronbach Alpha

Reliability Statistics		
Test	Cronbach's Alpha	N of Items
SCS Pre	0.89	26
SCS Post	0.89	26
CPAQ-R Pre	0.82	20
CPAQ-R Post	0.91	20

Range between $\alpha = 0.70$ to 0.95 adheres to internal consistency.

To measure changes in pre & post therapy measures of SCS & CPAQ-R scores, descriptive statistics were analyzed and are presented in table 17. SCS pre-scores ranged from (2.1-3.8) with an average of 2.7, whereas post results had a reduced range from 2.3 to .3.8

with an increased average of 2.8, therefore it is evident that overall SCS scores increased post therapy.

CPAQ-R scores pre-therapy ranged from 32-68 with an overall group average of 47.9 post CPAQ-R scored increased with a range from 36-87 with a group average of 56.9.

Table 17: Descriptive Statistics: SCS / CPAQ-R Pre & Post

	N	Range (min.)	Range (max.)	Mean	Std. Deviation
SCS Pre	8	2.10	3.80	2.7063	.57224
SCS Post	8	2.30	3.80	2.8875	.50832
CPAQ-R Pre	8	32.00	68.00	47.8750	14.53506
CPAQ-R Post	8	36.00	87.00	56.8750	17.93988
Valid N (listwise)	8				

Higher scores reveal higher mindful self-compassion, whereas 1 is the lowest number and 5 is the highest number that can be achieved for the SCS questionnaire. CPAQ-R score can range from 0-156, higher numbers indicate higher chronic pain acceptance.

To test for statistical significance (table 18) between pre & post therapy a paired sample t-test showed statistical significance for both scores SCS ($p=0.003$) and CPAQ-R ($p=0.001$). Statistical significance was set at $p<0.05$.

Table 18: Paired Samples Correlations: t-test results SCS / CPAQ-R Pre & Post

	N	Correlation	Sig.
SCS Pre&Post	8	.897	.003
CPAQ_R Pre&Post	8	.921	.001

Correlation is significant at the 0.05 level (2-tailed).

The overall group mean scores increased statistically significantly for both SCS & CPAQ-R scores. To attest for correlation data items were analyzed with a Pearson correlation. Table 19 shows correlations of both pre-and post-test scores of the same measure and across both measures. Interestingly, SCS Pre-to CPAQ-R post scores did not result in a significant correlation. However, comparing pre CPAQ-R scores with SCS post scores resulted in a significant correlation of 0.763 and a p value of $p= 0.027$.

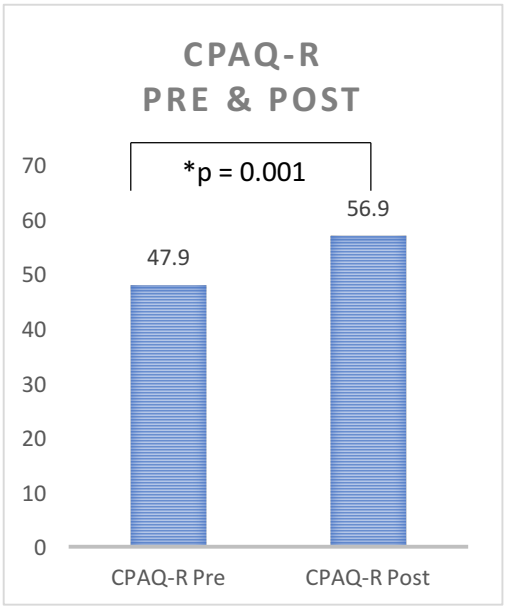
Table 19: Pearson Correlations of Pre & Post SCS / CPAQ-R Total Group Mean Scores

		SCSPre	CPAQRPre	SCSPost	CPAQRPOST
SCS Pre	Pearson Correlation	1	.630	.897**	.640
	Sig. (2-tailed)		.094	.003	.088
	N	8	8	8	8
CPAQ-R Pre	Pearson Correlation	.630	1	.763*	.921**
	Sig. (2-tailed)	.094		.027	.001
	N	8	8	8	8
SCS Post	Pearson Correlation	.897**	.763*	1	.825*
	Sig. (2-tailed)	.003	.027		.012
	N	8	8	8	8
CPAQ-R POST	Pearson Correlation	.640	.921**	.825*	1
	Sig. (2-tailed)	.088	.001	.012	
	N	8	8	8	8

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

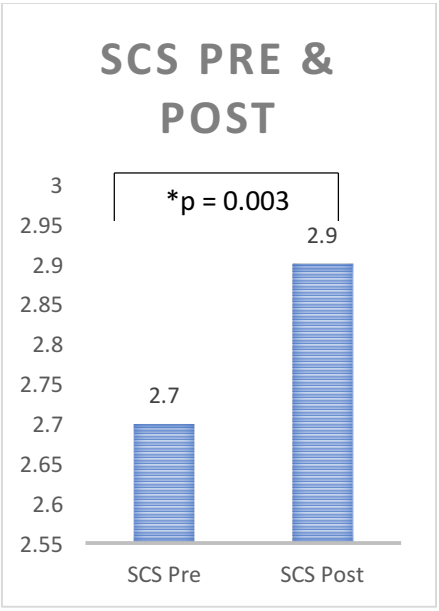
To visualize results, graphs in figures 12 & 13 show the overall group mean increase of SCS and CPAQ-R pre & post study scores.

Figure 12: Graph showing CPAQ-R Pre & Post Group Mean Results



CPAQ-R scores can range from 0-156.

Figure 13: Graph showing SCS Pre & Post Group Mean Results



SCS scores can range from 1-5.

*= significant p-value ($p \leq 0.05$)

As mentioned in the Method chapter of this paper, both questionnaires are designed based on subscales. The SCS enhances 6 subcomponents, whereas the CPAQ-R has two underlying subcategories. The following tables (20 & 21) show descriptive statistics of the overall group mean, ranges and standard deviation for the subscales pre & post study.

Table 20: Descriptive statistics for six SCS components pre & post study

	N	Minimum	Maximum	Mean	Std. Deviation
Pre SK	8	1.00	3.80	2.4750	.90040
Post SK	8	2.40	3.60	2.9750	.48329
Pre SJ	8	2.60	4.00	3.4750	.47734
Post SJ	8	2.80	4.20	3.3500	.45040
Pre CH	8	1.25	3.75	2.8750	.85565
Post CH	8	1.25	3.75	2.7188	.87052
Pre IS	8	1.50	4.25	3.1875	.83184
Post IS	8	1.50	3.50	2.5313	.76108
Pre MI	8	2.00	3.75	2.8438	.69356
Post MI	8	2.50	3.75	3.1250	.40089
Pre OV	8	1.75	4.25	3.5313	.86021
Post OV	8	1.75	4.25	3.0313	.84976

SK=Self-kindness, SJ=Self-judgment, CH=Common Humanity, IS=Isolation, MI= Mindfulness, OV=Over identification

Table 21: Descriptive statistics for two CPAQ-R subscales pre & post study

	N	Minimum	Maximum	Mean	Std. Deviation
CPAQ-R AE Pre	8	20.00	42.00	27.0000	8.55236
CPAQ-R AE Post	8	22.00	52.00	32.8750	11.23054
CPAQ-R PW Pre	8	11.00	37.00	20.8750	8.77395
CPAQ-R PW Post	8	11.00	38.00	24.0000	9.21179

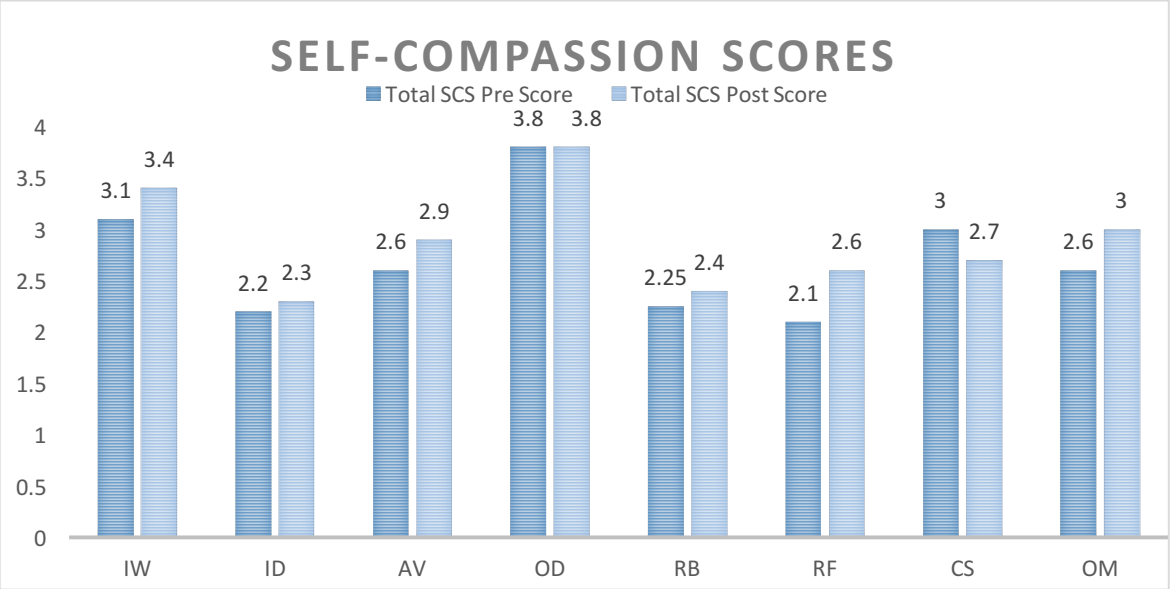
AE= Activity Engagement: Results score range can from 0-66; PW= Pain Willingness: Results score can range from 0-54

8.1.2 SCS & CPAQ-R: WITHIN SUBJECT QUANTITATIVE RESULTS

As the sample size in the study was small (n=8) and considering what the mixed method allows for, subject analysis in the following figure 14 shows individual self-compassion scores pre & post therapy. For the majority of the patients (n=6) SCS scores increased post treatment for one client OD (n=1) scores remained the same and for one participant

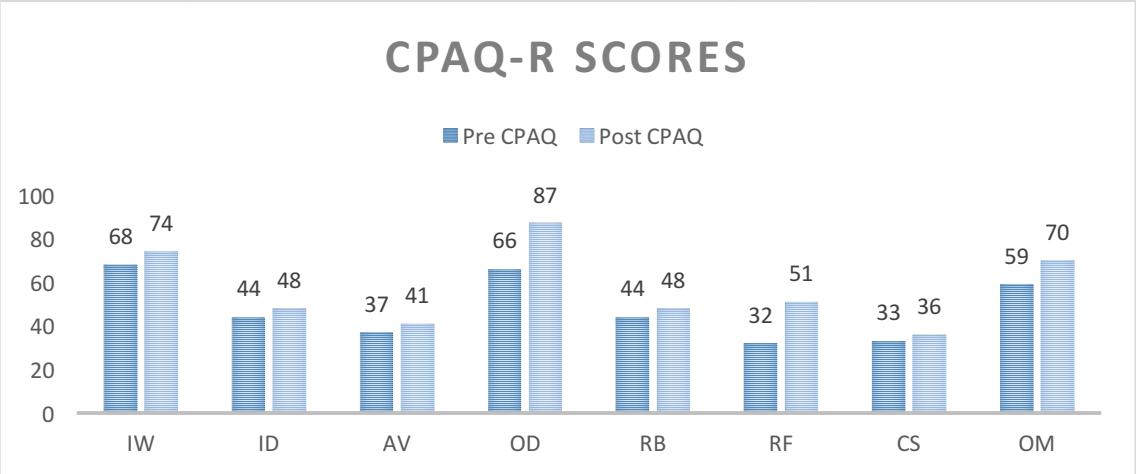
CS (n=1) SCS scores decreased post treatment. CPAQ-R scores were also analyzed within subject in figure 15. Throughout the sample all CPAQ-R scores increased.

Figure 14:Graph showing within subject SCS scores pre & post study



SCS scores can range from 1-5.

Figure 15: Graph showing within subject CPAQ-R scores pre & post study



CPAQ-R scores can range from 0-156.

8.1.3 RESULTS ON PAIN PERCEPTION

Pain perception was measured using numeric rating scales (1-10) and are summarized in table 23 and visualized in figures 16 & 17. All patients experienced an overall pain reduction and the overall group mean pre-study was 7 and post study 5. When looking at individual sessions it is evident that not all sessions resulted in a reduction of pain for all patients. This is possibly due to the nature of the intervention of mindful self-compassion, where some sessions are focused on confronting the pain rather than distraction from the pain. The average pain perception from the pre-and post test was analyzed with a paired sample t-test and did not result in a significant result ($p= 0.261 > 0.05$) as indicated in table 22.

Table 22: Paired Samples Correlations: t-Test for Pre & Post Pain Perception

		N	Correlation	Sig.
Pair 1	PreNRS & PostNRS	8	.452	.261

Nonetheless, most patients experienced a reduction in pain perception after music therapy intervention and resulted in an overall pain reduction. The results on the next page show an overall trend in pain reduction, which is also supported by research finding evidence that music may has analgesic effects (Taylor, 2010).

→ continued on the next side

Table 23: Individual pain perception pre & post music therapy sessions measured on numeric rating scale

Patient	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8	Mean NRS Pre	Mean NRS Post
IW	6 to 5	8 to 4	5 to 0	9 to 5	10 to 5	8 to 5	7 to 4	9 to 3	8	4
ID	8 to 5	6 to 0	8 to 5	10 to 7	5 to 0	5 to 5	8 to 4	5 to 4	7	4
AV	6 to 4	7 to 5	5 to 8	6 to 6	8 to 5	4 to 4	5 to 5	x	6	5
OD	5 to 5	7 to 6	3 to 3	6 to 4	9 to 5	4 to 3	6 to 2	5 to 5	6	4
RB	7 to 6	8 to 5	4 to 1	6 to 4	5 to 8	3 to 2	8 to 3	x	6	4
RF	5 to 2	8 to 6	8 to 5	7 to 5	5 to 1	6 to 4	7 to 4	x	7	4
CS	10 to 9	9 to 6	10 to 7	6 to 5	5 to 8	6 to 8	9 to 9	8 to 5	8	7
OM	5 to 5	8 to 5	6 to 4	5 to 5	8 to 3	4 to 0	6 to 5	4 to 3	6	4

Pain perception scores measured on a numeric scale ranging from 1 (no pain) to 10 (worst pain possible).

