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The Body Tambura: a new instrument for the field of music therapy

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Abstract

In this article the authors concern themselves with Bernhard Deutz's recently developed stringed instrument - the *body tambura* – which is designed to be placed on the human body. Its development was motivated by the wish within the field of music therapy for a body instrument that can be used in receptive work with bedridden clients (coma patients).
The instrument was very well received by therapists working in a wide range of fields, prompting the authors to elucidate the body tambura's application possibilities and its spectrum of effectiveness. To begin with, this new music therapy instrument is introduced and a closer look is taken at the varying tone qualities inherent to the monochord and tambura sounds, as well as the unique features of these body instruments.
Drawing on Dietrich's clinical experience in her own psychotherapeutic work, which incorporates elements of receptive music therapy, several case studies are presented. Following this, a summary of a survey of therapists carried out by Deutz is given.
Finally, drawing on these examples, potential therapeutic applications are discussed.

Two-and-a-half years ago, instrument maker Bernhard Deutz developed the *body tambura,* a novel therapeutic stringed instrument designed to be placed on the human body. The instrument consists of a very lightweight corpus equipped with an ergonomically contoured base and a sounding board fitted with 28, i.e. 7 x 4 strings, tuned in the same way as an Indian tanpura (A – d – d – D).
The initial motivation for this new development sprang from a music therapist's request for an easy-to-handle body instrument for receptive music therapy work with bedridden patients (coma patients).
This novel instrument was conceived and designed to transmit energy intensively to specific areas of the body (e.g. to the back, chest, stomach or pelvic region) through targeted, gentle superimposition of a resonator. By playing the strings evenly, fine vibrations are produced and a softly enveloping acoustic space is created for the listener. As a result permeability, breathing and body awareness are promoted. The effect of this very delicate sound should be relaxing and at the same time stimulating in a gentle way.
In the subsequent period, the body tambura was exceptionally well received by therapists working in a wide range of areas, one of whom was Cordula Dietrich.
This positive response to the new instrument was confirmed in various ways when Deutz carried out a survey of therapists who work with the tambura. The survey was carried out in connection with a talk he gave at the Workshop for Music Therapy Basic Research in Ulm in early 2004 (the first time that the role of the instrument in the therapeutic process was at the centre of a specialist conference

on music therapy).
Ever since completing her medical studies, Cordula Dietrich, consultant psychiatrist and psychotherapist working from her own practice, has focused on the receptive application of music in the treatment of patients, including music therapy approaches to self-awareness. While researching into Siddha medicine, a traditional holistic southern Indian art of healing which is also related to yoga and meditation (Dietrich 2002), she became fascinated not only by the unique construction of the body tambura developed by Bernhard Deutz, but also by its grounding and simultaneously transcendental sound. She began to incorporate the body tambura into therapeutic treatments. This paper presents in-depth descriptions of her clinical experiences with the body tambura and the results of her survey of 46 random subjects after a single 10-minute body therapy treatment as well as the results of the above-mentioned survey carried out by Deutz.
First, however, we will discuss the circumstances that led to the development of this new therapeutic instrument. This section deals with the question of the healing quality of the sound of the tambura as distinct from the sound of the monochord, with particular reference to the body experiences that may be possible with this instrument. We then go on to present and discuss its potential applications from a therapeutic point of view.

Description of the instrument

The body tambura consists of a rectangular wooden corpus measuring 70 x 33 x 8 cm (L x W x H). In cross section – viewed from the front end – the contact surface of the corpus is concavely curved. The radius of the curvature is chosen such that it fits the contours of the human body without being constrictive. The contact surface is thus enlarged and can be placed over the patient like a cover. If the instrument is placed at the centre of an adult's body, the length of the corpus gives rise to contact points between the shoulders and the pelvic region.

