Limited approximations: music-imaginative pain treatment (entrainment) with a 45-year-old patient suffering from schizoaffective psychosis

Susanne Metzner, Sylvia Kunkel

Angaben zur Veröffentlichung / Publication details:

Metzner, Susanne, and Sylvia Kunkel. 2015. “Limited approximations: music-imaginative pain treatment (entrainment) with a 45-year-old patient suffering from schizoaffective psychosis.” In *Advanced practice in medical music therapy: case reports*, edited by Cheryl Dileo, 117–37. Cherry Hill, NJ: Jeffrey Books, Music Therapy Resources.

10

Limited Approximations: Music-Imaginative Pain Treatment (Entrainment) with a 45-year-old Patient Suffering from Schizoaffective Psychosis

Susanne Metzner
Sylvia Kunkel

Abstract

In this case study of a 45-year-old patient suffering from chronic schizoaffective psychosis, the authors examine the question if severe psychiatric illness presents a contraindication for music-imaginative pain treatment. These considerations are based on the alarming fact that psychotic patients have a much lower life expectancy than the general population, because somatic illnesses are often not discovered at an early stage. Despite heterogeneous research findings, it is often assumed that persons with psychotic illness are insensitive to pain. Moreover, instruments for the assessment of (chronic) pain that are specially constructed to meet the needs of psychotic patients are not available. If, however, one pays sufficient attention to the specific characteristics of communication in the therapeutic relationship, then it becomes possible to help the affected patients through methods of music therapy and to treat chronic pain in its complex psychological and social context.

Introduction: Description of the Patient and Context

Our title, 'Limited Approximations,' is inspired by the concert for six pianos microtuned to be 1/12th of a tone apart from each other (resulting in 72-tone equal temperament) and orchestra by the Austrian composer, Georg

Friedrich Haas (2010). The interval in twelve-tone tuning is so small that it is no longer heard as an interval, but rather as the shading of a single note.

In a metaphoric way, this phenomenon leads us to 45-year-old Mr. B., who has been suffering from chronic, recurrent schizoaffective disorder (ICD F25.1) for about 25 years. According to ICD 10 (WHO, 2010), schizoaffective disorder is an illness in which both affective and schizophrenic symptoms (hallucinations, delusions, ego impairment, thought disorders, and disorganization) occur in the same episode of illness and do not meet criteria for a diagnosis of either schizophrenia or depressive or manic episodes. It was always situations involving separation that provoked psychotic decompensation in Mr. B., with sometimes schizophrenic and sometimes depressive symptoms. So, in the course of his lifetime, the patient had been admitted to many different psychiatric hospitals and had outpatient psychotherapy a number of times. Within the last decade, Mr. B. had to be admitted as an inpatient in a psychiatric clinic at least twice a year. Still, considering the severity of his illness, Mr. B. was able to function quite well in everyday life, and he led an independent, altogether satisfying life (more details concerning his biography and living situation are reported below).

The reason for his last admittance to a psychiatric clinic was a moderate depressive episode and fatigue syndrome (F32.1). This time, there were no acute psychotic symptoms. As he explained, he sought the clinic as a "safe haven" following a tumor disease and a complicated operation with severe health repercussions, because he felt exhausted and unstable. His otherwise quiet and clearly structured everyday life had been thrown out of joint due to the many examination and treatment appointments and the severe pain.

Two years prior, he had been diagnosed with a glomus tumor (also called paraganglioma, a usually benign neuroendocrine tumor that originates from autonomic ganglion cells) on the right side of his face, which was surgically removed, causing damage to cranial nerves IX-XII. Since then, Mr. B. had been suffering from severe pain in his head, face and neck.

The opinion of the multidisciplinary team on the psychiatric unit was that, on the one hand, the patient's desire for support and care should be addressed; however, on the other hand, his inpatient stay should not be so long as to endanger his autonomy. In addition to psychiatric care, psychotherapy, various social-psychiatric activities, and neuroleptic and analgesic treatment, Mr. B. was given individual music therapy in the form of music-imaginative pain treatment by Sylvia Kunkel. The patient himself asked for music therapy, as he indicated that he was an artistically-minded person and referred to previous positive experiences with music in connection with speech therapy. The patient gave his written consent to publish the course of his therapy.

Transdisciplinary Collaboration in the Treatment of Severe Mental Health Disorders

In psychiatric treatment, the etiology of psychotic disorders, that is generally assumed to be biological, often leads to a one-sided emphasis on pharmacological treatment and the subsequent neglect of psychotherapy

interventions, in spite of the fact that research has demonstrated their effectiveness (Dümpelmann et al., 2013; Leichsenring Dümpelmann, Berger, Jaeger & Rabung, 2005). Also, the influence of music therapy, particularly for the alleviation of negative symptoms, has also been confirmed empirically (Gold, Heldal, Dahle & Wigram, 2005; Gold et al., 2013; Gühne et al., 2012; Mössler, Chen, Heldal & Gold, 2011).

For this case study, however, we would like to focus on the alarming fact that inpatients admitted with affective disorders, schizophrenia, and schizoaffective disorder have higher mortality rates for almost every cause of death when compared to persons who have never been treated for a mental disorder (Laursen, et al., 2007). The life expectancy of individuals with schizophrenic disorders is about fifteen years less than that of the general population (Ajetunmobi, Taylor, Stockton & Wood, 2013). In spite of the high number of unnatural causes (suicide, accident) in about two-thirds of the cases, this high rate of mortality is attributable to cardiovascular, neoplastic, and respiratory disease (Leucht, Burkard, Henderson, Maj & Sartorius, 2007).

Several potential explanations include factors intrinsic to mental health problems or their pharmacological treatment, lifestyle risk factors (sedentary lifestyle, poor nutrition, smoking, obesity), psychosocial factors, such as negative social consequences, (living alone, unemployment) and difficulties in communication. Therefore, "delays in the detection or initial presentation of somatic symptoms lead to more advanced staging at diagnosis" (Hodgson, Wildgust & Bushe, 2010, p.57).

In the case of Mr. B. as well, an advanced stage tumor was discovered only after numerous tests. In addition to the fact that psychiatrists and other staff members in mental health care may not be sufficiently attentive to their patients' somatic health problems, there is the problem that general physicians often have difficulties in meeting the special communication needs of these individuals. Thus, it is quite obvious that an improvement in the medical care of patients who suffer from psychotic disorders can only be achieved through interdisciplinary collaboration.

Psychodynamic Approach to (Music) Therapy with Patients Suffering from Psychosis

Based on our experience with psychotherapy and music therapy for patients with psychotic disorders, we know that it is important to consider their experience of self-negation and their hypersensitivity. Similarly, we know it is also important to keep in mind their insecurities regarding the regulation of closeness and distance, as well as the regulation of affect, so as to be prepared for metaphors that at times may be bewildering (Dümpelmann, 2010). If it is not possible to empathize with the difficulties of the psychotically ill patient, what then happens is what Steimer-Krause (1996, p. 279) has described as "negative intimacy."