Figure 16: Graph showing within scores on pain perception

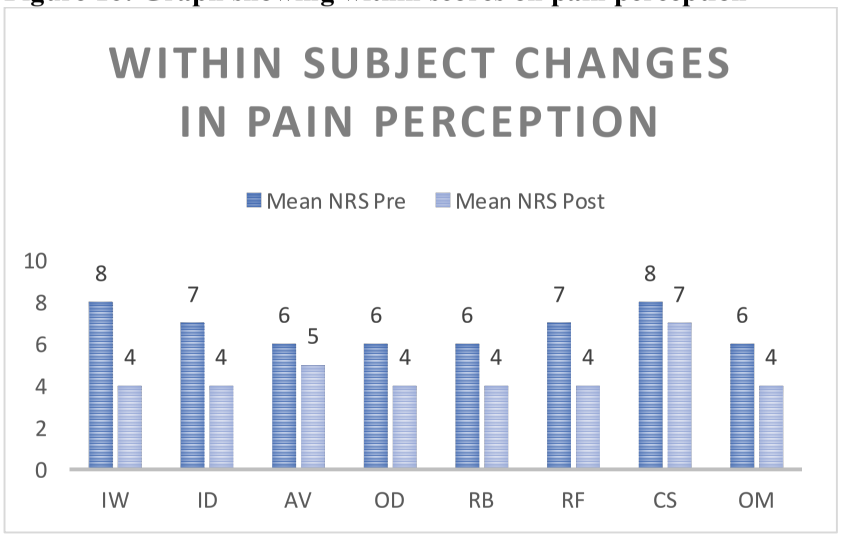
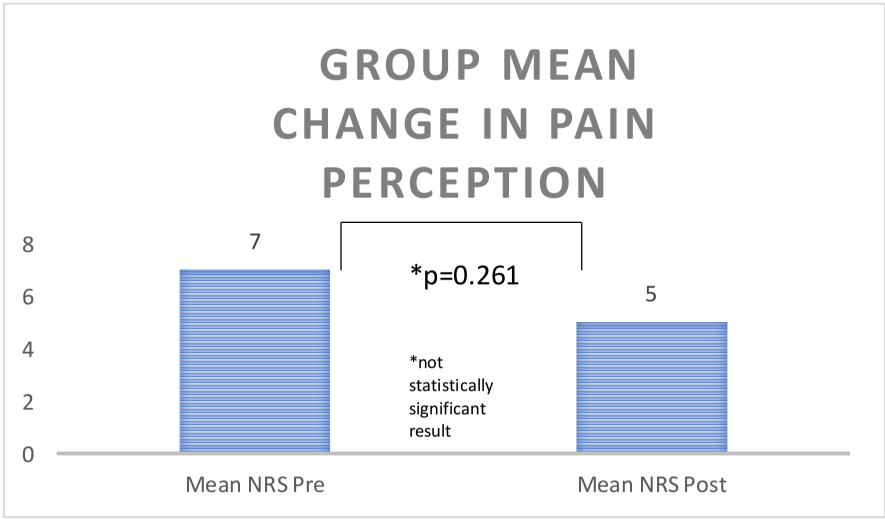


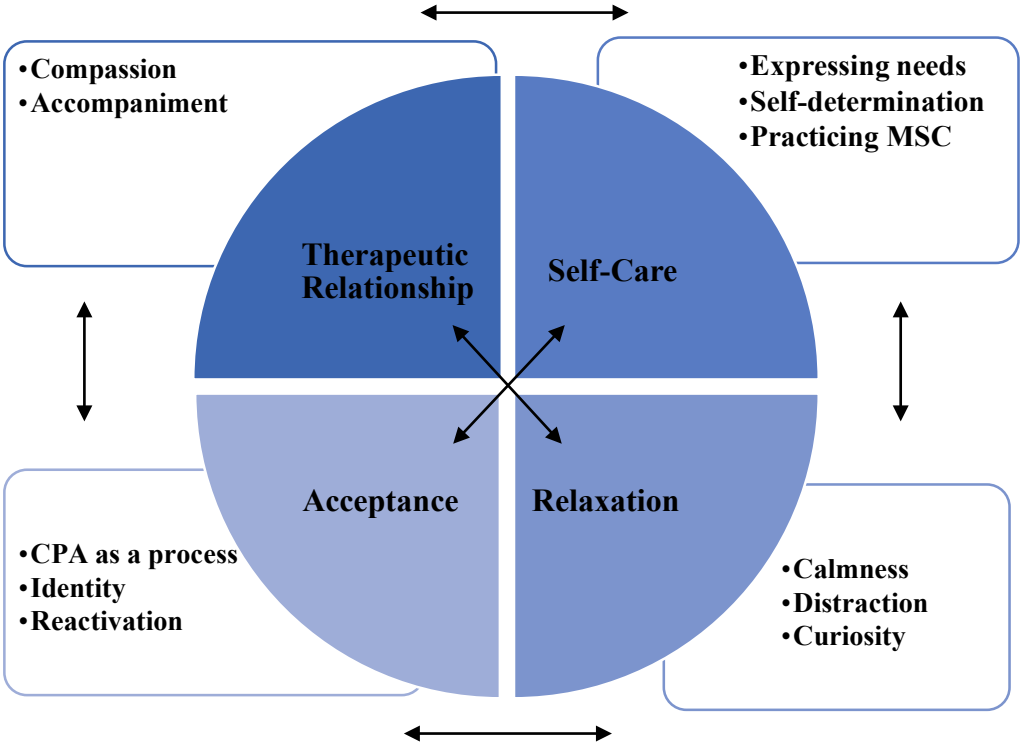
Figure 17: Graph showing overall pain perception pre & post study



8.2 Qualitative Results

As already described in the methods chapter 7, the researcher chose a theoretical and latent thematic analysis approach, which implied interpretation of the data and while it is was not just described, it already related to the underlying theory (Braun & Clark, 2006). The author may find more figures in the Appendix (L & M), showing the progression of the thematic analysis from initial codes to these final themes. The thematic analysis derived from the eight focused interviews, visualized in figure 18, resulting in the following four themes with its according subthemes: Relaxation, Acceptance, Self-Care, Therapeutic Relationship. The circle shape with its equal four parts indicates that the themes and subthemes are interrelated and one theme may have acted on another one, it was not evident that one theme was more predominant than another one. The patient's statements resulted in these four themes and were interpreted as common thread throughout the interviews.

Figure 18: Thematic Visualization of Thematic Analysis: Interplay between the themes



8.2.1 FOCUSED INTERVIEWS

None of the participants in this study engaged in music therapy intervention during previous treatment experiences, therefore it was a new modality for all participants. Not only were they new to music therapy, seven out of the eight were also new to the concept of mindful self-compassion. The analysis of the interviews shows that all participants appreciated music therapy intervention, some patients were skeptical at first, expressed by voicing concerns about not being "musical" and some expressed that due to their chronic pain they stopped listening to music, however, towards the end of the study all the participants voiced a positive evaluation towards music therapy. Commonly used phrases to describe music therapy were including aspects of enjoyment, relaxation, pleasure and music therapy being a healing experience. The following extracted statements punctuate the consensus of the participant's overall impression of music therapy.

"[...]Ich habe in den letzten Wochen in der Musiktherapie ein Stück Heilung erfahren." (IW)

"[...]Ich kam sehr gerne in die Musiktherapie ich fand es schade, dass es mir nicht gelungen ist meine anderen Dinge loszulassen." (RB)

"Singen in der Mth hat mir sehr gut getan [...] es hat mich befreit." (RF)

"Also ich bin eigentlich hierhergekommen und hatte keine Vorstellung, was ich mit der Musiktherapie anfangen soll und habe ganz gut gefunden, wie mein Alltagssituation mit Instrumenten nachspielen konnte."(AV).

"Es war für mich anfänglich schwierig mich auf die Musiktherapie einzulassen, ich hatte Vorbehalte [...] ich war angenehm überrascht, es war ein Erlebnis und ein Genuss." (ID)

"Ich hätte gerne noch mehr gemacht, es hat mir extrem zugesagt, das will doch sicher jeder, länger und häufiger, zweimal in der Woche à 45 Minuten wäre für mich besser gewesen. [...]Musik war etwas, dass mich zu mir selber führt" (OM)

Theme 1: Relaxation

Though the interview questions did not ask for relaxation, evidently, it was a common theme across the data set. The theme of relaxation was divided in subthemes of "distraction from pain", "curiosity" and "calmness". Participants seemingly perceived music therapy as something that helped them forget their pain through distraction. This can be linked to pervious research found in the literature considering music to be an agent to distract from pain in therapy with chronic pain sufferers (Taylor, 2010; Hilleke, 2005). The distraction from the pain seemed to play an important part in why participants evaluated music therapy as beneficial. As evidenced by the quantitative results, all patients in the study had an overall decrease in pain perception post-treatment, though there were some sessions were patients did experience a pain increase. The decrease in pain perception ranged from -1 to -4 on the NRS scale. Some patients stated that their pain perception was completely absent or reduced during Mth.

"Also ich hatte so gut wie nie Schmerzen in der Musiktherapie" (IW)

"[...] Möglichkeit den Schmerz nicht zu spüren während der Mth oder verminderter oder durch etwas Neues abgelenkt zu sein[...]." (OM)

" [...] Man kann hier in eine andere Welt flüchten, wie in einem Traum" (RB)

"Während der Mth habe ich die Schmerzen für einen Moment vergessen oder weniger beachtet, sie waren dann nicht weg, aber es war einfach etwas, dass mir guttut" (RF)

"Die Mth hat mir sehr geholfen alles auszublenden, abzuschalten, also die Schmerzen habe ich gar nicht wahrgenommen" (OD)

Music Therapy further seemed to be something that evoked curiosity, which acted upon pain perception during treatment. The intervention was perceived as something valuable due to it being a new experience. These statements can be related back to the activity engagement, one of the subcomponents of chronic pain acceptance. The overall group

mean of the increased CPA was statistically significant, further it was evident that all patients in the study has an increased pain acceptance score post treatment, which may be related to their activity engagement throughout the duration of their hospitalization. It seemed that some patients mentioned the novelty of music therapy treatment as something that aided them to be distracted from their pain.

"Für das Ausblenden der Schmerzen war für mich wichtig, etwas ganz Anderes zu machen." (OD)"

"[...] *die Schmerzen waren zwar noch präsent, aber weil ich etwas Neues machen durfte war die Neugier wichtiger." (OM)*

"Ich durfte viel Neues ausprobieren, hatte sonst nie die Möglichkeit in meinem Leben, ich war so neugierig [...]. *Wegen den Schmerzen habe ich sehr viel verpasst, ich möchte trotz dem Schmerz Sachen erleben." (CS)*

Some patients appeared to benefit from music therapy under the aspect of "calmness" and found that the music helped them engage with their pain in a different context. The monochord bed seemed to be a highlight experience during music therapy treatment for many participants. The patients were asked during the interview to mention one memorable experience and the monochord bed was mentioned by six out of the eight patients. It was evaluated under the aspect of relaxation evoking feelings of calmness and serenity.

"Diese Klänge und Schwingungen haben meinen Schmerz verändert und haben mir erlaubt einen anderen Umgang mit dem Schmerz zu lernen, er war kein Feind mehr...ich fand dies sehr entspannend" (ID)

"Ich habe vorallem das Klangbett sehr geschätzt, die Ruhe, die Gelassenheit und Entspannung." (OD)

"Die Bilder haben sehr viel mit meinem Inneren zu tun [...] *Bilder die mich bewegen und mir aufzeigen was ich brauchte, die Ruhe und die Stille. " (ID)*

Theme 2: Acceptance

A second theme that emerged from the analysis was the overarching theme of acceptance. The participants were asked what pain acceptance means to them, if they perceived a change pre-and post-treatment and if music therapy influenced their chronic pain acceptance. Acceptance as a theme was chosen by the author from a latent analytic approach, though participants were directly asked the question, responses interestingly showed commonalities across the data set. Chronic pain acceptance was described as difficult by all eight participants and during the interviews six out of the eight reacted with initial laughter when asked the question and six out of the eight stated that this was a difficult question to be asked . One of the sub-themes was summarized as "pain identity", since pain and/or difficult emotions were often associated as something that were described as integrated in their identity. One patient stated that she came to accept difficult emotions such as anger:

"Ich habe gemerkt dass ich ein bisschen Aggressionspotential habe und durfte erfahren, dass ich auch akzeptieren darf, dass ich dieses Gefühl habe." (AV)

Another patient described her pain as her twin sister and therefore pain acceptance for this participant was especially difficult:

"Schmerzakzeptanz ist schwer, ich akzeptiere sie leider nicht, sie sind wie eine Zwillingsschwester, ich lebe mit ihr." (CS)

A third participant described that she had difficulties accepting pain, but comes to accept the psychology of pain.

"Das fällt mir echt schwer [...] ich kann nur sagen, dass ich gemerkt habe, dass der Schmerz nicht nur vom Körper ist [...] ich akzeptiere inzwischen, dass der Schmerz bei mir auslösbar ist, durch psychischen Stress." (AV)

All the participants described their experience of chronic pain acceptance as a process, and some indicated that it is even a life-long process, consequently the sub-theme of "chronic pain acceptance as a process" emerged:

"Akzeptanz ist ein sehr schwieriges Thema [...] anfänglich war es ein Kampf die Schmerzen zu akzeptieren, ich habe schon viel gelernt, es geht schon besser." (OD)

"Das ist etwas, dass man als Schmerzpatient dauernd daran ist zu lernen [...]lernen zu akzeptieren, ich kann sie nicht einfach auslöschen aber Strategien lernen damit umzugehen, oder sagen jetzt brauche ich einfach Ruhe [...]es ist nicht einfach, es ist schwierig." (RF)

"Die Schmerzakzeptanz ist noch in Arbeit." (IW)

"Das ist DAS Thema [...]sowohl beim Schmerz, wie auch bei Gefühlen und Empfindungen, wenn ich diese annehme und akzeptiere, dass sie da sind, sie sich aufzuweichen beginnen...ich vermute mal, das ist ein lebenslanger Prozess [...]ich bin jedoch jetzt schon viel schneller am Punkt." (IW)

"Ich habe gelernt, dass das mein eigener Schmerz ist, der nur mir gehört und ich den nicht erklären muss [...] diese Ruhezeiten welche ich erfahren habe in der Musiktherapie sind mir ganz wichtig geworden, Zeiten in denen ich mich auf den Schmerz einlassen kann und der Schmerz dann auch reduziert ist." (ID)

Another sub-theme that emerged was consolidated as "reactivation". Across the data set music therapy was ascribed to have reactivated interests in music listening, singing and self-confidence. Some mentioned an interest in pursuing an instrument and for some music therapy intervention evoked interest in continuing with music therapy upon discharge from the clinic. Some participants commented on the low frequency of weekly Mth sessions and wished for more sessions with longer sequences. As defined in the literature , one aspect when assessing for chronic pain acceptance is the activity engagement

(McCracken et al., 2004), which seemed to be an important factor in why music therapy was evaluated as beneficial. Some quotes from the interviews indicated this.