Fig. 1 The body tambura

The corpus is made from naturally grown, solid, fine-pored tonewood which guarantees good stability (the frame is made of sycamore maple) and optimal vibrational properties, both as a "listening" and as a "feeling" instrument (the stringed and convexly curved sounding board and the curved contact surface are made from mountain spruce). Recessed handles are located at the front and back ends of the instrument so that it can be gripped securely and applied and removed in such a way that the patient is not touched inadvertently.
The instrument weighs roughly 2,200 g. Its construction – in terms of material thickness and quality - is such that the resonating chamber is as light as possible. However, a certain weight is required for good vibration transference and, distributed over the entire upper body, this can be experienced as very pleasant.
As with the monochord, the recommended playing technique is a very even, confluent touching of the strings with the fingertips with both hands alternating. While playing, percussive sounds, background noise (fingernails) and mechanical vibrations/shocks caused by playing too hard should be avoided.
The body tambura is very compact and easy to transport. It is particularly suitable for bedside use, where large instruments such as monochords are too bulky.

Fig. 2b Coma patient

In addition to its special properties as a receptive body instrument, the body tambura can, of course, also be used actively as a stringed instrument and is played like a monochord, e.g. resting on the knees in front of the player – or even between two players, who can play simultaneously next to each other on its relatively wide playing surface. (As revealed by the survey of therapists, these options are indeed frequently used. However, since the main focus of this article is on the receptive level, we refrain from going into further detail here.)

Fig. 3 Patient in a persistent vegetative state actively playing the tambura

In the meantime (March 2005), there are approx. 50 body tamburas in existence which are used primarily by music therapists, but also increasingly – in fact much more than other instruments – by therapists from other health fields (medical and psychological psychotherapists, speech therapists, occupational therapists, physiotherapists, breath trainers, yoga teachers and end-of-life companions).

The specific quality of stringed instruments with identically tuned strings (monochord and tambura)

The body tambura belongs to the group of acoustic instruments with identically tuned strings, but its tuning is different to that of the monochord now frequently used by music therapists.
The characteristics of both sounds are presented in greater detail in the following.
The monochord, whose 13 or more identically tuned strings are touched lightly and played evenly with the fingers, allows the listener to experience in a unique way long-lingering vibrations which create a delicate sonic ambience and a sound tapestry of great lightness. Once one string is struck all other strings are simultaneously set in motion: this is – from a physical perspective – known as "resonance (from the Latin *resonare = to reverberate, to echo, to sound again and again*)", "the co-vibration of one body in the frequency of another body" (Küllmer, 1986, p. 13).
Because the strings of the monochord are tuned in perfect unison (1:1), at first an absolutely beatless sound is created, a perfect consonance. On top of this sound tapestry lies an open, seemingly spherical overtone melody which emerges naturally according to certain principles.
The instrument places no great demands on the player in terms of playing technique and energy. A good monochord effectively gives back more than one puts into it – and its sound has an exceedingly nourishing quality that virtually invites the listener to creep into it; this can trigger feelings of happiness ranging from cosmic connectedness to "oceanic boundlessness" (Strobel, 1999, p. 109). At the same time, the purity and total openness of this *one sound* (German *Ein-Klang*) can also be experienced as bottomless and frightening.
Compared with this, the sound of the tambura appears more innocuous, more closed, providing greater stability and grounding. The tambura is modeled on the tuning of the Indian *tanpura*. (The European spelling is used when referring to the tuning of the tambura and to the instrument after which it was named by Deutz, which is not a copy of the Indian tambura.) It belongs to the long-necked lute family and, as a four-stringed bourdon instrument, is absolutely essential to classical Indian music culture, not only in the musical sense, but also in the spiritual sense and due to the special healing qualities of its sound: "Small wonder that in southern India the tanpura is used also in preparation for childbirth, where expectant mothers hold it to their bellies while singing" (Hess, 2005, no page ref.). "It is the only means to forget. Like the waters of the Lethe, its sound washes away the past and erases loneliness. It brings us back to our essence, so that we can sing from the core of our innermost being. Once the sound of the tanpura has penetrated our consciousness

nothing else seems to matter" (Menon, 1988, p. 50). (Note: In Greek mythology, the Lethe is a river in the underworld from which the deceased drink in order to forget their earthly existence" (Meyers, 1981, vol. 13, p. 106.)