The explanatory model for these phenomena and their treatment that underlie our work in this case is based on modern psychoanalytic concepts that

encompass developmental psychology, as well as interaction, affect, and dream research; we have described the application of these concepts to music therapy elsewhere (Kunkel, 2008; Metzner, 1999; 2010; 2013). Furthermore, we view music therapy as a treatment approach in which aesthetic feeling and thinking are considered to be prerequisites for the initiation and success of therapeutic processes. From an anthropological perspective, the human being needs a medium that allows him or her to cope with his/her inner states. This can be language, but can also be music (Metzner, 2005).

Specific musical interactions with psychotic patients—especially at the beginning stage of therapy —have been described in detail by De Backer (2005; 2013) and Kunkel (2008). Generally speaking, they consist of highly erratic or repetitive structures, the so-called 'sensorial play.' Such musical phenomena provide concrete material to demonstrate that, in psychosis, the experience of clearly defined self-boundaries of a potent and autonomous self is impaired (Mentzos, 2010), and that mentalization abilities (Brent, 2009; Fonagy, Gergely, Jurist & Target, 2004 [2002]; Gergely & Unoka, 2011; Metzner, 2013) as well as interpersonal affect regulation (Dümpelmann, 2004) are limited. Moreover, neurophysiological findings indicate that psychotic patients have difficulties discriminating between constant and varying auditory stimuli (Northoff & Dümpelmann, 2013). This should not be understood as an isolated cognitive defect, but rather as an element of complex neurophysiological processes and as a pre-phenomenal correlate of how persons experience the world and themselves in the world, that is, often without a frame of common sense and without meaning.

What is of further importance in the case presented here is that—beside the mental activities—the subjective experiencing of one's own body plays a central role in ego-consciousness. According to Scharfetter (1981), this consists of the psychophysical dimensions of vitality, activity, consistency, demarcation, and identity. The interplay of these dimensions leads to the experience of a coherent self in a healthy person; in the case of a psychotically ill person, however, this process is disrupted (Scharfetter, 1996), which is also manifested in how pain is experienced and expressed.

Psychosis and Pain

Neither ICD nor DSM defines diagnostic criteria for changes in body experience in psychotic disorders. The Brief Psychiatric Rating Scale/BPRS" (Overall & Gorham, 1990) and the "Positive and Negative Syndrome Scale for Schizophrenia/PANSS" (Kay et al., 1987) include only one item that refers to body experience, namely 'somatic concern.' This item primarily assesses delusional and non-delusional somatic complaints.

Apart from this, the notion that schizophrenic patients appear to have decreased pain perception or (at least) decreased pain expression is widespread (Röhricht & Priebe, 1997, pp. 324), although empirical findings are not homogeneous. The findings that support the idea of schizophrenia being a pain insensitivity syndrome can be presented here only briefly for reasons of limited space.

Pain insensitivity in schizophrenic patients in the case of severe somatic illness is reported by Rosenthal, Porter & Coffey (1990), Talbott and Linn (1978), and by Bickerstaff, Harris, Leggett & Cheah (1988). In experimental studies, Blumensohn, Ringler & Eli (2002) as well as Boettger, Grossmann & Bär (2013) found higher pain thresholds in some schizophrenic patients compared to healthy subjects. According to Dworkin & Caligor (1988), chronic pain or migraine has only rarely been reported. Explanatory models include sensory or affective anomalies, altered biological mechanisms, and side effects of neuroleptic treatment (Autié et al., 2009, p. 301).

Research on pain experiences in schizophrenic patients faces multiple problems and needs further development. Existing findings should be treated with caution due to various limitations, such as (a) reductionist definitions of pain, (b) experimental research methodology and (c) lack of reliability and transferability. According to Autié, et al. (2009), influential factors in the perception of pain such as attention, stress, and emotion under experimental conditions are not sufficiently discussed. Also, an altered expression due to the pain socio-cultural environment, communicative skills, and representational ability of the individual has to be considered. As there is no specific tool for the evaluation of pain in mentally ill patients, the observation of specific language or behavioral changes is essential to improve medical care for this client group (Saravane, 2013).

This coincides with the central objective of this case study, namely to describe an appropriate procedure to assess pain in patients suffering from severe mental health problems through music therapy. Furthermore, we would like to open up a new discussion on the benefits and limitations of music-imaginative pain treatment for this client group, because unstable mental health conditions are currently considered as a contraindication.

Music-Imaginative Pain Treatment (Entrainment)

Music-imaginative pain treatment originates from entrainment (Bradt, 2010; Dileo & Bradt, 1999; Rider, 1985) that focuses on the treatment of a symptom within the entire biopsychosocial context of an individual (Dileo, 1997) and, in particular, on the subjective experience of the patient, including intensive psychological processes of entering, confronting, exploring, and reflecting the pain. Music-imaginative pain treatment is carried out in an individual setting lasting for at least 1 or more sessions. The treatment process includes: (a) an extensive interview regarding the individual pain experience, determining the indication and negotiating the contract, (b) the creation[1] of 'pain-music' and 'relief music' or 'healing-music,' (c) application phase where the composed music is played to the patient, and (d) appraisal and reflective discussion. Music-imaginative pain treatment is sometimes integrated into an ongoing therapy or, especially in the case of chronic pain, it can be the starting point of long-term psychotherapy or music therapy.

[1] In English publications often called 'improvisation,' in Germany the musical creations within music-imaginative pain treatment are considered as compositions.

In principle, music-imaginative pain treatment can be applied to all kinds of acute or chronic pain conditions. Patients should be physically and mentally stable. Under inpatient conditions, some positive experiences with patients suffering from trauma or other severe mental health problems have been reported within the German network for music-imaginative pain treatment. Therefore, a contraindication depends on the context or conditions as well as on the level of psychotherapeutic and musical competency of the music therapist. By carefully watching for any signs of overburdening/exhausting the patient, the therapist can immediately modify the treatment model individually if necessary.

Apart from common components accounting for outcome, the specificity of music-imaginative pain treatment can be explained by a combination of functional and representational brain functions (Metzner, 2012). This includes, on one hand, cross-modal processes between affective-sensory and auditory experiences and, on the other hand, an assignment of musical symbols to pain respite or relief.