"Ich würde Musiktherapie weiterhin wöchentlich machen. " (AV)

"Auch Musik hören, wenn ich Schmerzen habe, und merken, dass es eine beruhigende Funktion hat." (OM)

"Was ich aus der Mth mitnehme, werde ich noch viel daran denken und eventuell wieder in den Chor zu gehen." [...] "Das habe ich wegen meinen Schmerzen aufgegeben, mir wurden die Proben zu viel, das hat mich sehr belastet." (RF)

"Ich konnte aufgrund meiner Schmerzen keine Musik mehr hören, obwohl mir Musik immer sehr wichtig war, für mich war die MTH das Ermöglichen vom Musik hören und vor allem auch dann, wenn ich es für mich selber brauche." (OM)

Theme 3: Therapeutic Relationship

The third theme was summarized under the term "therapeutic relationship". The participants commented on this aspect although not directly asked, however, it seemed to be a common valued aspect of their therapy experience. Some participants highlighted the demeanor of the therapist and compassionate atmosphere during therapy, which was summarized under the sub-theme "compassion":

"Sehr bereichernd, ich durfte viele Emotionen zeigen, wir hatten sehr gute Gespräche." (OM)

" [...] Ich habe es einfach als einfühlsam und emphatisch erlebt, sie hat gespürt welche Themen anstehen und auch, wie sie auch die Themen direkt benannt hat die ich in Verbindung mit Schmerzen habe." (IW)

"Die Musiktherapeutin war sehr freundlich zu mir und hatte eine Art die mich willkommen hiess." (RB)

The aspect of feeling accompanied and feelings of trust towards the therapist were mentioned by some participants, which were summarized under the sub-theme "accompaniment".

"Es ist traurig, dass ich vermutlich so eine Begleitung nicht mehr habe, aber ich bin ja selber gross, ich bin gut an meinen jetzigen Punkt geführt worden." (IW)

"Wie so oft wenn das Vertrauen da ist sind wir auf das Thema Scham gekommen...da wurde mir der Zusammenhang zwischen meinen Schmerzen und meiner unterdrückten inneren Kraft plötzlich klar, die Schmerzen haben dazu gedient meine innere Kraft zurückzuhalten." (IW)

" [...]Ich musste bis jetzt immer einen Weg finden für mich alleine, leider." (CS)

"Hier darfst du sein [...] ankommen, durchatmen, hier sein dürfen." (ID)

A third sub-theme "self-determination" under the umbrella of the therapeutic relationship was that participants mentioned the aspect of having a sense of control during therapy. As an example, on participant stated that she appreciated the sense of control that was given to her:

"Ich hatte keine Ahnung was Mth ist und ich habe herausgefunden, dass es kein Druck ist, ich durfte mitentscheiden...und auch etwas Kontrolle haben, es war eine tolle Erfahrung." (RF)

Another participant stressed, that she appreciated the in the moment experience without pressure.

"Ich fand es besonders gut, dass ich in der Situation wählen durfte was gerade passt...diese Vielfalt und das Eingehen auf den Moment und die Situation….kein Druck…das war sehr wichtig für mich." (OM)

Theme 4: Self-Care

The participants were asked about their perception of self-compassion and if music therapy had an influence, further they were also asked what self-compassion meant to them. Some patients had difficulties explaining the meaning of the word, however this question was a good indication that MSC in the context of music therapy may have been more of experiential than of cognitive nature. The patients often described music therapy being a place, where they could express and follow their needs and a place where they were introduced to aspects of mindful self-compassion. Quantitative data resulted in an overall significant increase in self-compassion. Unlike with chronic pain acceptance, not all patients had an increased SCS score. One patient (OD) did not indicate any change and (CS) has a decreased post SCS score. The overarching theme of self-care seemed more appropriate, since there was a bigger consensus by most participants that through practicing self-compassion they practiced their self-care. A sub-theme was defined as "expressing needs" as filtered out by the following statements:

"Einfach machen und meinen Bedürfnissen folgen [...] und dass mich Musik auch sehr beruhigt." (BR)

"Für mich einstehen und auch Nein zu sagen, ist mir ganz wichtig geworden, das hätte ich vorher nie gemacht." (ID)

"Die Musiktherapie war für mich öffnend, ich habe sehr schnell gemerkt, wenn ich wieder etwas gemacht habe, was mir selbst nicht entsprochen hat." (IW)

"Dass ich mich so akzeptieren kann, wie ich bin und etwas finden das mir guttut und dass ich das bewusst steuern kann, ich war überrascht über mich selber....dass ich immer etwas gefunden habe das mir guttut." (AV)

"Bei jeder Therapiestunde durfte ich sagen, wie es mir geht und was ich mir wünsche...und ich durfte mich auch hinlegen [...] *auch einfach mal mein Gefühl zulassen." (RF)*

A second sub-theme "practicing self-compassion" emerged out of the same question during the interview relating to MSC. The patients commented on how they evaluated music therapy under the aspect of mindful self-compassion. Answers were diverse in nature as some commented on how this new concept sparked continuing interest, one participant expressed aversion to the concept and other participants described examples on how they practiced self-compassion during their treatment.

"Ich habe es als sehr positiv empfunden, dass hier ein therapeutischer Prozess unter dem Aspekt Selbstmitgefühl läuft [...] und ich habe es geschätzt, dass die Therapeutin verschiedene Werkzeuge gehabt hat um mich immer wieder abzuholen." (IW)

"Ich kriege gute Rückmeldungen, dass sich mein Selbstmitgefühl geändert hat, mein ganzes Wesen im Prinzip [...] ich bin viel gelassener." (OD)

"Ich habe gelernt vor allem besser auf mich zu hören und mich besser wahrzunehmen." (ID)

„Die Musik wirkt als Tool zum Selbstmitgefühl." (OM)

Ich bin sensibilisiert worden [...] und ich habe auch gemerkt, dass es für mich wichtig ist dies in die unterschiedlichsten Situationen mit einzubringen auch in schwierigen Situationen." (IW)

"Selbstmitgefühl ist etwas dass ich neu kennengelernt habe und mich selber mitfühlend behandeln ist etwas dass ich jahrelang nicht gemacht habe, ich möchte dran bleiben." (OM)

“Ich bin wie ich bin [...] der Mensch hat einen Charakter und den kann man nicht einfach so verändern in ein paar Wochen.” (CS)

“Es ist präsenter denn je, dass ich sehr viel an mich glaube und nicht denke das schaffe ich nicht.” (RB)

As a summary of this results sections, the author postulates that the qualitative data reveals an overall positive feedback from the patients and it seemed as if they perceived MTH as beneficial under the aspects of relaxation, fostering of self-care, acceptance and benefitting from the accompaniment from the therapeutic relationship. These self-reported aspects by the patients were also evident considering the quantitative changes on SCS and CPAQ-R score pre-vs. post-treatment.

9. DISCUSSION

In the discussion chapter of this thesis, the research questions and hypothesis will be re-introduced and discussed. The discussion is approached by interpreting the results of the conducted clinical study, with references to the underlying theory, and comparison to similar research studies. The discussion is structured in two parts, which will present quantitative & and qualitative results separately. Following the separate subchapters, the author will make statements about the implications of the findings, comment on the limitations of the study, and finally give an outlook and a recommendation for future research in this field of work.

9.1 DISCUSSION OF HYPOTHESIS 1 & 2: QUANTITATIVE RESEARCH APPROACH

Quantitative data resulted in a statistically significant overall increase for both mindful self-compassion scores and chronic pain acceptance scores. The patients in this study further experienced an overall reduction in pain perception. The main research question underlying the first hypothesis asked, if music therapy intervention had an effect on mindful self-compassion and chronic pain acceptance?

Hypothesis 1:
Patients engaging in music therapy treatment with the use of mindful self-compassion techniques, increase their mindful self-compassion and chronic pain acceptance, stating that there is a direct correlation between mindful self-compassion and the acceptance of chronic pain.

The hypothesis was tested with quantitative means (Pearson Correlation & descriptive statistics) and can be proved. The data resulted in a positive correlation with statistical significance. The increase of SCS pre & post scores proved significant with p=0.003 and, CPAQ-R pre & post scores with even higher significance with p= 0.001. As expected, an increase in one area correlated positively with the other area. However, the author suspected that high pretreatment self-compassion scores would result in higher chronic pain acceptance scores. An interesting fact through correlation analysis showed that high

CPAQ-R pre-scores correlated more significant with post SCS scores (p=0.027), compared to SCS pre-scores with post CPAQ-R scores (p=0.088) (see table 19 for reference). In the context of this study the researcher defined the dependent variable as chronic pain acceptance and the independent variable as self-compassion, finally, the outcomes seem to be reversed. An interesting link to this unexpected outcome may be that increased self-compassion might not automatically lead to higher chronic pain acceptance, and the author presumes that having an accepting mindset might in this case even be a prerequisite to increase self-compassion. This can be traced back to the findings of McCracken &Yang (2006) who found that chronic pain patients tend to fear and avoid unpleasant events and attempt to control difficult emotions. In the light of this thesis, it would be evident that if individuals have increased chronic pain acceptance, they might increase their overall willingness to meet these difficulties with self-compassion. Acceptance has been described as an opposing concept to avoidance per Dahl et. al. (2005), supposing that in order to turn towards difficult sensations, acceptance might be a prerequisite to approach difficult emotions and physical pain with self-kindness, common humanity and mindfulness. Incorporating MSC techniques in a music therapy context, contributed to the increase of both self-compassion and acceptance scores. One perspective on this outcome may be, that music within itself has been described to have the quality to act on those limbic areas, increasingly active with persistent pain, upon which the effects of music reduce this activity. In other words, music, can break through the affective and stress related systems of pain perception (Bacher, 2014, p. 138). The relaxing quality of music may have offered the patients a way to adapt these new coping mechanisms, in a safe and anxiety reduced space. Considering the aspect that the expression of pain may be an indication of adult attachment styles, experiencing these new ways of coping and incorporating the ideas of MSC and Acceptance in the context of music therapy may have acted as a catalyst not only in the therapeutic relationship but also in the patient's relationship with their pain. In the act of music making, patients may observe their patterns of interaction and inner mental states can be vocalized, and this can lead to synchronization and attunement (Bacher, 2014, p. 140). Germer (2009, p. 33) connoted a direct correlation between acceptance and self-compassion, stating "acceptance of ourselves while we're in pain" is beneficial. Further, he labeled acceptance as an opponent to resistance, which he ascribed

to cause more suffering, and therefore acceptance, in the context of self-compassion, may take on the role of a conscious choice to fully experience sensations.

Overall, correlation between the two concepts has been proven, which is perhaps also due to the interrelatedness of the subcomponents. Chronic pain acceptance is measured through subscales of activity engagement and pain willingness, which could be interrelated with the MSC component of mindfulness as an overarching prerequisite to become an active agent in facing difficulties. Mindfulness as a tool in pain management has been described as, raising awareness of the pain, while accepting it with all its underlying thoughts and feelings (Burdick, 2013). McCracken (1999) described that a prerequisite for acceptance is the openness to the reality of the present moment, which can be related back to the component of mindfulness.

Practicing mindfulness in the context of Music Therapy offers the patients an auditory stimulus to keep them oriented to the moment, as music is a time and space oriented medium with an immediacy of effect. “While mindfulness practice usually calls for attention to one’s breath, other stimuli, including auditory stimuli can serve as a source of contemplation” (Lesiuk, 2016, p. 1).

Costa et. al. (2011) studied subgroups within the two concepts of SCS & CPAQ-R, which this underlying study did not consider, however, it would be an important asset to make statements about the correlation when considering the subcomponents in both concepts.

Considering the subscales of the CPAQ-R, pain willingness & activity engagement, both subscales increased pre-vs. post study. Activity engagement scores increased from a group mean of 27 to 32 and pain willingness scores from 20 to 24. Looking at individual within subject scores, it is evident that although MSC may have remained the same (OD) or even decreased (CS) for some patients, their CPAQ-R scores still increased post study.

Another research question related to the above was: Do mindful self-compassion and chronic pain acceptance scores increase after music therapy intervention?

Answering this research question at a first glace is simple, due to the increase of self-compassion from a mean group score pretreatment of 2.7 to a 2.9 post treatment score. The author concluded that music therapy has potential in increasing self-compassion in individuals suffering from chronic pain. Considering the changes of components of MSC, self-kindness was increased the most as the pre-study mean for self-kindness was 2.47 and in the post study the overall group mean was 2.97. The increase of self-kindness may

be related to the lack thereof pretreatment. Self-kindness for patients suffering from chronic pain has been described as relevant in instilling an unconditional, warm and comforting attitude towards oneself (Neff & Germer, 2009). Patients often engage in self-judgment due to the chronicity of their symptoms despite multiple treatment attempts, continuing medical rejection and fostering of the symptoms when psychological aspects are not treated due to misdiagnosis (Reisch, 2002). Mindfulness scores increased from 2.8 to 3.1, which is another component described as relevant for chronic pain sufferers as it is a tool to keep difficult aspects in awareness without ignoring or ruminating on them (Brown & Ryan, 2003). The increase of both self-kindness and mindfulness may also be an indication that the music therapy interventions used in this study addressed these components. Interestingly, common humanity scores decreased during the study. This may be due to the individual therapy setting and the intervention techniques used in treatment did not address this component specifically. Overall, the negative components all decreased during the study: Self-judgment from 3.5 to 3.3, Isolation from 3.1 to 2.5 and over identification from 3.5 to 3.0. The increase of almost all positive components and the decrease of their counteracting components indicates similar correlating changes as Neff (2012) found in her pilot study. It is evident that changes pre-and post-treatment were minor, though statistically significant it is important to note, that the MSC 8weekly program takes place within a timeframe of 8 weeks consisting of hour long sessions, with weekly thematic emphasis and weekly practice exercises (Neff & Germer, 2013). The underlying study had timely limitations as the patients were introduced to diverse techniques during the weekly 45-minute music therapy sessions and encouraged to practice MSC in their daily life. Changes in MSC scores were not as major as in other studies. However, looking at the quantitative data it is evident that using MSC techniques in music therapy led to an increase in both SCS & CPAQ-R scores. The question remains as to what factors contributed to this change, and will be discussed further below.