As a drone, the tuning intervals of the tambura, in their basic musical statement are at the same time the elementary components of oriental music, indeed cross-culturally they are the very essence of "world music".

In terms of musical proportions this sound contains not only harmony (Note: The body tambura is tuned to a – d' – d'- d; in Indian music the absolute pitch is not defined) but also polarity: the perfect consonance of the intervals of the two ground notes **d'** (1:1), the lower octave **d** (2:1), the first and purest musical interval similarly with beatless interaction of the overtones, as well as (in relation to the perfect octave) the perfect fifth **a** (3:2), the overtone series of which coincides with each third partial or (in relation to the ground note) the perfect fourth (4:3), the overtones of which coincide with every fourth partial of the ground note.

These four tones shape the ground note character of the tanpura sound. The harmonious, well-proportioned octave space is not only ideally or theoretically predefined here, rather it becomes physically tangible in the actual sound of the individual tones, which, played consecutively, sound together and overlap in the entirety of the sound fabric (Glorian, 1995, p. 48).

In the case of the Indian tanpura, this overlap is conveyed by the specific curvature of the bridge, which produces a buzzing tone that fades out very slowly and, after subsiding, swells once again. In the consonance of the four consecutively plucked strings a rhythmical, lightly pulsating tapestry of sound develops, for which, in addition to the buzzing, the sequence in which the tones are played is important for the development and effect of the sound: The sound begins by rising/ascending with the fourth to the double tonic and ends softly on the ground note, the lower octave.

This sequence appears to be very important for the quality of being *grounded* that may be experienced when listening to the sound of the tambura: The sound opens in a leap of fourth upwards into boundless, celestial spheres, before descending again softly to arrive at the lower octave and to ascend again to a height via the fifth. The tone has "neither a beginning nor an end (…) It is indivisible. Every moment of the sound is in itself beginning, middle and end" (Menon, 1988, p. 47).

The characteristic sound of the body tampura with its 7 x 4 strings - provided it is played evenly - is a merging of the different tones to *one* standing/static/continuous sound. At the energetic level, playing the strings in sequence as described above has an uplifting effect that provides both grounding and security.

A certain natural "dominance of the major" that emerges from the particularly audible fifth overtone, the major third, is particularly noticeable. In terms of audio-physiology, this corresponds to the phenomenon of combination tones which are produced as subjective sound phenomena in the inner ear when two different tones are sounded simultaneously. When the lower octave and the lower fifth are sounded together, the major third of the ground note is additionally produced (for more detail see Glorian, 1995, p. 52 ff).

Based on our own observations and the reports of many therapists, this sound phenomenon may be partly responsible for the bright mood created by the instrument.

Sound and body

The particular appeal and the above-described sound effect of instruments with identically tuned strings suggest that it may be possible to experience these sounds physically. Referring back to the definition of resonance cited at the beginning of this article it becomes clear that if a stringed