There are a number of studies that have provided evidence for the effectiveness of music listening or music therapy for pain reduction (for example, Cepeda, Carr, Lau, & Alvarez, 2006; Loewy, Hallan, Friedman, & Martinez, 2005; Koch, Kain, Ayoub, & Rosenbaum 1992; Silvestrini & Piguet, 2011) as well as research evidence for the effectiveness of music therapy entrainment for pain management (Bradt, 2010; Dileo, et al., 2013; Schwoebel, Coslett, Bradt, Friedman, & Dileo, 2002). The effectiveness of music-imaginative pain treatment has been recently brought in connection with processes related to neurophysiologic change. Under experimental conditions with healthy subjects, Hauck, Metzner, Rohlffs, Lorenz & Engel (2013) suggest that music-imaginative pain treatment involves modulation of pain perception at early cortical processing stages. However, in a clinical context, and especially in psychotic patients, it can be assumed that the initial state of neurophysiological processes in the somatosensory cortex is changed (Northoff & Dümpelmann, 2013); this, however, does not have to be considered an absolute criterion for exclusion of music-imaginative pain treatment.

Case Study: Mr. B.

Biographical Information

Biographical information that was drawn from the patient's medical file and from the pain interview in music therapy is summarized here.

The youngest of three children, Mr. B. grew up in a working-class family in the Ruhr area of Germany. He describes the atmosphere of his family home as 'dull harmony.' His father was seldom at home and drank more and more alcohol, which often made him aggressive and impulsive. His mother spoiled her youngest child quite a bit, was over-protective and did not respect personal boundaries. Both parents are deceased, and the patient has some contact with his siblings.

As a child, and throughout his entire life, Mr. B. felt unwanted and rejected. As early as kindergarten and later on in school, he was often made fun

of. Beginning as an adolescent, Mr. B. suffered from depression and dropped out of school because of this. He then started vocational training which he also quit because he was frequently ill and often felt that he was left out.

He finally attempted a fresh start by moving to a larger city where he worked in different jobs. For a long time, he worked in a library, where he evidently felt comfortable. He completed training as a German teacher for students with a migrant background and enjoyed working in this field despite his severe mental illness. Recently, however, he was no longer able to work as a teacher because of a vocal cord paralysis resulting from his tumor, and he retired because of his permanent disability.

Mr. B. lived alone, but had had several relationships that had ended, the last one shortly before being admitted to the clinic. Mr. B. said that he liked reading a lot. On the ward, he was called 'the intellectual.' He liked listening to music, including jazz, but did not play an instrument himself. His great love was painting. He traveled to as many cities as he could to visit exhibitions and art openings, and despite his limited budget, he always bought a catalog.

First Music Therapy Session: The Pain Interview

Mr. B. arrived punctually for his first appointment. He was a tall, burly man with a cautious demeanor, a tired face, but alert eyes, and a low and very coarse voice. He was somewhat carelessly dressed which gave him a kind of Bohemian look. Immediately, the therapist felt empathy for him. To his first session, he brought along a folder and a water bottle from which he occasionally took a drink and for which he apologized.

After introductions and some explanation concerning music-imaginative pain treatment, the pain interview began. Mr. B. reported that the tumor in the right side of his face was discovered at a late stage. At that time he had constant pain, a coarse voice and other illnesses; he underwent numerous examinations by different doctors until finally the quite large but benign tumor was discovered. At first it was not clear how the tumor could be removed. After some discussion, *"vessels were closed"* in the first operation to prevent the tumor from growing. In a second operation two months later, the tumor was completely removed, *"probably all of it,"* Mr. B. commented, *"at least it was no longer detectable in the MRI."* Following surgery, but probably even before that, one vocal cord was paralyzed; moreover, his cranial nerves 9 to 12 were damaged by the operation.

From the perspective of the therapist, Mr. B. reported his unsettling medical history without showing any emotion, actually more like a very eager student. Only when Mr. B. jokingly said that now he has *"a voice like a jazzman"* (when referring to his paralyzed vocal cord), did the therapist become aware of a certain pride in the patient. The patient and therapist nodded to each other and smiled; this was a first moment of agreement.

He had undergone numerous treatments on an outpatient basis, including speech therapy. Last year he was admitted for inpatient treatment because of psychosomatic exhaustion. For him, the treatment program was like a full-time job and had negative consequences for his personal and financial situations. He

strongly regretted not being able to work any longer. However, Mr. B. immediately added that his voice had become much better in the meantime through speech therapy. At that point, he had had 50 sessions. He brought along a folder with his exercises.

The therapist promised to look through the folder, but only after the session was over. Instead, she referred to what he had said before about his private life. The patient was open about this topic. It seemed that his girlfriend broke up with him without giving any reason and did not want to speak with him anymore. This threw him off his feet like a karate chop to the neck. Everything around him started to become blurry. As if he needed something to hold on to, Mr. B. repeated the metaphor. The image of a man being beheaded on a guillotine came to the therapist's mind. She was extremely shocked over this brutal and existential description. She stated that it must have been a situation that was experienced as life-threatening, which the patient confirmed. It looked as if he recognized himself in the emotional engagement of the therapist; in any case, he added that he had become somewhat calmer in the clinic. Also, it was practical to be here because of the short distances to his therapy appointments.

At this point, the therapist returned to the actual focus of the music-imaginative pain treatment. She was, however, not really convinced of these last statements, because the patient's descriptions revealed mental suffering, which was responsible not only for his current depressive episode, but also for his schizoaffective psychosis, and seemed to be of much greater significance to him than the somatic pain.

Mr. B. appeared quite willing to answer questions about his pain and at first explained that he was experiencing pain as a result of the operation and not as a result of the tumor. He did not want to continue pharmacological treatment, because of the steadily increasing doses and their side-effects. The pain, however, had diminished as a result of the other therapies he was receiving. The therapist reflected that it seemed important for the patient to be active, and he strongly agreed.

The patient described the pain that was giving him the most trouble as a waxing and waning kind of pain: *"kind of like the weather in April, sometimes the sun is shining, sometimes it rains."* The therapist asked him to explain in more detail, and Mr. B. added that when he did not sleep well and tossed and turned all night, his shoulder and upper arm hurt. This led to problems, as he doesn't get enough exercise because of the pain. But that had also improved in the meantime. Moreover, he described a burning sensation around the surgical scar. That too had become somewhat better thanks to lymph drainage (the surgery also damaged his lymph system). Further, he often had a severe feeling of numbness on the right side of his face and neck, as well as frequent headaches. The therapist summarized the complaints that currently bothered him the most: pain in his shoulder and upper arm, pain around the scar and his headaches. Mr. B. nodded and said: *"Right, all of this because of the operation."* Of course, he was previously informed about the possibility that nerves could be damaged, but because it was necessary to remove the tumor, he had no choice. When asked if

the therapy should focus on all three areas, or if he wanted to make a selection, he decided that the focus should be on his headaches and the painful scar.