The approaches underlying mindful self-compassion and chronic pain acceptance are ascribed to cognitive & behavioral therapy and to two of the four components: sensory, affective, cognitive & behavioral (Katz. et. al., 2015; McCracken & Vowels, 2014). MSC and CPA challenge cognition and behavior changes predominantly, and the verbal nature of the methods require cognitive prerequisites. Treatment approaches for chronic pain

patients have been described as most effective when encouraging a shift from helplessness to resourcefulness, self-efficacy (Katz et. al., 2015) and being of multidisciplinary nature (Bagdi, 2014). Music therapy has the advantage of being a multisensory experience addressing different components/levels as described by Moreno (2003) and not only affects cognitive components but also affective and sensory levels. Metzner (2012) for example views the approach of music-imaginative pain treatment within the perspective of an aesthetic-theoretical framework stating, that through expressing pain through the qualities of music, the affective-sensory feeling of not wanting the pain turns into an aesthetic experience involving self-reflection. The biopsychosocial model (Engel, 1977), explains that pain sufferers often have difficulties in their emotional expression. According to Hilleke et. al. (2005) music therapy is therefore indicated for use due to its ability to address emotional regulation. The inhibited expression in chronic pain patients, which occur in different domains (motor, sensory, behavioral, intrapersonal, cognitive, emotional, motivational) may be observable during the active music making process. The main goal in the treatment is described to resolve the inhibitions and transfer them to the individual's nonmusical goals (Hilleke, 2005). The flexibility of music as a medium to address these inhibitions was observable during this underlying study. Using the MSC techniques in the context of music therapy allowed for flexibility, individualized treatment and to experience the method in a nonverbal, noninvasive and multisensory context instead of cognitively learning about it.

The underlying study did not use a randomized control group to compare results, however, due to evidence that music therapy addresses different components, it can be viewed as an appropriate intervention in the multidimensional phenomenon that chronic pain is. Using MSC techniques in this context, may contribute to the multimodal nature of the intervention. Hypothesis 1 was proven, as both MSC & CPAQ-R scores increased and the correlation was statistically significant, however the dependency of the variables may have had an unexpected outcome. The author concluded that music therapy has great potential in increasing self-compassion and chronic pain acceptance as evidenced by quantitative data and evidence from the underlying theory.

Hypothesis 2:
Patients in this study experience an overall reduction in their pain perception through practicing MSC and engaging in music therapy.

The questions underlying hypothesis 2 was: Are the patients in this study experiencing a reduction in their perception of pain?

Looking at the overall mean score of all the sessions pre-therapy the pain perception was rated at a 7 on a numeric rating scale ranging from 1 to 10. The overall mean post therapy pain perception was at a 5. Cepeda et. al. (2003) in their meta-analysis described that "The minimal reduction in pain intensity levels on a zero to ten scale that is normally perceptible to patients is one unit, but if pain is severe the decrease must be two units or greater to be perceptible" (Cepeda, 2003, p. 7). The author concludes that the patients experienced an overall reduction in their pain perception, however a paired sample t-test on the data did not result in a significant change ($p = 0.261 > p = 0.05$). Looking at individual self-reports throughout the 7-8 individual music therapy sessions, there were instances where pain perception decreased post music therapy treatment, however, there were patients for which pain perception increased (see table 22 for reference). Using NRS scales in assessing pain perception is recommended as self-report is important in grasping subjective sensation of pain (Katz. et. al. 2015). Through informal observations during music therapy, it was interesting that patients had difficulties reporting their pain on a numeric scale, especially post therapy. Considering self-report from the focused interviews, patients often commented on how music therapy was relaxing with subthemes of experiencing calmness, curiosity through experiencing a new modality and experiencing distraction from their pain. It seemed as if during therapy they could forget their pain and once confronted with the question of their pain rating post therapy, their focus shifted back on their pain. When looking at individual ratings, the increase of pain perception post therapy may have been motivated by individual factors. The APA (2013) described that the report of pain must be regarded as an individual and subjective process in a cultural context, with often underlying individual agendas. Reporting pain may also foster somatization and attention-seeking behavior in the light of a vicious cycle of convincing the therapist of pain (Flor & Turk, 2011). Therefore, using numeric rating scale as a measure was discussed in this context. Again, the question arises what factors contributed to the documented pain reduction. An evidence may lay in the biomedical perspective on

music therapy supporting the quality of music as an analgesic catalyst affecting pain perception (Taylor, 2010). Although increase and a positive correlation between MSC & CPA was proven and pain perception was decreased, the factors that contributed to this change cannot be quantitatively answered in the context of this study, as the pilot character and missing control comparison condition did not allow that these results could be generalized and causality could be given. The aim of this underlying study was to explore if MSC techniques in the context of music therapy would have an influence on these changes described above.

Tschuschke (2015) wrote on the main contributing effect factors in psychotherapy. These factors were studied in the context of a clinical research study PAP-S, with the intent to analyze relevant processes and attributes in psychotherapeutic treatment that ultimately influence therapy results. Tschuschke (2015, pp. 76-83) stresses that within the evidence-based practice of psychotherapy, the contributing factors in therapy ought to be studied otherwise the existence of the methods may not be credible. Referring to the study by Duncan et. al. (2010) he mentions that the contributing factors showed that only between 1% - 15% of the resulting variance of therapeutic change is based on the approach and methods taken, while 30% of the contributing factors are ascribed to the therapeutic alliance. When considering this perspective, the question of what helped the patients in this underlying study to increase self-compassion and chronic pain acceptance remains legitimate. This question cannot be answered directly nor can the contributing factors be pinpointed directly, however, the qualitative data gathered in this pilot study, may allow a direction for discussion.

9.2 Discussion of Qualitative Research approach

To approach the discussion concerning the qualitative research approach, the author will elaborate on the themes Relaxation, Acceptance, Therapeutic Relationship & Self-Care, extracted from the thematic analysis of the focused interviews and make connections to the underlying theory. The questions in the focused interviews investigated self-report of the patients generally asking them if music therapy treatment under the aspect of MSC was evaluated as helpful and valuable, and further asking about their perceived individual development of MSC and CPA. The research questions asked: What is the potential of music therapy in the practice of mindful self-compassion?

And underlying the main question the author asked: Based on self-report of the patients who engage in music therapy intervention during this study, how do they evaluate their development of mindful self-compassion and chronic pain acceptance after music therapy intervention?

Mindful Self-compassion

Patients in this study described their development of MSC in the light of being able to express their needs during music therapy treatment, that their treatment was perceived as individualized, that they felt a sense of control as an active contributor to their treatment and felt no pressure. Per Nöcker-Ribaupierre (2008) individual treatment plans are especially needed in individuals with chronic pain because chronic pain and its corresponding pain perception are to be individualized and not to be generalized. An important aspect of MSC is the encouragement of self-efficacy in patients and that it is more important to be aware of the needs in the moment than to become a good meditator (Neff & Germer, 2013). Using MSC techniques in any therapy context is often described as being both the path and the goal (Desmond, 2016), which can be related back to the perception of the patients in this study of taking an active role in getting to express their needs. Through using MSC techniques, such as initiating music therapy sessions with an MSC break, patients directly applied self-kindness, mindfulness and common humanity, which in the context of music therapy allowed for the patients to act upon their individual needs. Due to this, MSC may have acted as the path and the goal in music therapy. Mindful self-compassion could therefore be considered a therapeutic technique and goal at the same time. Interestingly patients described that the concept of MSC sparked their interest and that it was something new to them, especially the component of self-kindness was commonly rated as something difficult and new. The engagement in music therapy treatment under the aspect of MSC as reported by the patients seemed to swap over in other life domains and they could transfer and integrate the concept of MSC in their daily life. The patients stated that they learned how to say no, advocate for their needs and to feel the softening of difficult emotions.

A common theme across the data set was that patients mentioned the importance of the therapeutic relationship in their therapy experience and that they appreciated the compassionate and empathetic demeanor of the music therapist, feeling welcome and understood. Neff (2011) ascribed great importance to the relationship between patient and therapist, as therapists may play a role in changing insecure attachment styles in the light of giving the patients a re-parenting experience. Insecure attachment styles seem to be common among patients suffering from chronic pain, as these styles often foster the continuation and magnification of chronic pain. Desmond (2016) stated that self-compassion can be incorporated in any therapy modality springing naturally from therapeutic relationship when therapists connect with the client's goals instead of following a script. As mentioned above, the importance of the therapeutic relationship in treatment effects has been researched in the field of psychotherapy, as it appeared as a challenge to filter out what common factors contribute to therapeutic change despite different approaches and schools of thought. Tschuschke (2015) stressed the importance of the therapeutic relationship in the context of contributing therapy factors, which may indicate why patients in this study seemed to have evaluated the therapeutic process under the aspects of the therapeutic relationship as valuable and supportive. Tschuschke (2015, pp.111-118) further elaborates, based on the PAP-S study, that the more chronic the conditions of the patients are, the more the therapeutic alliance appears to be strengthened through supportive, flexible, individualized treatment, that therapists choose to adapt according to the individual's needs. In the context of this presented study, it appeared that the patients appreciated the individualized treatment approach and the aspects that were analyzed under the theme of the "therapeutic relationship" such as feeling accompanied, feeling of compassion and support, which were mentioned by all patients in this study exclusively. Though this study aimed to research the effects of a method (MSC in music therapy), the complex interrelatedness of the possible effects may be important to be considered, when evaluating any method.

Dileo & Bradt (1999) wrote one the concept of entrainment in the treatment of chronic pain, where the music is applied to address pain as a multidimensional phenomenon and the patients are met with the iso-principle, using the music to match patient's moods. Metzner (2012) stresses the quality of using music as a medium for expression, on one side to find relieve from the pain and on the other side to have a mode of expression for

the pain experience (Metzner, 2012, p. 296). Using music as a medium to aid a patient to have a mode of expressing the subjective pain, "music appears to mean something and to give an individual the feeling of being mirrored, accompanied, or even personally understood" (Metzner, 2012, p. 163). As Winnicott (1953) stated, "It is in the space between inner and outer world, which is also the space between people–the transitional space–that intimate relationships and creativity occur" (p. N.A.).
This research study was designed according to these above principles of individualized treatment and using the iso-principle to match patient's moods in meeting them where they were at. This approach seemed to be valued by the patients in this study.

Chronic Pain Acceptance

The patients in this study commented on the lowering of their pain perception due to the aspect of being distracted from their pain, which was something they were not directly asked for, however, it seemed to be an important and common theme amongst all patients. Music Therapy has been researched by Taylor (2010) and was defined as having an analgesic influence on pain due to descending inhibiting mechanisms (Egle, 2016). The author postulates that another aspect of why music therapy was evaluated as a relaxing treatment modality is due to the experiential nature of it. Although MSC techniques are often categorized to the domain of cognition, the interventions always occured in the context of active or receptive music making, addressing diverse domains. Perhaps the music reduced pain perception and therefore the engagement in therapy was possible and evaluated as relaxing. Patients also noted that music therapy sparked their curiosity due to it being a new modality and could play an active role in making decisions on what was most relevant for them that day. Treatment approaches that appear most effective are described as enabling patients from a state of helplessness to resourcefulness (Flor & Turk, 2011). For some patients, music within itself came to play a role as a reactivated resource and some started listening mindfully to music during the study, picked up learning an instrument, one patient even commented that music therapy helped her believe in herself and her abilities despite her pain and one patient stated that music was within itself a tool to practice self-compassion. Chronic pain acceptance is defined in its subcategories of activity engagement and pain willingness (McCracken & Vowels, 2014), which both

seemed relevant for the patients as they described becoming active agents in their treatment due to the interplay of following their needs and due to the relaxing moments, they experienced during music therapy. Chronic pain acceptance per the patients in this study seemed to be an important theme in their treatment, but also in living with their chronic condition, with the consensus summarized as acceptance being a process. Patients described that throughout their hospitalization at the clinic engaging in different treatment modalities, they realized that pain is as a multidimensional occurrence in their life and commented on psychological pain and the interplay between somatic and psychological factors in their pain experience. Multiple patients stated that music therapy treatment helped them in processing difficult emotions such as anger and shame.

In summary, the qualitative results of this study show that patient's statements addressed the concepts of mindful self-compassion and chronic pain acceptance. The consensus across the data set shows that both concepts are perceived as an ongoing and relevant process and that they perceived music therapy to be a valued asset in their treatment.