instrument vibrates as a body of sound incorporating the two resonators, the string and the corpus of the instrument, for body instruments, the human body represents an extended resonating space and vibrating body. Patients treated with such a body instrument pick up its vibrations not only through the ears, but also with the whole body, through bone conduction, via the skin and at cellular level. In the process they experience a "merging" with the resonating body and, in this way, they can experience their own body as an instrument. "The absorption of sound waves through the skin, the hairs on the body and the peripheral nerve endings connected there to is a process which "could be described as sensory-receptive outwardly-directed hearing" (Cramer, 1999).
As a result, a number of instrument makers have developed monochord tables and sound beds.
In 1996, Deutz presented a sound chair for the first time at the World Congress of Music Therapy. While lying supine allows total physical release and promotes relaxation and regression, the sound chair allows deep relaxation in the sitting position which is accompanied by an inner alignment and an experience of grounding which is supported by contact to the floor with the feet. "This most closely mimics the perception of sound in the womb, where the child perceives the sounds of the mother's heart, bowel sounds, and sounds from the blood vessels primarily as body vibrations and only secondarily through hearing" (Hess, op. cit.).
Both large resonance chambers, the sound bed and the sound chair, are very "heavy" in terms of the low frequency waves and vibrations produced when playing and, in terms of their application, the therapist is confined to a particular location due to the size of the instrument. In comparison, the body tambura is a much more mobile and versatile instrument, which has an initial "local" effect - on the area of application on the body – one that is, however, immediate. If the instrument is placed over the middle of the body, very fine waves directly affect the heart region, the abdomen and the breathing. "The pure basic sound of the tanpura can be applied primarily for deep relaxation since it has a soothing effect, performing an "inner massage" on the nervous system. At the same time, the cerebral cortex is aurally stimulated and energized by the high frequency fraction of the overtones, while the heart and breathing rhythms slow down almost imperceptibly" (Glorian, 1995, p. 59).
The body tambura addresses this level of impact in a unique way. While the high tones create a very fine, overtone-rich envelope of sound that can be experienced acoustically, the more muted lower octave and fifth sounds are more perceptible and tangible.

Clinical aspects

The question of the healing quality of the tambura sound, as distinct from the tonal archetype of the monochord, can only be answered in a substantiated way on the basis of studies on the cultural conditions of application, also of the Indian tanpura. Although this instrument did serve as a model for the body tambura developed for the said context, the modes of action must be analyzed in a culture-specific manner. Up to now, no clear results have emerged, but we continue to focus on this question.
In the following, Dietrich's experiences with the body tambura in the course of her therapeutic work are presented. She incorporates receptive music therapy elements into depth psychology-based psychotherapy. During therapy sessions the body tambura is played, although at first without being placed on the body. Several examples show the effect of the acoustically perceived sound on the therapeutic process and the patients' reactions to the treatment. Other case studies are concerned purely with body-oriented work, where the instrument is placed on the body. Finally, potential applications of the tambura are discussed in detail.

Clinical experiences of the application of the body tambura in the therapeutic process

Motivated by her own encounters and experiences with the instrument, Dietrich applies the body tambura in her therapeutic work in two ways. In the following, she describes her clinical experiences.

1. Listening to the sound of the body tambura

The patient lies relaxed on her back on the treatment bed. The therapist sits on a chair at the foot of the bed and plays the tambura for 5-10 minutes. Prior to this, the patient has agreed to give a signal should any discomfort arise during the listening experience. After the music fades out, the therapist gives the patient time to gather her thoughts. Then they discuss the experience. The session finishes with a few simple body stretches guided by the therapist.

In the treatment of a 32-year-old office worker the body tambura was put to use shortly after starting therapy. The patient was suffering from *dysthymia* with *obsessive-compulsive personality disorder* (ICD 10 F 34.1). On her first visit she reported feeling overwhelmed, had difficulty concentrating, complained of low drive, and felt generally unable to cope. She could no longer meet the demands of everyday life at home or at work. She reported feeling increasingly worthless and having a growing fear of failure. After several consultations the patient was offered sound therapy with the tambura. The patient hesitated and asked for time to think it over until her next appointment. For the time being, she wished to hear the sound of the instrument. Dietrich explained the structure of the instrument and played it for a few seconds. At the next visit, the patient explained her concerns. She reported feeling unworthy of such a treatment; she felt the playing of the instrument must be very demanding for the therapist. Finally, she consented to the treatment. During playing, the patient lay on her back on the treatment bed with her eyes open. Gradually she relaxed and, after a few minutes, she closed her eyes. Following the 10-minute treatment session the patient reported her experiences. She said she found it very hard to consent to the therapy; on the one hand her curiosity had been aroused by the sound, but then she felt she did not deserve such a treatment. Now she felt happy that she had accepted it after all. The sound had relaxed her greatly and she had enjoyed the music. During the sound therapy session she had seen mental images of herself sitting very calmly and quietly in nature and she had enjoyed this scene very much. Then another image arose - a moment of harmonious togetherness with her mother and with friends and she felt very much at ease. After the therapy she reported feeling invigorated. During the next four sittings we repeated the same treatment. In the subsequent discussions we addressed the need for leisure time and nature, music, and contact with friends. In the meantime, the patient regularly meets up with friends. She is toying with the idea of taking up the piano again, which she used to play on a regular basis as a young girl until she left secondary school.
Treatment with the body tambura helped this patient to value her own feelings of relaxation. She was able to directly experience and subsequently reactivate suppressed resources such as the enjoyment of nature, music and leisure time.