In the next part of the session, the patient and therapist worked out the characteristics of the headaches and scar pain. Sometimes the headache crept up on him, and sometimes it had a very sudden onset. *"It usually comes on suddenly, for example, when I am making a call or in stressful situations, especially private stress."* At such times, he couldn't concentrate at all, and sometimes lost his voice also. The pain was in the area of his forehead and eyes as well as in his right jaw where he also had a feeling of numbness and a burning sensation. The scar pain also waxed and waned, although the scar had healed nicely and was almost invisible. All of these symptoms had improved through therapies that were previously unknown to him. When asked about further characteristics, he described the headache as dull, black, like a thunderbolt, the color sometimes red and grayish-black. The scar pain was a hot pain. His free associations: *"Fire—red—an overheated cooking pot."* Both kinds of pain gradually subsided, but sometimes they disappeared suddenly. When suffering from mental stress caused by the break-up, the aches and pains were considerably stronger.

The therapist picked up on the image of an overheated cooking pot and compared his psychological state with a fire that was making the pot even hotter. Mr. B. nodded: *"Yes, pfffft* (a hissing sound that gets louder and louder), *and then the lid falls off."* In response to the therapist's request to give a rating to the greatest pain he was feeling on a scale from 1 to 10, Mr. B. said that he had filled out a pain scale ranging from 1 to 5 at his doctor's office. Whatever was connected with illness and pain had a rating of about 3, sometimes also higher. But, 'personally speaking,' he was so distraught by what was going on with his girlfriend, that the pain intensity level reached 5. At that time, he often tried to take his mind off the pain by reading, engaging in sports or going for walks. The other patients did not understand this; instead they asked him if he was the intellectual here on the ward. But he only read for his own pleasure, he said.

His remarks concerning what made him feel better were the starting point for the therapist to turn to the topic of pain relief; she asked him about his ideas and wishes. Mr. B. said that *"the pain no longer played such an important role,"* and following a short pause he added *"Of course, this is connected with the private story I just told you about."* The therapist asked him to name colors or provide images that represented a state of relief for him; he responded: *"Maybe I could just lie in a bathtub...such a nice bubble bath, that's something I haven't done in a long time."* In any case, it had to be something relaxing. Listening to the radio was another possibility; concentrating on listening to something also made him feel better. From other therapies, he knew that he had to first accept the pain in order to then 'get rid of it.' Sometimes he wrote down such phrases. Again Mr. B. referred to his folder and said that it was a mess, but he hoped the therapist would be able to read it. After thirty minutes (a length of time that is appropriate to the needs of psychotic patients), the session was over.

During the follow-up work after the session, the therapist was bothered by the feeling that she did not fulfill her responsibility toward the patient, and was not really able to encounter him and recognize his needs. Wishing to make

amends, she devoted a great deal of time to the folder, in which the patient had filed his exercises, some texts, a couple of doctor's letters, and poems. Yet, the act of foraging through the folder appeared to lead her even further away from the patient and also triggered unpleasant memories in connection with her own speech training courses: impersonal standard exercises for impersonal standard problems in order to learn impersonal standard articulation and standard speech. The therapist criticized herself for her negative feelings, as Mr. B. had pointed out how much speech therapy had helped him previously. At the same time, what remained in her mind was the fact that his girlfriend had refused to speak with him anymore, which was equivalent to a karate chop to the neck and lifted the lid off the pot, in other words, immobilized his psychological defenses.

Several days after this session, the therapist saw a poem entitled "Hopeless," which Mr. B. had recently published in a magazine. *"The end—and not a fresh start - in the house of tomorrow - is my accomplishment."* That was the first verse.

Interpretation of the First Session

Mr. B. proved to be a patient who made a great effort to meet the demands made of him. He transferred his thoughts about his previous positive therapy experiences to music therapy. In music-imaginative pain treatment, it is not unusual for the patient to establish connections between somatic (physical) and mental (psychological) pain (suffering) as early as the pain interview. However, this was unlikely to happen in a patient with a chronic schizoaffective psychosis. Mr. B.'s ability to give a vivid account of his inner experiences and to express them through appropriate metaphors was a rare exception. These elicited corresponding affective reactions and fantasies in the therapist, which suggested a rapidly developing intimacy.

At the same time though, this development was hampered by the patient through transferences that seemed routine, e.g., in reference to speech therapy or the pain scale, as well as by his apologies for having to drink water because he felt thirsty. For the therapist, the intimacy was disrupted by the feeling of having done something wrong that lasted even after the session was over. This suggested a pathological association of intimacy and annihilation, which incidentally was also expressed in the last verse of the aforementioned poem: *"The desperate glance – The hopeless greed – To annihilate - Everything and everybody."*

Second Session, Part I: Composition of Pain Music

As in the previous session, Mr. B. brought along his water bottle and mentioned that he needed to drink some water from time to time.

The therapist asked what kind of thoughts and feelings he had had since the last session. His goal, he said, was to take fewer pills. The therapist summarized the results of the pain interview, which Mr. B. confirmed, and he proclaimed how much lymph drainage had helped him so far. The therapist believed that he was already well taken care of in reference to pain treatment and

that was not what he really wanted from her. Still, music-imaginative pain treatment was continued as planned. The decision concerning a shift of the therapy focus was postponed because the feeling of not doing the right thing could also be interpreted as a typical countertransference arising in the relationship with a psychotic patient. In this case, it would be better from a psychodynamic perspective, to contain the feeling of being wrong.

When asked which of the instruments in the room would be appropriate to express the characteristics of his pain, he replied: *"Maybe the piano?"* and added as if in doubt: *"Maybe because I have always used the piano"* and then talked about his speech therapy program. Holding on to the familiar was something that the therapist was accustomed to in therapy with psychotic patients—and in particular with chronically ill ones. But she did not address this issue; instead, she asked him how she should play the piano so that it could express the pain by means of music. Now Mr. B. was confused, *"Oh, okay, to express it...."* he said, and then went to explain in detail the procedure followed in speech therapy. After the therapist explained to him once more the technique of music-imaginative pain treatment, Mr. B. spontaneously chose the kettledrum. *"That sounds good already," he* said as the therapist played a couple of low, slow notes. However, it became more and more evident that it was difficult for the patient to describe how the therapist should play. Over and over she had to ask him for instructions and had to restrain her impulse to play some variations. Finally, however, he asked her to play dull and regular tones with increasing loudness and intensity to a point at which he told her it was loud enough, after which the music should fade away.

In order to find another instrument that was able to express the burning pain of the scar, Mr. B. asked if he could try out the instruments himself; the therapist welcomed this suggestion. He tried out the gong, temple blocks, and metallophone and then remarked: *"that's difficult,"* and finally struck the bass chime bar. *"Maybe this here,"* he said, and played it for a while. *"Maybe with such an even beat*?" he asked while looking toward the therapist. She asked him if he wanted to express the quality of the dull pain once more with this deep sound. *"No, the burning"* was his response. Although the therapist nodded, Mr. B. seemed to sense that for her, the dull sound had nothing to do with the idea of burning. In any case, he said somewhat uncertainly *"Well, I think so*." The therapist reassured him and pointed out that it was his perception that counted and not hers. Very much relieved, he emphasized that it was indeed something completely subjective, which the therapist, in her opinion, confirmed emphatically.