9.3 Implications And Alternative Explanations of the Findings

Music therapy seemed to be a treatment modality that was well received by the patients in this study, and based on quantitative and qualitative data analysis therapeutic change did occur, considering the common treatment goal of reducing pain perception (AMTA, 2018; Taylor, 2010; Hilleke, 2005). A question that arises is if the use of MSC techniques can be generalized as a treatment modality for chronic pain patients. When looking within subject scores, not all patients fit into the hypothesis of positive correlation of SCS and CPAQ-R. There was one specific patient (CS) that the author would like to point out to address this question. CS had reduced SCS scores and increased pain perception post therapy during three out of the 8 sessions. This specific patient during the interviews made statements about feeling isolated due to the pain, having no accompaniment during life. She also found that her character cannot be changed through therapeutic intervention and that her pain is like a twin sister that she must live with. However, she seemed to enjoy the novelty of music therapy and enjoyed using instruments to experience relaxation and distraction of her pain, which may also explain why her CPAQ-R increased post study. When considering the theory of adult attachment styles, the researcher may insinuate an

insecure attachment style to this specific patient, which is solely based on informal observation and considering biographical information. During treatment, she was predominantly fixated on her marital issues and attention seeking behavior of convincing the music therapist and the interdisciplinary team that she suffers from chronic pain, as she was rejected by other medical people in her past treatments. The example of this patient is relevant for the discussion of this paper, as it seems that this individual has not encountered compassionate relationships in her past and may have benefitted from music therapy under the aspects of relaxation, self-care and the therapeutic relationship. Research seems to not have settled the correlation of experiencing compassion from others into developing self-compassion (Strauss et. al., 2016). Desmond (2016) ascribes compassion as being the force that makes direct contact with pain. A valid question for future studies in the field of self-compassion is if compassion is a prerequisite in developing MSC. The phenomenon of pain behavior may be the consequence of suffering, which has been described as a state of, for example, helplessness and meaninglessness and an immediate threat to an individual's self-concept (Flor & Turk, 2011). Pain magnification is one of those pain behaviors, where individuals are driven to convince others of their suffering. Pain behaviors have been researched and described as a way for individuals to communicate stress (Flor & Turk, 2011). In music therapy the music may act as a catalyst in the therapeutic relationship and it is possible that with patients who had debilitating experiences lacking from compassion in previous treatment, which is often the case in chronic pain sufferers, could benefit from this (Reisch, 2012). The music may act as a safe place, which seemed to be the case for many patients in this study as evidenced by qualitative analysis. Bacher (2014) stated that the in the act of music making, patients may observe their patterns of interaction, and inner mental states can be made audible, leading to synchronization. Active music making in a clinical setting occurs in relationship to one another (Bacher, 2014). As a music therapist, the music may be a medium that adds to the relationship and may offer an instrument to provide holding and containment for the expressed pain in all its entities. "There are various ways in which one adult can offer to another this holding, and it can be crucial for a patient to be thus held in order to recover, or to discover maybe for the first time, a capacity for managing life and life's difficulties without continued avoidance or suppression" (Casement, 1985, p.133). Another aspect of alternative findings is considering Hilleke's et. al. (2005) Heidelberger model of music therapy and

chronic pain. The 20 hour-treatment is structured in three phases with the goal of diminishing inhibitions in multiple domains: motor, sensory, behavioral, intrapersonal, cognitive, emotional, motivational (Hilleke, 2005), transferring to the idea of applying linear therapy implementation following specific treatment phases. The phases consist of increasing subjective well-being (remoralization), symptom improvement (remediation) and improvement of functional levels in areas of life (rehabilitation). This underlying study did not consider linearity in treatment planning and it might be an important aspect for future studies to consider linearity in this approach of music therapy. It is possible that MSC techniques might have been introduced too early and could have proven more effective when introduced during a later point in treatment, per Hilleke (2005) that could be during the rehabilitation phase. An alternative explanation of the above findings is that music therapy did not just serve as a distractor from the pain, as evidenced by quantitative increases in both SCS & CPAQ-R scores and from self-report of the patients in this study. Music therapy may have great potential in addressing long term goals of chronic pain sufferers such as described by McCracken & Vowels (2014). Psychological flexibility, being "the capacity to continue with or change behavior, guided by one's goals, in a context of interacting cognitive and direct non-cognitive influences", is one of those long-term goals that might be addressed by the multimodal nature of music therapy. The author postulates that in the context of this study music therapy may have increased psychological flexibility, which is a sub process of acceptance and may therefore have led to more self-compassion.

In the following figure 19, the components of MSC and MTH are represented as overlapping circles showing the evaluated complementary nature of incorporating MSC in music therapy. The space in between the circles represents the space where patients may gain resources approaching difficult situations with a self-compassionate countenance. Under the following inherent qualities of Music Therapy, the author summarized some final insights on why Music Therapy was found to be an appropriate context in incorporating MSC techniques:

1. Music Therapy is a nonverbal and experiential form of treatment and may lend itself to adapt MSC techniques, as it allows for an individual to experience MSC in the context of multiple domains.
2. Music has the quality to distract from the pain, due to analgesic effects, assisting with relaxation, within which an individual may experience reduced pain perception and may further support the practice of mindfulness due to music's immediacy of effect.
3. Music Therapy may assist an individual in emotional expression through active music interventions, where difficult emotions may be expressed and met with self-kindness rather than self-judgment.
4. Music Therapy may recreate memories of well-being and assist an individual to feel connected rather than isolated.
5. Music may act as a catalyst in creating a compassionate therapy atmosphere, fostering the therapeutic relationship.
6. Music therapy treatment may act as a catalyst in increasing flexibility, through giving an individual a sense of control and choice, based on individual needs, fostering self-compassion.

Figure 19: Music Therapy and Mindful Self-Compassion as a Resource

9.4 LIMITATION OF THE STUDY

The hypothesis statements of this study were proven as significant through quantitative data analysis. There were some multi-faceted limitations to this study that will be discussed to look at the results through a critical lens and which might be helpful to improve future research studies in this field or work. The small sample size (n=8) was a limitation that may have skewed quantitative parametric statistical analysis. Research with chronic pain patients in a clinical inpatient setting proved difficult. Recruitment of the patients was a challenge due to early discharge caused by health insurance cuts. This observation that can be a general limitation when conducting studies with chronic pain patients in this setting. Health insurance policies are not consistent and may be discriminatory for individuals with lower socioeconomic statuses, as they tend to have shorter period of coverage in inpatient settings. This possible limitation would have to be researched further to exclude it as a limitation. Another factor in sampling limitations was the age range of the sample. The researcher observed that younger patients were excluded from the study due to aspects of therapy endurance, as some left the clinic early due to reasons of disappointment, mistrust, lack of treatment motivation or debilitating feelings due to chronic pain. Another limitation was an aspect of the exclusion criteria, since German or English language skills were an important prerequisite to take part in this study. Some patients were not considered and excluded due to their limited language skills. This may skew results in discriminating the participants in the sample, especially since non-German speaking patients in Switzerland tend to have a different cultural background. The sample of this underlying study was not diverse looking at the distribution of gender, as only one male took part in the study. Interestingly, statistics in the chronic pain population show that the prevalence of chronic pain is predominant in females and/or they might report pain more often (Katz, Rosenbloom, & Fashler, 2015).

The qualitative data was gathered through a focused interview guide that was designed by the researcher and author of this study and was a limiting factor in the outcomes of this study. It was evident, that the questions regarding personal definitions of mindful self-compassion and chronic pain acceptance were not as relevant as questions. Additionally, the question asking about their evaluation of the used methods was another question that was not suited in the context with this population. The majority of the patients did

not know how to answer the questions, which may be due to the experiential approach taken. For future studies it might be more effective to choose a more open instead of a focused interview approach.

Time was another limiting component in this study, as MSC was researched in the context of an intensive 8-week course with multi hour weekly sessions and daily practice exercises, and this study did not have the resources to mimic this aspect of the design.

Finally, it is important to note that the author had multiple roles in this study as a researcher, facilitator of the study and therapist. This may have influenced the outcomes of this study; however, the researcher maintained a researcher attitude by not prompting certain behaviours during therapy. One important aspect in the design of this study was that a neutral person (music therapy colleague) conducted the focused interviews, to create a space for the patients to reflect on the treatment process to a neutral person.

9.5 Recommendations for Future Research

The ongoing process in the medical field of defining diagnostic criteria for chronic pain, as with the upcoming ICD-11 and the research in improving treatment modalities in this field of work, may also be relevant as a field of further study for music therapists. The author recommends continuing research similar to the conducted study in the context of this thesis. As it is considered a pilot study, it might be interesting to adapt the same design with more patients for a longer duration and maybe even increasing the duration of the weekly therapy sessions. Comparing results with a bigger and more diversified sample would be interesting, especially to see if the use of the intervention may be generalized for the chronic pain population and even in the work with other populations within the psychosomatic field.

In order to research the effects of music therapy with the use of MSC techniques, it might be interesting to conduct a randomized controlled trial study using a control group engaging in regular MSC exercises, compared to a music therapy group with MSC techniques. Another research area that might be valuable would be to consider the effects of music therapy on adult attachment styles with patients suffering from chronic pain.

10. CONCLUSIONS

In the conclusion of this master thesis, the author would like to invite the reader to take a mindful moment to reflect on these past chapters in a broader perspective, and offer some concluding critical and maybe hopeful thoughts.

The year of 2018 marks an important year in the study of pain, as the new release of the ICD (11) will reclassify diagnostic features for chronic and especially somatoform pain sufferers. This year was further marked as the "Global Year for Excellence in Pain Education" by the IASP, as the quest of the understanding of pain is prevalent among not only patients and caregivers, but policymakers, administrators and the public alike. It was further noted that "The presence of an education gap allows inappropriate treatments to be normalized and misunderstandings to bloom" (IASP, 2018). One consensus across the chronic pain literature is that pain is considered a multifaceted problem for each sufferer, having effects with a global magnitude, with multidisciplinary treatment being proven the most effective (Katz et. al., 2015; Bagdi et. al., 2014). The presented clinical pilot-study was an attempt to contribute to this gap on a small scale. Through the lens of music therapy with a multimodal focus, this study incorporated techniques and principles from acceptance and mindfulness based treatment approaches. Music Therapy was well received by the patients in this study and cannot be generalized, however, the results show some statistical significance and positive self-report with an overall increased chronic pain acceptance and reduced pain perception, which is stated as the main goal in chronic pain treatment (Egle, 2016). Music Therapy, as a treatment modality and the use of mindful self-compassion techniques, revealed to be effective and appreciated by the patients in this study under the aspect of feeling accompanied in the context of a compassionate therapeutic relationship.

The literature research for this thesis seemed to show that music therapy as a treatment modality is rarely considered and mentioned in interdisciplinary journals. One journal by Bagdi et. al. (2014, p. 4) associated music therapy with art therapy and stated that "There is not enough research data investigating the effectiveness of art therapy in chronic pain." This statement raises the question that if this is one of many examples of misrepresentation and misinformed assumptions about the field of music therapy. In the light of the year of excellence in pain education, the author concludes that to advance access to music

therapy for chronic pain patients, maybe more advocacy on the effects of music therapy on chronic pain is needed. Advocacy in this context may be suggested in the form of more collaborative, transdisciplinary, qualitative and quantitative studies.

As R. Melzack stated, “There are few problems more worthy of human endeavour than the relief of pain and suffering”

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APPENDIX

APPENDIX A: LIST OF TABLES AND FIGURES

APPENDIX B: ABBREVIATIONS

Mindful Self-compassion: MSC

Chronic Pain Acceptance: CPA

Self-compassion scale: SCS

Chronic Pain Acceptance Questionnaire Revised: CPAQ-R

Self-Kindness: SK

Self-Judgment: SJ

Common Humanity: CH

Isolation: IS

Mindfulness: MI

Over identification: OV

Activity Engagement: AE

Pain Willingness: PW

Acceptance and Commitment Therapy: ACT

Cognitive and Behavioral Therapy: CBT

APPENDIX C: HEIDELBERGER MUSIKTHERAPIE MANUAL FÜR CHRONISCHE SCHMERZEN

Ziele nach der Phasentheorie	Musiktherapeutische Behandlungsziele	Musiktherapie-spezifische Faktoren	Musiktherapeutische Techniken
Phase I: Verbesserung des subjektiven Wohlbefindens	Aktivierung von „erinnertem Wohlbefinden“	Musikalisch gestützte Ressourcenaktivierung	Rezeptiv-musikalische Stimulation
Phase II: Verringerung der Symptome	Emotionale Flexibilisierung Emotionale Aktivierung und Bearbeitung des Schmerzes bzw. des erstarrten Bezugskorrelates	Musikalische Flexibilisierung Musiktherapeutisch imaginative Aktivierung und Re-inszenierung, Aufbau von Alternativen	Variation musikalischer Parameter in freier Improvisation (z.B. Accelerando) Symptomimprovisationen, Taftraumimprovisation (instrumental/vokal)
Phase III: Steigerung des allgemeinen Funktionsniveaus	Erprobung und Implementierung flexibler Verhaltens – und Erlebensweisen Generalisierung	Erprobung adäquater, nonverbaler Interaktionsmuster Stabilisierung des Erreichten und Ablösung von Patient und Therapeut	Ritualimprovisation, Realitätsimprovisation Musikalisches Selbstportrait und Behandlungsevaluation

APPENDIX D: SCS (ENGLISH VERSION)

To Whom it May Concern:

Please feel free to use the Self-Compassion Scale in your research. Masters and dissertation students also have my permission to use and publish the Self-Compassion Scale in their theses. The appropriate reference is listed below.

Best,

Kristin Neff, Ph. D.
Associate Professor
Educational Psychology Dept.
University of Texas at Austin

e-mail: kneff@austin.utexas.edu

Reference:
Neff, K. D. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity, 2, 223-250.*

Coding Key:
Self-Kindness Items: 5, 12, 19, 23, 26
Self-Judgment Items: 1, 8, 11, 16, 21
Common Humanity Items: 3, 7, 10, 15
Isolation Items: 4, 13, 18, 25
Mindfulness Items: 9, 14, 17, 22
Over-identified Items: 2, 6, 20, 24

Subscale scores are computed by calculating the mean of subscale item responses. To compute a total self-compassion score, reverse score the negative subscale items before calculating subscale means - self-judgment, isolation, and over-identification (i.e., 1 = 5, 2 = 4, 3 = 3. 4 = 2, 5 = 1) - then compute a grand mean of all six subscale means. Researchers can choose to analyze their data either by using individual sub-scale sores or by using a total score.

(This method of calculating the total score is slightly different than that used in the article referenced above, in which each subscale was added together. However, I find it is easier to interpret the total score if a mean is used.)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

_____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.

_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

_____ 5. I try to be loving towards myself when I'm feeling emotional pain.

_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.

_____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

_____ 8. When times are really difficult, I tend to be tough on myself.

_____ 9. When something upsets me I try to keep my emotions in balance.

_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.

_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____ 14. When something painful happens I try to take a balanced view of the situation.