A 24-year-old woman was treated for a diagnosis of adjustment disorder (Anpassungsstörung) (ICD 10 F 43.2). The patient started therapy due to her increasing inability to cope, difficulties concentrating, fear of failure as well as a tendency to brood and disrupted sleep. She was just about to sit her final university exam and was afraid she was not going to pass. The trigger for this decompensation was an earlier internship phase in South Africa, where she was pestered physically by a man whose feelings she did not reciprocate. Over the course of the therapy it became clear just how traumatic this event was for the patient. In the subsequent period, she refused all contact with Africa and could not imagine ever going there again. The situation worsened when an opportunity

arose for her to travel to Africa on short notice. During this phase, Dietrich began to incorporate the body tambura into her patient's treatment. She asked the patient to lie on her back on the treatment bed with her eyes closed. Sitting opposite the patient, she played the instrument for 10 minutes. While playing, Dietrich observed a slight twitching of the patient's eyelids. Afterwards, the patient reported that she had found the music very soothing and it had been easy for her to relax. Gradually, she had begun to feel a lump in her throat, as if she needed to cry, but she had fought hard against it. Then mental images of Africa and the places that were especially familiar and dear to her appeared. She saw herself sitting on the beach with her current boyfriend; she was able to enjoy the sea and the sun. Even now, she still felt happy and suffused with these mental images, and realized just how important Africa is for her. She cried at the end of this therapy session. Two weeks later she travelled to Africa.
Accompanied by the sound of the tambura, this patient was able to overcome a huge obstacle that was blocking her emotional access to those positive impressions and experiences of Africa. Subsequently a very constructive therapeutic process was possible.

A 33-year-old female student was treated for *chronic-depressive disorder* and *anxiety disorder* (ICD 10 F 41.2). At the beginning of treatment she complained of difficulty initiating and maintaining sleep as well as sudden attacks of anxiety, especially when around other people. For instance, she reported being suddenly overcome by a feeling of constriction when eating together with other people. Her throat would then feel as if she were being choked, she would get stomach pains, a sensation of heat in her body and would not be able to continue eating. These symptoms first appeared six weeks earlier, after she had separated from her partner with whom she had had a 10-year relationship. During the first therapy sessions it became clear that rationalization was the patient's primary defense mechanism. By rationalizing the situation she was able to avoid a reaction of grief. Instead a depressive process began. At a more advanced stage in the therapy, Dietrich introduced the body tambura for the first time. At the beginning of the therapy session the tambura was lying on a shelf. The patient sat down on a chair next to it and asked what kind of instrument it was. Just having the construction of the instrument explained to her brought tears to her eyes. Once the therapist started to play, the patient cried for the first time since starting therapy. Dietrich played only very briefly and then it was agreed that the instrument would be integrated into subsequent therapy sessions. At the next visit, hearing the sound again brought tears to her eyes. During the next visits she listened to the music while lying down with her eyes closed. Afterwards she reported having felt really aware of her body for the first time and also having experienced a good, pleasant body image for the first time. Through the music, blockages in her body had been released. She reported having felt very relaxed and now felt very calm.
The application of the tambura as one element of the therapy set in motion a very constructive body awareness process. The patient, motivated by the sound experience with the tambura, now experienced comparatively pleasant body feelings outside of the treatment setting. She described, for example, a visit to the theatre where on hearing the music of the play she felt comfortable and relaxed in herself. She reported drawing on her memory of the sound of the tambura in moments of stress and pressure when the urge to smoke a cigarette is strongest. This then gives her the strength not to smoke.