The metallophone was too harmonic for him, Mr. B. remarked, and the therapist reminded him that his pain had something to do with disharmony. After her remark, the patient replied, *"Yes, like Stravinsky,"* (but actually he liked Stravinsky!). Searching for disharmony, Mr. B. finally discovered the monochord. In the end, for his pain music, he combined this instrument with the bass chime bar. As the burning is often connected with the headache, it made sense to start with the bass chime bar which was even better than the kettledrum. The bass chime bar stood for the headache, which was often accompanied by the burning – here, the monochord. Again, the therapist stressed that what was

important was that perceptions and decisions are very subjective in nature. Mr. B. stressed that his decision was entirely spontaneous; he had not spent the entire weekend racking his brain about this.

While working on the pain music, a severe thunderstorm came out of nowhere, as the day before, it had been humid and muggy, and a weather warning for thunderstorms had been issued for the current day. Still, it seemed like a remarkable coincidence that exactly during that specific quarter of an hour, it turned dark outside and started to lightning and thunder. *"How fitting"* said the therapist and referred to the fact that earlier, Mr. B. had compared his pain with a bolt of thunder. The immediate agreement of the patient and his smile of relief signaled that he felt understood. *"This thunderstorm,"* she said smilingly, and Mr. B. responded with total relief: *"Yes, that's great."*

This was followed by further work on the structure of the pain music; also, therapist and patient agreed upon the hand gestures that would be needed later during the listening part of the session. The music started with slow and soft beats on the bass chime bar, which gradually increased in volume and intensity (= headache), while the tempo remained the same. In response to a signal from the patient, the therapist began to draw the bow across the string of the monochord with increasing intensity here too, until the sound became piercing (= scar pain). After this, first the monochord died out, and then the beats on the bass chime bar faded away.

As a substitute for the monochord, the therapist suggested the bowed psaltery to match the quality of the disharmony, perhaps, a bit more clearly. He immediately agreed to this and wanted to use it to replace the monochord. However, the simultaneous playing of the bass chime bar and the string instrument did not work, so Mr. B. decided to go back to the original version: *"Too much is irritating."* The therapist asked herself, why she had made the suggestion in the first place and blamed herself for being annoying and intrusive.

Interpretation of the Second Session, Part I

The patient needed some time to put aside his expectations that stemmed from his speech therapy sessions. At first, it looked as if it was hard for him to create a connection between his experience of pain and the musical sounds, but this turned out not to be the case. First of all, he noticed that the therapist associated different sounds with the burning pain than he did. This upset him. Secondly, he understood how the sound phenomena must be arranged so that they could represent the different qualities of pain that were interrelated. At the same time, what was noteworthy in this situation was that the processing of both exteroceptive stimuli (music) and interoceptive stimuli (pain) as well as their interrelationship was altered in the psychotic patient and, therefore, not easily understood by the therapist.

Furthermore, there was a problem in the interaction between patient and therapist, which fluctuated between total agreement about the meaning of the impending thunderstorm and irritating feelings of strangeness. In this uncertain situation, the therapist no longer clearly perceived the boundaries of the patient,

which made her feel ashamed also, because it reminded her of how the patient described his mother. However, Mr. B. was successful in gaining some confidence here. He interpreted the interaction (not the music!) quite precisely, namely, too much is irritating.

Second Session, Part II: Creation of the Healing Music

Creating the healing music was much easier. Mr. B. again referred to his positive experiences with speech therapy and wanted the therapist to play the piano; while she did, he sang the 'f 'and 'g.' If he successfully hit the notes, he was relatively calm, and then it hurt less, he said. He wanted nothing more than to do the same in music therapy. The therapist was overcome by the feeling that she had been robbed of her individuality. She felt uncomfortable and reacted sullenly. In order to remain true to her principles on the one hand and avoid rejecting him on the other, she suggested that she would play a free improvisation on 'f 'and 'g' on the piano and also sing these notes. In other words, she would do for him what he usually did for himself in speech therapy.

Mr. B. wanted the music to swing from one note to the other while the loudness remained the same. The therapist made several attempts using piano improvisation and vocal improvisation. Mr. B. thanked the therapist for each new version presented to him. The playing calmed him down, and it also calmed his nerves, he repeatedly stated. He described the music as a child being brought to bed with his mother singing at the bedside. The therapist had the same impression.

The patient went on to tell the therapist that, at home, he often listened to music. There, he would lie in bed and listen to Mozart, which made him feel good, as this music is *"a bit lulling."* However, if the music is too complicated, he cannot get into it. This is also how the healing music should be: as simple as possible, like a children's song or a lullaby. Turning back to the healing music, the patient decided that the singing should join the piano until, after a while, the music slowly fades out.

The next session was scheduled for two days later. Once more, Mr. B. made a reference to his speech therapy. He asked if, here too, he could sing by himself. The therapist proposed to finish the music-imaginative pain treatment first and to wait for this until the next music therapy session.

After the therapist showed the patient to the door, Mr. B. explicitly thanked her and said good-bye.

Interpretation of the Second Session, Part II

Mr. B. was not willing to enter into a new therapeutic relationship, unless he could also hold on to speech therapy. Although he was able to make connections between the music and images of healing, his strong need for motherly protection thwarted his own vital impulses, as well as those of his counterpart, in this case, the therapist. From this perspective, although the lullaby did promise temporary relaxation and comfort, it offered no solution for the

indistinct self- and object- boundaries. The repeated expressions of his deep gratitude concealed his disturbed interpersonal regulation of affect. Although the therapist knew how she was supposed to play, she perceived it as a confiscation of her individuality. The patient too seemed to notice that there was something wrong. He suggested that he could sing; this, however, seemed more like a step backward into speech therapy instead of a step forward. All of this was camouflaged by the principles of music-imaginative pain treatment, according to which the therapist is supposed to play, but is not allowed to provide her own ideas and suggestions. This led to a dilemma, which the therapist, who is experienced in the treatment of psychosis, resolved by postponing the development of more independent activities, like singing or free improvisation.