_____ 15. I try to see my failings as part of the human condition.

_____ 16. When I see aspects of myself that I don't like, I get down on myself.

_____ 17. When I fail at something important to me I try to keep things in perspective.

_____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

_____ 19. I'm kind to myself when I'm experiencing suffering.

_____ 20. When something upsets me I get carried away with my feelings.

_____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.

_____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.

_____ 23. I'm tolerant of my own flaws and inadequacies.

_____ 24. When something painful happens I tend to blow the incident out of proportion.

_____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.

_____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

Appendix E: SCS (GERMAN VERSION)

(Hupfeld & Ruffieux, 2011)

ZHdK: Upgrade MAS Klinische Musiktherapie 15–17

Fragen zu Selbstmitgefühl

Wie ich typischerweise mit mir selbst in schwierigen Zeiten umgehe

Bitte lesen Sie jede Aussage sorgfältig durch, bevor Sie antworten. Kreuzen Sie bei jeder Aussage an, wie oft Sie sich in der beschriebenen Art und Weise verhalten:

	sehr selten	*selten*	*gelegentlich*	*oft*	*sehr oft*
1. Ich missbillige und verurteile meine eigenen Fehler und Schwächen.	①	②	③	④	⑤
2. Wenn ich mich niedergeschlagen fühle, neige ich dazu nur noch auf das zu achten, was nicht in Ordnung ist.	①	②	③	④	⑤
3. Wenn die Dinge bei mir schlecht laufen, sehe ich diese Schwierigkeiten als Teil des Lebens, den jeder einmal durchlebt.	①	②	③	④	⑤
4. Wenn ich über meine Fehler und Mängel nachdenke, neige ich dazu mich vom Rest der Welt getrennt und abgeschnitten zu fühlen.	①	②	③	④	⑤
5. Ich versuche mit mir selbst liebevoll umzugehen, wenn es mir emotional schlecht geht.	①	②	③	④	⑤
6. Wenn ich bei etwas versage, was mir wichtig ist, werde ich von Gefühlen der Unzulänglichkeit aufgezehrt.	①	②	③	④	⑤
7. Wenn ich völlig am Ende bin, rufe ich mir in Erinnerung, dass es vielen anderen Menschen auf der Welt genauso geht.	①	②	③	④	⑤
8. In wirklich schwierigen Zeiten neige ich dazu, streng mit mir selbst zu sein.	①	②	③	④	⑤
9. Wenn mich etwas aufregt, versuche ich meine Gefühle im Gleich-gewicht zu halten.	①	②	③	④	⑤
10. Wenn ich mich auf irgendeine Art unzulänglich fühle, versuche ich mich daran zu erinnern, dass die meisten Leute solche Gefühle der Unzulänglichkeit haben.	①	②	③	④	⑤
11. Ich bin intolerant und unduldsam gegenüber denjenigen Seiten meiner Persönlichkeit, die ich nicht mag.	①	②	③	④	⑤
12. Wenn ich eine sehr schwere Zeit durchmache, schenke ich mir selbst die Zuwendung und Einfühlsamkeit, die ich brauche.	①	②	③	④	⑤
13. Wenn es mir schlecht geht, neige ich dazu zu glauben, dass die meisten anderen Menschen wahrscheinlich glücklicher sind als ich.	①	②	③	④	⑤
	sehr selten	*selten*	*gelegentlich*	*oft*	*sehr oft*

1 SCS-D (Hupfeld & Ruffieux, 2011)

SCS (GERMAN VERSION) → CONTINUED

ZHdK: Upgrade MAS Klinische Musiktherapie 15–17

Fragen zu Selbstmitgefühl

	sehr selten	*selten*	*gelegentlich*	*oft*	*sehr oft*
14. Wenn etwas Unangenehmes passiert, versuche ich einen ausgewogenen Überblick über die Situation zu erlangen.	①	②	③	④	⑤
15. Ich versuche, meine Fehler als Teil der menschlichen Natur zu sehen.	①	②	③	④	⑤
16. Wenn ich Eigenschaften bei mir feststelle, die ich nicht mag, dann deprimiert mich das.	①	②	③	④	⑤
17. Wenn ich bei etwas scheitere, das mir wichtig ist, versuche ich die Dinge nüchtern zu betrachten.	①	②	③	④	⑤
18. Wenn ich wirklich zu kämpfen habe, neige ich zur Ansicht, dass andere es sicherlich einfacher haben.	①	②	③	④	⑤
19. Ich gehe freundlich mit mir um, wenn ich Kummer und Leid erfahre.	①	②	③	④	⑤
20. Wenn mich etwas aufregt, werde ich von meinen Gefühlen förmlich mitgerissen.	①	②	③	④	⑤
21. Wenn ich Leid erfahre, kann ich mir gegenüber ein wenig kaltherzig sein.	①	②	③	④	⑤
22. Wenn es mir schlecht geht, versuche ich meinen Gefühlen mit Neugierde und Offenheit zu begegnen.	①	②	③	④	⑤
23. Ich akzeptiere meine Fehler und Schwächen.	①	②	③	④	⑤
24. Wenn etwas Unangenehmes passiert, neige ich dazu, den Vorfall völlig zu übertreiben.	①	②	③	④	⑤
25. Wenn mir etwas für mich Wichtiges misslingt, glaube ich oft, dass nur ich allein versage.	①	②	③	④	⑤
26. Ich versuche verständnisvoll und geduldig gegenüber jenen Zügen meiner Persönlichkeit zu sein, die ich nicht mag.	①	②	③	④	⑤
	sehr selten	*selten*	*gelegentlich*	*oft*	*sehr oft*

APPENDIX F: CPAQ-R (ENGLISH VERSION)

Chronic Pain Acceptance Questionnaire – Revised (CPAQ-R)

Authors: Lance M. McCracken, Kevin E. Vowles, & Christopher Eccleston

The 20-item CPAQ-revised has been designed to measure acceptance of pain. The acceptance of chronic pain is thought to reduce unsuccessful attempts to avoid or control pain and thus focus on engaging in valued activities and pursuing meaningful goals.

There have been 2 factors identified in the CPAQ-Revised:

(1) Activity engagement (pursuit of life activities regardless of pain). Items – 1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 19.
(2) Pain willingness (recognition that avoidance and control are often unworkable methods of adapting to chronic pain). Items – 4, 7, 11, 13, 14, 16, 17, 18, 20.

Scoring: The items on the CPAQ are rated on a 7-point scale from 0 (never true) to 6 (always true). To score the CPAQ, add the items for Activity engagement and Pain willingness to obtain a score for each factor. To obtain the total score, add the scores for each factor together. Higher scores indicate higher levels of acceptance

Reliability: The CPAQ-Revised demonstrates very good to excellent internal consistency, with alphas of .82 (Activity engagement) and .78 (Pain willingness).

Validity: The CPAQ shows moderate to high correlations with measures of avoidance, distress, and daily functioning. The 2 factors of the CPAQ-revised have been found to significantly predict pain-related disability and distress, thus demonstrating predictive validity.

References:

McCraken, L. M., Vowles, K. E. & Eccleston, C. (2004). Acceptance of chronic pain: component analysis and a revised assessment method. *Pain, 107,* 159-166.

McCracken, L. M., Vowles, K. E., & Eccleston, C. (2005). Acceptance-based treatment for persons with complex, long standing chronic pain: a preliminary analysis of treatment outcome in comparison to a waiting phase. *Behavior Research and Therapy, 43,* 1335-1346.

Revised date (4 October 2006)

CHRONIC PAIN ACCEPTANCE QUESTIONNAIRE

Below you will find a list of statements. Please rate the truth of each statement as it applies to you. Use the following rating scale to make your choices. For instance, if you believe a statement is 'Always True,' you would write a 6 in the blank next to that statement.

0	1	2	3	4	5	6
Never true	Very rarely true	Seldom True	Sometimes true	Often true	Almost always true	Always true

_____ 1. I am getting on with the business of living no matter what my level of pain is.

_____ 2. My life is going well, even though I have chronic pain.

_____ 3. It's OK to experience pain.

_____ 4. I would gladly sacrifice important things in my life to control this pain better.

_____ 5. It's not necessary for me to control my pain in order to handle my life well.

_____ 6. Although things have changed, I am living a normal life despite my chronic pain.

_____ 7. I need to concentrate on getting ride of my pain.

_____ 8. There are many activities I do when I feel pain.

_____ 9. I lead a full life even though I have chronic pain.

_____ 10. Controlling my pain is less important than any other goals in my life.

_____ 11. My thoughts and feelings about pain must change before I can take important steps in my life.

_____ 12. Despite the pain, I am now sticking to a certain course in my life.

_____ 13. Keeping my pain level under control takes first priority whenever I'm doing something.

_____ 14. Before I can make any serious plans, I have to get some control over my pain.

_____ 15. When my pain increases, I can still take care of my responsibilities.

_____ 16. I will have better control over my life if I can control my negative thoughts about pain.

_____ 17. I avoid putting myself in situations where my pain might increase.

_____ 18. My worries and fears about what pain will do to me are true.

_____ 19. It's a great relief to realize that I don't have to change my pain to get on with life.

_____ 20. I have to struggle to do things when I have pain.

Revised date (4 October 2006)

APPENDIX G: CPAQ-D (GERMAN VERSION)

(Nilges et. al., 2007)

ZHdK: Upgrade MAS Klinische Musiktherapie 15–17

Fragen zu chronischen Schmerzen

Im Folgenden finden Sie eine Liste mit Feststellungen zu chronischen Schmerzen. Bitte lesen Sie sich jeden Satz durch und wählen Sie aus den sieben möglichen Antworten diejenige aus, die am besten angibt, in welchem Ausmaß Sie der Aussage zustimmen. Bitte kreuzen Sie bei jeder Feststellung die für Sie zutreffende Zahl an.

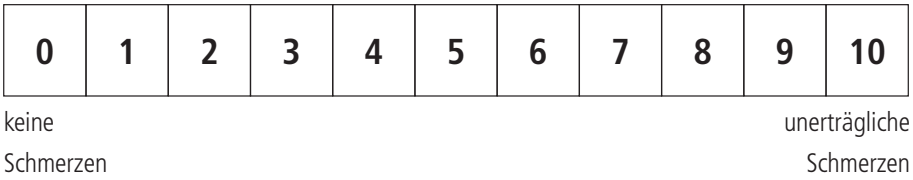
Nie = 0
Fast Nie = 1
Selten = 2
Manchmal = 3
Häufig = 4
Fast Immer = 5
Immer = 6

1. Ich komme mit meinen täglichen Aufgaben klar, egal wie stark meine Schmerzen sind.	0	1	2	3	4	5	6
2. Mein Leben verläuft gut, auch wenn ich an chronischen Schmerzen leide.	0	1	2	3	4	5	6
3. Es ist in Ordnung Schmerzen zu erleben.	0	1	2	3	4	5	6
4. Ich würde liebend gerne Dinge, die mir wichtig sind, opfern, wenn ich dann meine Schmerzen besser kontrollieren könnte.	0	1	2	3	4	5	6
5. Es ist für mich nicht notwendig, meine Schmerzen im Griff zu haben, um mein Leben gut bewältigen zu können.	0	1	2	3	4	5	6
6. Auch wenn es Veränderungen gegeben hat, führe ich trotz meiner chronischen Schmerzen ein normales Leben.	0	1	2	3	4	5	6
7. Ich muss mich darauf konzentrieren, meine Schmerzen los zu werden.	0	1	2	3	4	5	6
8. Es gibt viele Aktivitäten, denen ich nachgehe, wenn ich Schmerzen habe.	0	1	2	3	4	5	6
9. Obwohl ich an chronischen Schmerzen leide, führe ich ein erfülltes Leben.	0	1	2	3	4	5	6

10. Meine anderen Lebensziele sind mir alle wichtiger als die Kontrolle meiner Schmerzen.	0	1	2	3	4	5	6
11. Bevor ich wichtige Veränderungen in meinem Leben vornehmen kann, müssen sich meine Gedanken und Gefühle dem Schmerz gegenüber verändern.	0	1	2	3	4	5	6
12. Trotz der Schmerzen verfolge ich inzwischen einen bestimmten Lebensweg.	0	1	2	3	4	5	6
13. Immer, wenn ich etwas mache, hat die Kontrolle meiner Schmerzen erste Priorität.	0	1	2	3	4	5	6
14. Bevor ich irgendwelche ernsthaften Pläne schmieden kann, muss ich zunächst etwas Kontrolle über meine Schmerzen gewinnen.	0	1	2	3	4	5	6
15. Auch wenn meine Schmerzen stärker werden, kann ich meinen Verpflichtungen immer noch nachkommen.	0	1	2	3	4	5	6
16. Ich würde mein Leben besser im Griff haben, wenn ich meine negativen Gedanken in Bezug auf die Schmerzen besser kontrollieren könnte.	0	1	2	3	4	5	6
17. Ich vermeide es, mich in Situationen zu bringen, in denen meine Schmerzen schlimmer werden könnten.	0	1	2	3	4	5	6
18. Meine Sorgen und Ängste darüber, was der Schmerz mit mir machen könnte, stimmen.	0	1	2	3	4	5	6
19. Es ist eine Erleichterung zu erkennen, dass ich an meinen Schmerzen nichts verändern muss, um mit meinem Leben klar zu kommen.	0	1	2	3	4	5	6
20. Wenn ich Schmerzen habe, kostet es mich große Überwindung etwas zu machen.	0	1	2	3	4	5	6

D. Russo (CPAQ –G 2.0 Nilges, Köster, Schmidt)

APPENDIX H: NUMERISCHE RATING SKALA (NRS) - GERMAN



Aus dem Kompendium „Schmerztherapie für die Praxis – ein Wegweiser“ Dr. W. Stromer, Dr. G.Grögl-Aringer.

APPENDIX I: FOCUSED INTERVIEW QUESTIONS (GERMAN)

Das Ziel dieses Interviews ist es, das individuelle Erleben der Patienten, welche von chronischen Schmerzen betroffen sind, ***zu evaluieren. Die fokussierten Fragen dienen der qualitativen Beurteilung des Therapieprozesses und der subjektiven Erfahrungen, bezüglich der Entwicklung von Selbstmitgefühl und Schmerzakzeptanz.***

Raum: _____

Datum / Zeit: _____

Patient/in: _____

Leiterin des Interviews: _____

Interview-Fragen:

Orientierung des Patienten/Patientin, dass dieses Interview via Audio aufgenommen wird, die Daten jedoch im Rahmen der Masterarbeit, wie bereits besprochen, anonymisiert werden.

Einleitungsfragen:

1. Wie fühlen Sie sich momentan?
2. Wie haben Sie die Musiktherapie in den letzten Wochen erlebt?
    2.1 Welches Erlebnis kommt Ihnen dabei als erstes in den Sinn?

Fokussierte Fragen:

3. Was bedeutet für Sie der Begriff Selbstmitgefühl?
    3.1 Rückblickend, wie erleben Sie ihr Selbstmitgefühl?
    3.2 Wie haben Sie die Musiktherapie in Bezug auf ihr Selbstmitgefühl empfunden?
4. Was bedeutet für Sie Schmerzakzeptanz?
    4.1 Wie haben Sie die Musiktherapie in Bezug auf ihre Schmerzakzeptanz empfunden?
5. Wie erlebten Sie die gewählten Methoden in der Musiktherapie?