Third Therapy Session: Application Phase

At the beginning of the session, the therapist explained the procedure to the patient and informed him that he could have an audio recording of the session on CD, which he gladly accepted. The treatment was conducted with Mr. B. in a sitting position. Before Mr. B. started to relax, he stressed that yesterday his psychic pain became worse. Once more, the therapist had the impression that Mr. B. was actually seeking treatment for something other than for his physical pain in music therapy. She expressed her sympathy and her hope that the treatment would bring relief for both his psychic and physical pain, as these were inseparable. Mr. B. agreed with this and gave the cue for the therapist to start the pain music on the bass chime bar. Mr. B. rapidly alternated between giving signals for increasing or decreasing intensity of the music and for the monochord to come in or to stop. Although the therapist had the feeling that she had not really played the music as it was previously decided, she switched to the piano and started playing the healing music. Using her right hand, she first played a calm, simple melody that oscillated between the notes 'f' and 'g' and which was accompanied by slow triad arpeggios mostly in F and G major with the left hand. After a minute, as she looked Mr. B. directly in the eyes, he gave her the signal for the vocal part to begin. She started singing a melody similar to the one they had discussed previously by humming a semi-open vowel ("doo, doo") and accompanying this with simple triad arpeggios. A little bit later, which seemed like an eternity for the therapist, Mr. B. gave the signal to let the music slowly fade out. It took the therapist quite a bit of effort to come back to reality. Like awakening from a deep sleep or an altered state of consciousness, she only slowly came around and was grateful for the short pause that followed.

After some contemplation, Mr. B. stated that the psychic pain was worse after all. Yesterday, he had met a friend and then walked past the apartment of his former girlfriend. That was a mistake, and now the topic under discussion was grief and saying goodbye.

In response to the question from the therapist regarding how he had felt while listening to the music, Mr. B. said that it calmed him down again. He was happy about an audio recording that he could take home. He did not spontaneously talk about the pain music. When the therapist asked him about it,

the he replied that he couldn't get rid of the images in his mind of what had happened yesterday. Then the session was over.

When the therapist looked at the clock, she was astounded. The entire session had lasted not even 8 minutes. She must have lost her sense of time, because she thought the session had lasted much longer than the appointed half hour. She was even more surprised when she listened to the recording of the session and discovered that the healing music was only two minutes long. Although the pain music had lasted 45 seconds and had seemed very short to her while she was playing, she had lost complete track of time in reference to the healing music. She was totally stunned and even suspected that something had gone wrong with the recorder or with the counter.

In addition, when listening to the recording, she noticed that her singing was quite off-key, which was unusual for her. She was embarrassed about this and tried to figure out what could have happened. The only thing that came to her mind was the feeling that, although she had functioned according to the wishes of the patient while playing the healing music, she was not really present mentally.

Interpretation of the Third Session

Psychotic symptoms, such as disturbed (self-) perception, thinking, and somatic perception or—as in the case here—sense of time, can also occur in the therapist because of processes of identification and can become a "bridge on which mutual convergence" occurs (Benedetti, 1994, p. 184, translation by E. Hertweck). The patient had previously mentioned that everything was becoming blurred. Here, now, it became clear what that must have been like for him.

Apart from the slightly altered state of consciousness during the healing music, it is also astonishing that in such a concrete situation, the therapist was not aware of her off-key singing. Previously during the creation of the healing music, the patient had mentioned that in speech therapy it was important to hit the notes 'f 'and 'g' precisely. Now it seemed as if the therapist's ability to attune to the patient had been reduced. Rather than seeing this as a complete failure, though, this can be understood as a 'limited approximation,' which conveys a feeling for Mr. B.'s world, namely that nothing is really right. In contrast to the composition by Haas, we were not dealing with artistic expression, but with suffering from unsuccessful approximations: the lullaby, which was supposed to provide comfort and security, turned out to be deceptive. Although a dull pain and a burning pain are different, in the real situation, they were suddenly not clearly distinguishable. An external, totally accidental event, such as a thunderstorm, gained a shared meaning, but feelings cannot be matched with one's own actions.

Fourth Therapy Session: Reflective Discussion

At the beginning of the session, Mr. B. reported that he had felt quite well during the past few days, except for stomach pain probably caused by the pills he had to take. He did not mention his headaches or scar pain. When the therapist asked him about it, he stated that the pain was moving in the right direction. He

did not add anything else to this, so the therapist asked him to be more precise. *"Yes, a little bit less, I guess,"* he said vaguely. She again asked if the pain was occurring less often or if it was less intense; he spontaneously reported that the intensity had decreased. The therapist asked him how he would now rate the pain on a scale from 1 to 10; he answered: *"About four to five I guess, yes." "But in the evenings, it gets stronger."* Momentarily it seemed that his stomach pain had taken priority.

In response to the question about how he felt about his music-imaginative pain treatment on the whole, he stated: *"It was quite interesting"* and asked if he could have one more session before being discharged. The appointment book was checked for an available date. In reference to his physical pain, Mr. B. had nothing more to say. The rest of the session, he indicated that he wanted to do the vocal exercises with the 'f 'and 'g' notes from speech therapy.

Mr. B. had difficulty in trying to explain to the therapist how this was supposed to be done. For one thing, he wanted to sing the notes 'f 'and 'g,' and she should accompany him on the piano one way or another. The therapist asked the patient if he wanted to wander around the room while doing this. This was new for him, but he took the suggestion. This led to a nice improvisation with piano and vocals. Mr. B. walked around the room while listening to arpeggiated triads in F to G major. In response to the therapist's nod, he sang an aspirated 'f 'or 'g' with his mouth half open. In this way, it was possible to build both on the earlier positive experiences in speech therapy and the previous session, since the music was similar to the healing music. Mr. B. seemed to enjoy this very much. At the end of the session, he felt good and was relaxed. His stomach pain was gone. When the therapist gave him the CD with his pain music and healing music, he was delighted and left the room elatedly.

Meanwhile, the therapist was somewhat baffled. As in the previous sessions, she had the feeling that the main issue was not actually his somatic pain. Also, she did not really believe that the headache and scar pain had improved, even though Mr. B. indicated so by his ratings on the pain scale.

Interpretation of the Fourth Session

During the final improvisation, the patient felt understood and there was room for something new to have developed in the therapeutic relationship. Still, the impression lingered that it was not possible to really connect with one another. It seemed as if the patient and the therapist both shared the notion that their own personal presence and/or their subjective expressions made no sense for the other. So, it was difficult for the patient to convey to the therapist how the singing exercise with the tones 'f 'and 'g' was supposed to have been done, although it seemed so easy. And the therapist could not be sure that the patient noticed the change in key that indicated the entrance of the voice, but had to give him a cue. In this session, the issue of past maternal overprotection was also present, which the patient, by his request, both sought out and warded off.

From a musical perspective, the inaccurate time perception and loss of boundary was also due to the fact that there was a whole tone step between 'f''

and 'g,' and that both keys F and G major are harmonically relatively far apart; without modulation, there is an abrupt harmonic change. This means that there are no transitions that allow passing from one world to another. Further, there was no leading tone, and therefore no goal which could guide action.

Transferring this to the feeling of pain, it was obvious that there was a connection between somatic and psychological factors; however, it was difficult to develop a perspective on how change could come about. In any case, the final, mutual improvisation showed how constructive it could be to continue the work. Thus, what had been achieved in these four sessions was not insignificant.

Conclusion

The music-imaginative pain treatment of Mr. B. was characterized by numerous particularities that were directly connected to the patient's chronic psychotic illness. One cannot say that Mr. B. was insensitive to pain, but there were differences in the way in which the patient incorporated the pain in his intrapsychic and intersubjective world. For example, when composing the pain music, it became clear that the processing of both exteroceptive stimuli (e.g., music) and interoceptive stimuli (e.g., pain) as well as their interrelationship was more complicated than when dealing with mentally healthy pain patients. What is remarkable, however, is that in spite of his chronic psychosis, this patient developed an extraordinarily high level of motivation and possessed symbolization abilities that allowed the therapist to acquire an idea of the patient's condition and to become part of his perceptual world. Although the somatic pain seemed to be the focus of treatment, the main cause for psychic pain—the suffering from a deep insecurity of how to relate—could be felt and shared within the therapeutic process. The separation between somatic and psychic pain turned out to be non-existent.

What had to be considered was that the interactions between patient and therapist were characterized by indistinct self- and object-boundaries, and that it was necessary to deal with extreme countertransferences. On the part of the therapist, this was particularly evidenced by her constant struggle with the feeling that there was something she was not doing right and that she was no longer certain of her feeling for time, her vocal intonation, or her subjectivity. However, dealing with these countertransferences in an appropriate manner helped to prevent the development of negative intimacy.

Another aspect which should not be forgotten is that music-imaginative pain treatment in fact prescribes that the therapist strictly complies with the patient's instructions with regard to the music and refrains from carrying out her own musical ideas. However, in this specific case, an overzealous application of this rule would have especially facilitated a defense against affects that are difficult to regulate. So, during the entire process, the therapist had to find a balance between the objective to express the feeling of pain or the fantasy of healing through music on the one hand, and on the other, the attempt to mirror appropriately the patient's messages concerning the unbearable nature of the pain. Only because she managed to follow a two-track strategy was it eventually

possible for the work on the final improvisation to contribute to a restoration of inter-subjectivity and thus enable a careful separation, which otherwise is not possible in the everyday life of the patient.

The case of Mr. B. shows that it is necessary for the therapist to possess specialized skills and that a general contraindication for music-imaginative pain treatment would deny those patients suffering from severe mental health problems the opportunity to have their pain treated in its complex psychological and social context. As the number of therapists who are willing to apply this method to this type of client increases, there might be the chance to also use it as a pain evaluation tool and to contribute to the detection of serious physical illness in its early stages.

References

Autié, A., Montreuil, M., Moulier, V., Braha, S., Wojakiewicz, A. & Januel, D. (2009). Douleur et schizophrénie: Mythe et réalité. *L'Encéphale, 35*, 297-303.

Ajetunmobi, O., Taylor, M., Stockton, D. & Wood, R. (2013). Early death in those previously hospitalised for mental healthcare in Scotland: A nationwide cohort study, 1986–2010. *BMJ Open, 3*, 1-9.

Benedetti, G. (1994). *Todeslandschaften der Seele.* Göttingen: Vandenhoeck & Ruprecht.

Bickerstaff, L.K., Harris, S.C., Leggett, R.S. & Cheah, K.C. (1988). Pain insensitivity in schizophrenic patients. A surgical dilemma. *Arch Surg, 123*, 49–51.

Blumensohn, R., Ringler, D. & Eli, I. (2002). Pain perception in patients with schizophrenia. *J Nerv Ment dis, 190*, 481-483.

Boettger, M.K., Grossmann, D. & Bär, K.-J. (2013). Increased cold and heat pain thresholds influence the thermal grill illusion in schizophrenia. *Eur J Pain, 17*, 200-209.

Bradt, J. (2010). The effects of music entrainment on postoperative pain perception in pediatric patients. *Music and Medicine, 2*(2), 150-157.

Brent, B. (2009). Mentalization-based psychodynamic psychotherapy for psychosis. *J. Clin Psychol: In Session, 65*, 1-12.

Cepeda, M.S., Carr, D.B., Lau, J. & Alvarez, H. (2006). Music for pain relief. *Cochrane Database Syst Rev, 3.*19:CD004843.

De Backer, J. (2005). *Music and psychosis. The transition from sensorial play to musical form by psychotic patients in a music therapy process.* PhD Dissertation. Aalborg Universitet. http://old.musikterapi.aau.dk/forskerskolen_2006/phd-backer.htm (12.7. 2012)

De Backer, J. (2013). The case of Adrian. In S. Metzner (Ed), *Reflected sounds. Case Studies from psychodynamic music therapy* (pp. 16-53). English EPUB edition of the German original edition. Giessen: Psychosozial.

Dileo, C. (1997). Reflections on medical music therapy: Biopsychosocial aspects of the treatment process. In J. Loewy (ed.), *Music therapy and pediatric pain* (pp. 125-144). Cherry Hill, NJ: Jeffrey Books.

Dileo, C., Raffa, R., Clark-Vetri, R., Bradt, J., Hunt, A., & Kidd, C.,2013). The effects of music therapy entrainment on pain, vital signs, and bowel function of cancer patients. Paper presented at the European Congress of Music Therapy, Oslo.

Dileo, C. & Bradt, J. (1999). Entrainment, resonance, and pain-related suffering. In C. Dileo (Ed.), *Music therapy & medicine: Theoretical and clinical applications* (pp.181-188). Silver Spring, MD: American Music Therapy Association.

Dümpelmann, M. (2010). Zur bedeutung der affektentwicklung für die behandlung von psychosen. In H. Böker (Ed.), *Psychoanalyse im dialog mit den nachbarwissenschaften* (pp.481-499). Gießen: Psychosozial.

Dümpelmann, M. (2004). Kontingenzerfahrungen und affektentwicklung – entwicklungspsychologische ansätze in der psychotherapie von psychosen. In M.E. Ardjomandi (Ed.), *Jahrbuch der gruppenanalyse*, (pp. 169-178). Heidelberg: Mattes.

Dümpelmann, M., Jaeger, U., Leichsenring, F., Masuhr, O., Medlin, C. & Spitzer, C. (2013). Psychodynamische psychosenpsychotherapie im stationären setting (Psychodynamic inpatient treatment of psychotic disorders – Conceptions, findings and results). *Psychodyn Psychotherapie, 1*, 45-58.

Dworkin, R.H. & Caligor, E. (1988). Psychiatric diagnosis and chronic pain: DSM III-R- and beyond. *J Pain Symptom Manage, 2,* 87-98.

Fonagy, P., Gergely, G., Jurist, E.L. & Target, M. (2004 [2002]). *Affektregulierung, mentalisierung und die entwicklung des selbst.* Stuttgart: Klett-Cotta.

Gergely, G. & Unoka, Z. (2011). Bindung und mentalisierung beim menschen. Die entwicklung des affektiven selbst. *Psyche, 65*, 862-890.