Schlussfragen:

6. Was nehmen Sie aus der Musiktherapie auf ihren weiteren Weg mit?
7. Haben Sie noch offene Gedanken, welche Sie anmerken möchten?

Falls Ihnen in den nächsten Tagen noch etwas in den Sinn kommt, dass sie anbringen möchten, dürfen Sie sich gerne via E-Mail melden:

Ich bedanke mich herzlich für ihre Zeit und die Teilnahme an dieser Studie.

APPENDIX J: INFORMATION & CONSENT FORM

Information für Mitwirkende an der klinischen Studie
„Achtsames Selbstmitgefühl in der Musiktherapie
eine Ressource für Menschen mit chronischen Schmerzen“

Sehr geehrte Damen und Herren,

Herzlichen Dank für Ihr Interesse an dieser Studie!

Wozu dient diese Studie und weshalb werden Sie um eine Teilnahme gebeten?

Während Ihrem Klinikaufenthalt in der Klinik Barmelweid werden Sie im Kontext unseres multidisziplinären Teams verschiedene Therapien besuchen, unter anderem auch die Musiktherapie. Bei der vorliegenden Studie möchten wir untersuchen, wie sich die Musiktherapie auf Ihre Schmerzempfindung auswirkt.

Musiktherapie ist eine gut erforschte Intervention im Bereich der Schmerzforschung, da Sie ein relativ neues Berufsfeld ist, gibt es noch viel Forschungspotential. Selbstmitgefühl hat sich als ein wirksames Instrument erwiesen, um eine starke mentale Haltung und gesunde Widerstandsfähigkeit zu erlangen. Selbstmitgefühl kann uns Rückhalt geben, wenn wir mit schmerzlichen Situationen konfrontiert werden, wie zum Beispiel im Umgang mit chronischen Schmerzen. Die Verbindung dieses Ansatzes mit der Musiktherapie ist noch nicht erforscht und daher soll dieser Ansatz wissenschaftlich näher untersucht werden, um mit Hilfe der Ergebnisse das musiktherapeutische Angebot für chronische Schmerzpatienten weiter verbessern zu können.

Wie sieht eine Teilnahme an der Studie aus?

Die Untersuchung erfolgt in mehreren Schritten, welche ich Ihnen auf der folgenden Seite gerne graphisch darstellen möchte:

Vor Therapiebeginn:

- Schriftliche & mündliche Information über den Inhalt und Ablauf der Studie
- Einwilligungserklärung
- Ausfüllen der zwei Fragebögen „SCS“ & „CPAQ“

Woche 1:

- Erstgespräch und gemeinsame Zielsetzung
- Einführung in die Musiktherapie

Ab Woche 2:

- Wöchentliche Musiktherapiesitzungen à 45 Min.

Letzte Woche:

- Abschluss Sitzung Musiktherapie
- Ausfüllen der zwei Fragebögen „SCS“ & „CPAQ“
- Abschliessendes Interview

Des Weiteren möchte ich Sie bitten, Ihr Einverständnis zu geben, die Therapiesitzungen und das Interview via Tonaufnahmen aufzuzeichnen. Dies dient der vereinfachten Auswertung, das gesamte Audiomaterial wird in anonymisierter Form analysiert.

Wie sehen Ihre Rechte in dieser Forschung aus?

Die Studie ist für Sie keine Verpflichtung, wenn Sie sich jedoch für eine Teilnahme entscheiden, findet diese während Ihren wöchentlichen Musiktherapiesitzungen statt.
Ihre Teilnahme an dieser Studie ist freiwillig. Sie können jederzeit, auch nach Beginn der Studie abbrechen, ohne Gründe dafür nennen zu müssen. Im Fall eines Abbruches der Studie, werden Sie ermutigt, die Musiktherapie trotzdem weiter zu besuchen.
Alle Informationen, die Sie mir geben, werden streng vertraulich behandelt.

Was geschieht mit Ihren Informationen?

Die Tonaufnahmen der Therapiesitzungen, die Interviews und die Fragebogen werden zusammen mit den Daten von anderen Studienteilnehmern wissenschaftlich ausgewertet und ausschließlich für wissenschaftliche Zwecke genutzt. Die Ergebnisse der Auswertung werden zusammengefasst und in Form einer Masterarbeit an der Zürcher Hochschule der Künste veröffentlicht. Aus dieser Forschungsarbeit ist nicht zu entnehmen, welche Aussagen von Ihnen oder von anderen Mitwirkenden der Untersuchung getroffen wurden.
Des Weiteren ist es möglich, dass die Ergebnisse in wissenschaftlichen Zeitschriften erscheinen und auf Kongressen vorgestellt werden. Hier wird ebenfalls strengstens darauf geachtet, dass keine Rückschlüsse auf Sie bzw. die anderen Mitwirkenden gezogen werden können. Auf Wunsch kann ich Ihnen die Ergebnisse und Veröffentlichungen zukommen lassen.

Die Ergebnisse dieser Untersuchung sollen einen Beitrag zur Verbesserung des Therapieangebotes für Menschen mit chronischen Schmerzen leisten.
Es würde mich deshalb außerordentlich freuen, wenn Sie sich zur Mitwirkung an dieser Untersuchung bereit erklären.

Kontakt

Wenn Sie an der Untersuchung teilnehmen möchten oder weitere Fragen haben, können Sie mich jeweils dienstags telefonisch erreichen. Ansonsten können Sie Ihre Fragen auch via E-Mail an mich richten.

Mit freundlichen Grüßen,
Diandra Russo, MT-BC (Musiktherapeutin)

Einverständniserklärung für die Teilnahme an der Studie
„Achtsames Selbstmitgefühl in der Musiktherapie
eine Ressource für Menschen mit chronischen Schmerzen“

Ich wurde ausführlich über das Forschungsvorhaben informiert und hatten die Möglichkeit, Fragen zu stellen.

Ich hatte ausreichend Zeit, mich zu einer Teilnahme an dieser Untersuchung zu entscheiden und nehme freiwillig teil. Ich weiss, dass ich jederzeit und ohne Angabe von Gründen diese Zustimmung widerrufen kann, ohne dass sich dieser Entschluss nachteilig auf mich auswirken wird. Die Musiktherapie kann ich im Kontext meines Klinikaufenthaltes trotzdem weiter besuchen.

Mir wurde zugesichert, dass meine Daten anonym gespeichert und behandelt werden. Sie werden ausschließlich für wissenschaftliche Zwecke genutzt und gegebenenfalls für eine weitere wissenschaftliche Auswertung herangezogen.
Mir ist bewusst, dass die Musiktherapie im Kontext meines Klinikaufenthaltes zum multidisziplinären Therapieprogramm gehört und relevante Informationen über das Therapiegeschehen an das Team weitergeleitet werden.

Aus meiner Beteiligung an der Studie entstehen mir weder Kosten noch werde ich dafür finanziell entschädigt.

Ich haben eine Kopie der schriftlichen Information erhalten und erklären hiermit, meine freiwillige Teilnahme an der Untersuchung.

Ort, Datum — Unterschrift des Patienten/ Patientin

Ort, Datum — Unterschrift der Musiktherapeutin

APPENDIX K: CLINIC APPROVAL

ZHdK

Datenschutz:

Der Datenschutz wird gemäss Personalreglements bewahrt.
Im Rahmen der schriftlichen Masterarbeit werden sämtliche Daten anonymisiert.

Ethische und regulatorische Anforderungen

Im Einverständnis mit der Klinik Barmelweid benötigt diese Studie, im Kontext einer Masterarbeit, keinen Antrag der Ethikkomission.

Projektleiterin, Diandra Russo:

Aarau, 22.8.17 — Ort, Datum

Unterschrift

Chefarzt Psychosomatische Medizin, Prof. Dr. med. Roland von Känel

[redacted] 31.8.17 — Ort, Datum

Unterschrift

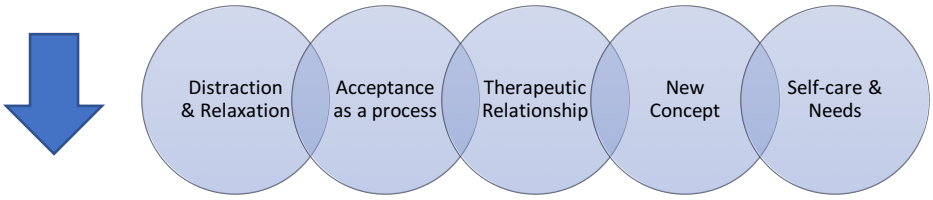
Anhang:

- Literaturhinweise
- Fragebogen 1 / Selbstmitgefühl
- Fragebogen 2 / Schmerzakzeptanz
- Interviewleitfaden

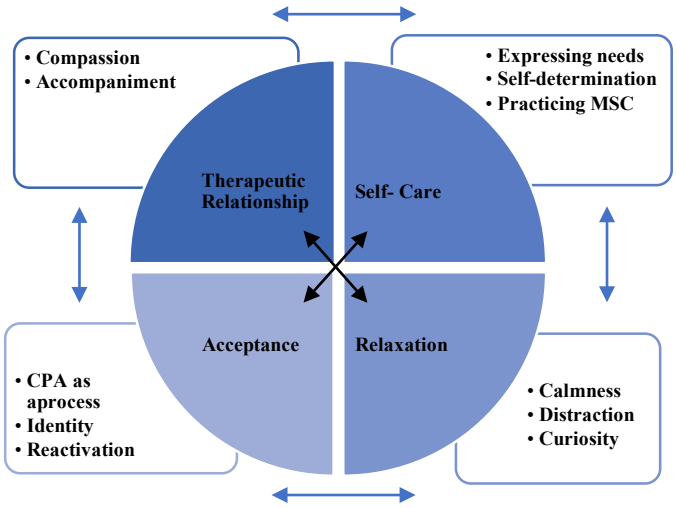
APPENDIX L: THEMATIC ANALYSIS – INITIAL CODES & THEMES

Initial Codes

Resulting Themes



Final Themes & Subthemes



APPENDIX M: THEMATIC ANALYSIS – CODES, THEMES, SUB-THEMES

Patient	Data Extract	Coded for	Theme	Subtheme	Time Mark Re-cording
IW					
	"Also ich hatte so gut wie nie Schmerzen in der Musiktherapie" (IW)	Relaxation	Relaxation	Distraction from the pain	4'38
	"Das ist DAS Thema...sowohl beim Schmerz, wie auch bei Gefühlen und Empfindungen, wenn ich diese annehme und akzeptiere, dass sie da sind, sie sich aufzuweichen beginnen [...] ich vermute mal, das ist ein lebenslanger Prozess...ich bin jedoch jetzt schon viel schneller am Punkt" (IW)	Pain Acceptance as a process	Acceptance	Pain Acceptance as a process	3'59
	"Die Schmerzakzeptanz ist noch in Arbeit" (IW)	Pain Acceptance as a process	Acceptance	Pain Acceptance as a process	4'15
	"Ich habe es einfach als einfühlsam und emphatisch erlebt, sie hat gespürt welche Themen anstehen und auch, wie sie auch die Themen direkt benannt hat die ich in Verbindung mit Schmerzen habe" (IW)	Therapeutic Relationship	Therapeutic Relationship	Compassion	5'28
	"Wie so oft wenn das Vertrauen da ist sind wir auf das Thema Scham gekommen [...] da wurde mir der Zusammenhang zwischen meinen Schmerzen und meiner unterdrückten inneren Kraft plötzlich klar, die Schmerzen haben dazu gedient meine innere Kraft zurückzuhalten" (IW)	Allowing emotions	Therapeutic Relationship	Compassion	1'10
	"Die Musiktherapie war für mich öffnend, ich habe sehr schnell gemerkt, wenn ich wieder etwas gemacht habe, was mir selbst nicht entsprochen hat" (IW)	Self-Care	Self-Care	Expressing needs	3'42
	Ich bin sensibilisiert worden [...] und ich habe auch gemerkt, dass es für mich	MSC as a new concept	Self-Care	Practicing self-compassion	3'10

	wichtig ist dies in die unterschiedlichsten Situationen mit einzubringen auch in schwierigen Situationen" (IW)				
	"Ich habe es als sehr positiv empfunden, dass hier ein therapeutischer Prozess unter dem Aspekt Selbstmitgefühl läuft [...] und ich habe es geschätzt, dass die Therapeutin verschiedene Werkzeuge gehabt hat um mich immer wieder abzuholen" (IW)	MSC as a new concept	Self-Care	Practicing self-compassion	7'36
	"Ich habe in den letzten Wochen ein Stück Heilung erfahren" (IW)	Allowing emotions	Overall impression of music therapy		6'45
	"Es ist traurig, dass ich vermutlich so eine Begleitung nicht mehr habe, aber ich bin ja selber gross, ich bin gut an meinen jetzigen Punkt geführt worden." (IW)	Therapeutic relationship	Therapeutic Relationship	Compassion	8'04
OM					
	" [...] Möglichkeit den Schmerz nicht zu spüren während der Mth oder verminderter oder durch etwas Neues abgelenkt zu sein[...] " (OM)	Distraction	Relaxation	Distraction from the pain	5'09
	„[...] die Schmerzen waren zwar noch präsent, aber weil ich etwas Neues machen durfte war die Neugier wichtiger" (OM)	Diversity	Relaxation	Curiosity	5'22
	"Auch Musik hören, wenn ich Schmerzen habe, und merken, dass es eine beruhigende Funktion hat" (OM)	Relaxation	Acceptance	Reactivation	7'15
	"Ich konnte aufgrund meiner Schmerzen keine Musik mehr hören, obwohl mir Musik immer sehr wichtig war, für mich war die MTH das Ermöglichen vom Musik hören und vor allem auch dann, wenn ich es für mich selber brauche" (OM)	Activation of resources	Acceptance	Reactivation	3'20
	"Sehr bereichernd, ich durfte viele Emotionen	Allowing emotions	Therapeutic Relationship	Compassion	0'40