Gold, C., Heldal, T.O., Dahle, T. & Wigram, T. (2005). Music therapy for schizophrenia or schizophrenia-like illnesses. *Cochrane Database Syst Rev* 2:CD004025. DOI 10.1002/14651858.CD004025.pub2.

Gold, C., Mössler, K., Grocke, D., Heldal, T.O., Tjemsland, L., Aarre, T. & Rolvsjord, R. (2013). Individual music therapy for mental health care clients with low therapy motivation: Multicentre randomised controlled trial. *Psychother Psychosom, 82*, 319– 331.

Gühne, U., Weinmann, S., Arnold, K., Ay, E.-S., Becker, T. & Riedel-Heller, S. (2012). Künstlerische therapien bei schweren psychischen störungen. Sind sie wirksam? *Nervenarzt, 83,*855–860.

Hauck, M., Metzner, S., Rohlffs, F., Lorenz, J. & Engel, A.K. (2013): The influence of music and music therapy on neuronal pain induced oscillations measured by MEG. *Pain®, 154*(4), 539-47.

Hodgson, R., Wildgust, H. & Bushe, C. (2010) Cancer in schizophrenia: is there a paradox?. *J Psychopharmacol, 24*(11) Suppl 4: 51-60.

Kay, S. R., Fiszbein, A. & Opler, L.A. (1987). The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophrenia Bulletin, 13*, 261-276.

Koch, M.E., Kain, Z.N., Ayoub, C. & Rosenbaum, S.H. (1998). The sedative and analgesic sparing effect of music. *Anesthesiology, 89*(2), 300-306.

Kunkel, S. (2008). *Jenseits von jedem? Grundverhältnisse, beziehungsformen und interaktionsmuster im musiktherapeutischen erstkontakt mit schizophrenen patienten.* Dissertation, Hochschule für Musik und Theater, Hamburg. http://ediss.sub.uni-hamburg.de/volltexte/2009/3954/ (12.7.2012).

Laursen, T.M., Munk-Olsen, T., Nordentoft, M. & Mortensen, P.B. (2007). Increased mortality among patients admitted with major psychiatric disorders: A register-based study comparing mortality in unipolar depressive disorder, bipolar affective disorder, schizoaffective disorder, and schizophrenia. *J Clin Psychiatry 68*(6), 899-907.

Leichsenring, F., Dümpelmann, M., Berger, J., Jaeger, U. & Rabung, S. (2005). Ergebnisse stationärer psychiatrischer und psychotherapeutischer behandlung von schizophrenen, shizoaffektiven und anderen psychotischen störungen. *Z Psychosom Med Psychother, 51*, 23-37.

Leucht, S., Burkard, T., Henderson, J., Maj, M. & Sartorius, N. (2007). *Physical illness and schizophrenia.* Cambridge: Cambridge University Press.

Loewy, J., Hallan, C., Friedman, E. & Martinez, C. (2005). Sleep/sedation in children undergoing EEG testing: A comparison of chloral hydrate and music therapy. *J Perianesth Nurs. 20*(5), 323-32.

Mentzos, S. (2010). *Lehrbuch der psychodynamik. die funktion der dysfunktionalität psychischer störungen.* Göttingen: Vandenhoeck & Ruprecht.

Metzner, S. (1999). *Tabu und turbulenz. Musiktherapie mit psychiatrischen patienten.* Göttingen: Vandenhoeck & Ruprecht.

Metzner, S. (2005). Following the tracks of the other. Therapeutic improvisations and the artistic perspective. *Nordic Journal of Music Therapy, 14*(2), 155-163.

Metzner, S. (2010). About being meant. Music therapy with an in-patient suffering from psychosis. *Nordic Journal of Music Therapy, 19*, 133-150.

Metzner, S. (2012). A Polyphony of dimensions: Music, pain and aesthetic perception. *Music and Medicine,* 4(3), 164-171.

Metzner, S. (2013). Von zerstörten liedern (Destroyed songs – Psychodynamic music therapy with a psychotic in-patient). *Psychodyn Psychotherapie, 1*, 24-33.

Mössler, K., Chen, X., Heldal, T.O. & Gold, C. (2011). Music therapy for people with schizophrenia and schizophrenia-like disorders. *Cochrane Database of Systematic Reviews* Issue 12. Art. No.: CD004025. DOI: 10.1002/14651858.CD004025.pub3.

Northoff, G. & Dümpelmann, M. (2013). Schizophrenie – eine neuropsychodynamische Betrachtung (Schizophrenia – A neuropsychodynamic perspective). *Psychodyn Psychotherapie, 1*, 14-23.

Overall, J.E. & Gorham, D.R. (1990). Brief Psychiatric Rating Scale. In *Ratingscales for Psychiatry.* Weinheim: Beltz.

Rider M. (1985). Entrainment mechanisms are involved in pain reduction, muscle relaxation, and music-medicated imagery. *J Music Ther, 22*(4): 183-192.

Röhricht, F. & Priebe, S. (1997). Störungen des körpererlebens bei schizophrenen patienten (Disturbances of body experience in schizophrenia patients), *Fortschr. Neurol. Psychiat. 65*, 323 – 336.

Rosenthal, S. H., Porter, K. A. & Coffey, B. (1990). Pain insensitivity in schizophrenia: Case report and review of the literature. *General Hospital Psychiatry, 12*, 319-322.

Saravane, D. (2013). La perception et l'évaluation de la douleur chez le schizophrène, *Oncologie, 15*, 4-9.

Scharfetter, C. (1981). Ego-psychopathology: The concept and its empirical evaluation. *Psychological Medicine*, *11*, 273-280.

Scharfetter, C. (1996). *The self-experience of schizophrenics. Empirical studies of the ego/self in schizophrenia, borderline disorders and depression.* 2nd ed. Zurich: University of Zurich.

Schwoebel, J., Coslett, H.B., Bradt, J., Friedman, R. & Dileo, C. (2002). Pain and the body schema: Effects of pain severity on mental representations of movement. *Neurology*, *59*, 775-777.

Silvestrini, N. & Piguet, V. (2011). Music and auditory distraction reduce pain: Emotional or attentional effects? *Music Med.*, *3*, 264-270.

Steimer-Krause, E. (1996). *Übertragung Affekt und Beziehung.* Bern: Peter Lang.

Talbott, J.A., & Linn, L. (1978): Reactions of schizophrenics to life-threatening disease. *Psychiatr Q.*, *50*(3), 218-27.

WHO - World Health Organisation (2010): ICD 10, International statistical classification of diseases and related health problems. - 10th revision. www.who.int/whosis/icd10/ (accessed 15-11-2013)

Acknowledgments

The authors would like to thank Eleonore Hertweck for translating this chapter and Dr. Lieselotte Dreusicke for kindly supporting us to finance the translation.