	zeigen, wir hatten sehr gute Gespräche" (OM)				
	"Ich fand es besonders gut, dass ich in der Situation wählen durfte was gerade passt [...] diese Vielfalt und das Eingehen auf den Moment und die Situation [...] kein Druck [...] das war sehr wichtig für mich" (OM)	Control No pressure	Therapeutic Relationship	Self-determination	6'12
	„Die Musik wirkt als Tool zum Selbstmitgefühl" (OM)	MSC as a new concept	Self-Care	Practicing self-compassion	3'34
	"Musik als etwas, dass mich zu mir selber führt" (OM)	Self-Care	Overall impression of music therapy		3'38
	"Ich hätte gerne noch mehr gemacht, es hat mir extrem zugesagt, das will doch sicher jeder [...] länger und häufiger, zweimal in der Woche à 45 Minuten wäre für mich besser gewesen"(OM)	More music therapy	Overall impression of music therapy		7'48
	"Selbstmitgefühl ist etwas dass ich neu kennengelernt habe und mich selber mitfühlend behandeln ist etwas dass ich jahrelang nicht gemacht habe, ich möchte dran bleiben" (OM	MSC as a new concept	Self-Care	Practicing self-compassion	3'53
OD					
	"Die Mth hat mir sehr geholfen alles auszublenden, abzuschalten also die Schmerzen habe ich gar nicht wahrgenommen" (OD)	Distraction	Relaxation	Distraction from the pain	2'49
	"Für das Ausblenden der Schmerzen war für mich wichtig, etwas ganz Anderes zu machen" (OD)"	Diversity	Relaxation	Curiosity	3'22
	"Akzeptanz ist ein sehr schwieriges Thema [...] anfänglich war es ein Kampf die Schmerzen zu akzeptieren, ich habe schon viel gelernt, es geht schon besser" (OD)	Pain Acceptance as a process	Acceptance	Pain Acceptance as a process	2'22
	"Ich kriege gute Rückmeldungen, dass sich mein Selbstmitgefühl geändert	MSC as a new concept	Self-Care	Practicing self-compassion	1'40

	hat, mein ganzes Wesen im Prinzip [...] ich bin viel gelassener" (OD)				
	"Ich habe vorallem das Klangbett sehr geschätzt, die Ruhe, die Gelassenheit und Entspannung." (OD)	Relaxation	Relaxation	Calmness	1'24
RF	"Während der Mth habe ich die Schmerzen für einen Moment vergessen oder weniger beachtet, sie waren dann nicht weg, aber es war einfach etwas, dass mir guttut" (RF)	Distraction	Relaxation	Distraction from the pain	4'46
	"Das ist etwas, dass man als Schmerzpatient dauernd daran ist zu lernen [...] lernen zu akzeptieren, ich kann sie nicht einfach auslöschen aber Strategien lernen damit umzugehen, oder sagen jetzt brauche ich einfach Ruhe...es ist nicht einfach, es ist schwierig" (RF)	Pain Acceptance as a process	Acceptance	Pain Acceptance as a process	3'46
	"Was ich aus der Mth mitnehme, werde ich noch viel daran denken und eventuell wieder in den Chor zu gehen" [...]"Das habe ich wegen meinen Schmerzen aufgegeben, mir wurden die Proben zu viel, das hat mich sehr belastet" (RF)	Activation of resources	Acceptance	Reactivation	6'07
	"Ich hatte keine Ahnung was Mth ist und ich habe herausgefunden, dass es kein Druck ist, ich durfte mitentscheiden [...] und auch etwas Kontrolle haben, es war eine tolle Erfahrung" (RF)	No pressure Diversity	Therapeutic Relationship	Self-determination	7'38
	"Bei jeder Therapiestunde durfte ich sagen, wie es mir geht und was ich mir wünsche [...] und ich durfte mich auch hinlegen...auch einfach mal mein Gefühl zulassen" (RF)	Control Self-care	Self-Care	Expressing needs	3'01
	"Wenn ich wütend bin habe ich gelernt, dass ich mich selber trösten kann,	MSC as a new concept Self-Care	Self-Care	Practicing self-compassion	1'34

	ähnlich wie mich meine Mutter in die Arme genommen hat, mich selber umarmen" (RF)				
	"Singen in der Mth hat mir sehr gut getan [...] es hat mich befreit" (RF)	Activation of resources	Overall impression of music therapy		7'31
RB	"Man kann hier in eine andere Welt flüchten, wie in einem Traum" (RB)	Distraction	Relaxation	Distraction from the pain	6'36
	"Es ist präsenter denn je, dass ich sehr viel an mich glaube und nicht denke das schaffe ich nicht" (RB)	MSC as a new concept	Self-Care	Practicing self-compassion	3'48
	"Die Musiktherapeutin war sehr freundlich zu mir und hatte ein Art die mich willkommen hiess" (RB)	Therapeutic Relationship	Therapeutic Relationship	Compassion	8'56
	"Ich kam sehr gerne in die Musiktherapie ich fand es schade, dass es mir nicht gelungen ist meine anderen Dinge loszulassen" (RB)	Diversity	Overall impression of music therapy		8'36
	"Einfach machen und meinen Bedürfnissen folgen [...] und dass mich Musik auch sehr beruhigt" (BR	Allowing emotions Relaxation	Self-Care	Expressing needs	2'32
AV	"Ich würde Musiktherapie weiterhin wöchentlich machen". (AV)	More music therapy	Acceptance	Reactivation	9'26
	"Das fällt mir echt schwer...ich kann nur sagen dass ich gemerkt habe dass der Schmerz nicht nur vom Körper ist [...] akzeptiere inzwischen, dass der Schmerz bei mir auslösbar ist, durch psychischen Stress" (AV)	Acceptance as a process Understanding of psychosomatic interplay	Acceptance	Pain Identity	5.11
	"Dass ich mich so akzeptieren kann, wie ich bin und etwas finden das mir guttut und dass ich das bewusst steuern kann, ich war überrascht über mich selber [...] dass ich immer etwas gefunden habe das mir guttut" (AV)	MSC as a new concept Self-Care Needs	Self-Care	Expressing needs	1'59
	"Selbstmitgefühl ist für mich akzeptieren, dass man Gefühlsausbrüche hat man sich aber jedoch auch selber trösten kann...wie man mit einer guten	MSC as a new concept Self-Care Allowing emotions	Self-Care	Practicing self-compassion	3.28

	Freundin umgehen würde" (AV)				
	"Ich habe gemerkt dass ich ein bisschen Aggressionspotential habe und durfte erfahren, dass ich auch akzeptieren darf, dass ich dieses Gefühl habe." (AV)	Allowing emotions Acceptance as a process	Acceptance	Pain Identity	6'43
	"Also ich bin eigentlich hierhergekommen und hatte keine Vorstellung, was ich mit der Musiktherapie anfangen soll und habe ganz gut gefunden, wie mein Alltagssituation mit Instrumenten nachspielen konnte."(AV).	Diversity Music Therapy	Overall impression of music therapy		5'23
CS	"Ich durfte viel Neues ausprobieren, hatte sonst nie die Möglichkeit in meinem Leben, ich war so neugierig [...] Wegen den Schmerzen habe ich sehr viel verpasst, ich möchte trotz dem Schmerz Sachen erleben" (CS)	Dicersity Distraction Activation of resources	Relaxation	Curiosity	7'08
	"Schmerzakzeptanz ist schwer, ich akzeptiere sie leider nicht, sie sind wie eine Zwillingsschwester, ich lebe mit ihr" (CS)	Acceptance as aprocess Pain identity	Acceptance	Pain Identity	5'08
	"Ich bin wie ich bin [...] Der Mensch hat einen Charakter und den kann man nicht einfach so verändern in ein paar Wochen" (CS)	Control	Self-Care	Practicing self-compassion	3'07
	" [...]Ich musste bis jetzt immer einen Weg finden für mich alleine, leider" (CS)	Therapeutic relationship	Therapeutic relationship	Compassion	3'37
ID	"Diese inneren Bilder die ich auf dem Klangbett erfahren habe vom fliegenden Adler, Kristallhöhle, Kirschenbaum machten mich entspannter [...] Bilder die Ruhe ausstrahlen und die mich erden" (ID)	Mindfulness	Relaxation	Calmness	1'23

	“Diese Klänge und Schwingungen haben meinen Schmerz verändert und haben mir erlaubt einen anderen Umgang mit dem Schmerz zu lernen, er war kein Feind mehr...ich fand dies sehr entspannend” (ID)	MSC as a new concept Pain identity Allowing emotions Relaxation	Relaxation	Calmness	7’14
	„Die Bilder haben sehr viel mit meinem Inneren zu tun [...] Bilder die mich bewegen und mir aufzeigen was ich brauchte, die Ruhe und die Stille“ (ID)	Relaxation	Relaxation	Calmness	4’20
	“Ich habe gelernt dass das mein eigener Schmerz ist, der nur mir gehört und ich den nicht erklären muss [...] diese Ruhezeiten welche ich erfahren habe in der Musiktherapie sind mir ganz wichtig geworden, Zeiten in denen ich mich auf den Schmerz einlassen kann und der Schmerz dann auch reduziert ist” (ID)	Acceptance as a process Relaxation	Acceptance	Pain Acceptance as a process	6’15
	“Für mich einstehen und auch Nein zu sagen, ist mir ganz wichtig geworden, das hätte ich vorher nie gemacht” (ID)	Control Self-Care Needs	Self-Care	Expressing needs	2’45
	“Ich habe gelernt vor allem besser auf mich zu hören und mich besser wahrzunehmen” (ID)	Needs Self-Care MSC as a new concept	Self-Care	Practicing self-compassion	3’57
	"Es war für mich anfänglich schwierig mich auf die Musiktherapie einzulassen, ich hatte Vorbehalte [...] ich war angenehm überrascht, es war ein Erlebnis und ein Genuss” (ID)	No pressure Diversity	Overall impression of music therapy		10’15
	“Hier darfst du sein [...] ankommen, durchatmen, hier sein dürfen” (ID)	Mindfulness	Therapeutic Relationship	Compassion	9’39’

APPENDIX N: MINDFUL SELF-COMPASSION BREAK IN MUSIC THERAPY (GERMAN)

Skript: Selbstmitgefühls-Pause in der Musiktherapie

(Patienten liegen oder sitzen je nach Präferenz)

Zum Üben von Selbstmitgefühl lade ich Sie ein, Ihr Leiden in Ihr Bewusstsein zu bringen und Ihre Aufmerksamkeit in den jetzigen Moment zu lenken. Wenn Sie die Musik* hören, nehmen Sie sich einen Moment um in einem Wechselspiel von aussen nach innen zu hören und falls sich etwas bemerkbar macht mit dem zu verweilen. Wenn Sie sich gestresst fühlen, schwierige Gefühle auftauchen oder Sie Ihre Schmerzen besonders stark wahrnehmen, spüren Sie nach, wo Sie dies in Ihrem Körper wahrnehmen. Wo in Ihrem Körper ist es vielleicht am deutlichsten spürbar? Wenn Gedanken kommen, welche Sie von Ihrem Unbehagen ablenken möchten, geben Sie diesen Gedanken Raum und lenken Sie Ihre Aufmerksamkeit bewusst zurück zu der Musik die Sie hören. Die Musik darf für Sie wie ein Anker im Hier & Jetzt sein.

Nun Sagen Sie zu sich selbst: „Das ist ein Augenblick des Leidens"
→ Das ist Achtsamkeit. Sie können diesen Satz auch mit Ihnen entsprechenden Sätzen formulieren zum Beispiel „Das tut weh", „Das ist Stress" „Das ist Wut".

Verweilen Sie mit ihrem Satz in Achtsamkeit und spüren Sie nach wo sich dieses Leiden in Ihrem Körper bemerkbar macht.

Nun Sagen Sie zu sich selbst: „Leid gehört zum Leben"
→ Das ist ein Ausdruck des gemeinsamen Menschseins.

Sie können auch diesen Satz mit einem Ihnen entsprechenden Satz ersetzen. Zum Beispiel „Ich bin nicht alleine" „Andere Menschen fühlen ähnlich" „Schwierige Momente und Schmerzen sind Teil meines Lebens".

***Wenn Sie mögen, legen Sie ihre Hand auf eine Körperstelle, vielleicht auf Ihr Herz oder die schmerzende Stelle. Wählen Sie eine beruhigende Berührung, welche für Sie stimmig ist.*

Nun Sagen Sie zu sich selbst: „Möge ich freundlich zu mir sein"
→Das ist ein Ausdruck der Selbstfreundlichkeit.

Für eine persönliche Ausdrucksform, fragen Sie sich was Sie jetzt am liebsten hören möchten, ich mache Ihnen ein paar Beispiele, welche Sie annehmen dürfen oder einen ganz eigenen Satz wählen.

„Möge ich mich selbst so annehmen wie ich bin"
„Möge ich mir verzeihen"
„Möge ich mir selbst das Mitgefühl geben, das ich brauche"
„Möge ich sicher und geborgen sein".

Wenn Sie keinen passenden Satz finden bleiben Sie mit der Aufmerksamkeit bei Ihrer Empfindung und in Achtsamkeit mit der Musik. Verweilen Sie mit Ihrem gewählten Satz und wiederholen Sie ihn so viel Sie mögen. Spüren Sie nach wie sich der Satz in Ihrem Körper anfühlt. Nehmen Sie die Gedanken, welche auftauchen wahr. Verweilen Sie bis die Musik nicht mehr hörbar ist mit dieser Achtsamkeit, dem gemeinsamen Menschsein und der geübten Selbstfreundlichkeit.

Anmerkungen:
**(Die Wahl der Musik wird von den Patienten gewählt: Optionen: Musik ab CD, Live rezeptive Musik von der Therapeutin gespielt, Beispiele: Kotamo, Klangmonochord, Klavier, Harfe)*

**Dieses Skript ist eine generelle Anleitung zur Inkorporation der drei Hauptelemente des achtsamen Selbstmitgefühls. Die Selbstberührung kann durch andere Elemente ersetzt werden wie z.B. das Vergegenwärtigen einer geliebten Person, eine Bewegung, ein Bedürfnis benennen, das Um positionieren zu einer liegenden oder sitzenden Position. Diese Elemente werden an die Therapieziele der Patienten angepasst.

As adapted from MSC course with Céline & Monica Brueni (www.achtsamsorgsam.ch)

APPENDIX O: STATEMENT OF AUTHORSHIP

I declare that I have used no other sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are indicated as such, i.e. cited and/or attributed. This thesis was written and composed by the signing author.

Aarau, November 12th, 2018

Signature: 
(Diandra Russo, MT-BC)