In the case of a 50-year-old office worker, who was treated for severe *fatigue syndrome with somatization disorder* (ICD 10 F 48.0 / F45.0), Dietrich also used the body tambura at the beginning of three therapy sessions. The patient complained of frequent upper abdominal pain and headaches. No organic cause had been found for these symptoms. She reported feeling weak and had no energy,

everything was too much for her, and she was afraid of not being able to cope in day-to-day life. During sound therapy the patient lay on her back with her eyes closed. Sitting opposite her, Dietrich played for 15 minutes. While listening to the music, the patient's stomach pains initially increased. She then experienced her body as "shivering internally"; mental images of her workplace appeared. Gradually, she was able to relax and her physical symptoms decreased. She visualized situations at the beach, abroad, moments of intense well-being. Her stomach pains improved significantly as a result of the therapy. She felt very relaxed.

2. Body-oriented work

The tambura is placed directly on the body of the patient, who lies either on their back or on their stomach. Beforehand, the patient describes the areas of the body where they feel tightness or pain. Then the tambura is played for 10 minutes with these areas in mind.

A 35-year-old woman who complained of back pain in the lumbar region was treated once in this way. The patient suffered from *severe obesity* (ICD 10 E 66.8) and was approx. 50 kg overweight. After treatment the patient felt very relaxed. She described the sound therapy as a special experience. Her body felt extremely light, for a short moment she had not felt it at all. Also, she reported less back pain, she felt generally better. She spoke of her intention to lose weight.
In this patient's case, the experience of physical weightlessness and disengagement from her overweight body led to a desire to lose weight.

A 36-year-old patient complained of unspecific lower abdominal pain. She had undergone a *hysterectomy* (ICD 10 Z 90.7) for suspected *cancer of the uterus* (ICD 10 C 55). The patient had been suffering from these pain symptoms since the operation. Her post-operative examinations were all normal. Over a period of eight visits, she was treated with the tambura once weekly for 10 minutes. During the therapy she lay on her back, the instrument lying on her lower abdomen. During the first therapy session she felt the sound vibrations in the abdominal region, radiating into both arms and both legs. The patient perceived the area where her womb had been as a dark, sensationless hole. During the second therapy session she could no longer delineate a hole; the feeling had blurred, moving towards her arms and her legs. In addition, she had a feeling of nausea in the area of the stomach. During the next therapy session she experienced a feeling of physical well-being. Now too, no hole was definable. She described this same feeling at her next visit as well; for the first time she also reported seeing mental images of a large tree in a meadow, towards which she was moving. At the following visit she described a physical feeling of loss coupled with inner emptiness and much sadness. She wept. In the next session, for the first time she reported feeling firstly numbness of the abdominal wall, then tingling, followed by a growing feeling of warmth. The pain subsided. At the next visit she described a huge improvement of her lower abdominal symptoms. This tingling in the abdominal wall followed by heat development also continued in the subsequent sessions; she achieved lasting pain relief.
Treating this patient with the body tambura induced the grieving process over the loss of her womb which had been resisted. This made it possible to discuss feelings of powerlessness, helplessness and inability to cope in the face of a life-threatening illness, and the stresses resulting from this on family and partnership.

A 94-year-old female patient was treated 10 days after suffering a stroke. She was bedridden and in a comatose state; her breathing was compromised due to *pulmonary edema* (ICD 10 J 81). The instrument, which was placed on her chest, was played softly. Gradually, the patient, who was in a

critical condition, began to breathe more easily and her body relaxed. Through the sound, the the tensions in her body were released and her facial expression also appeared more relaxed. She breathed more freely. After half an hour, she passed away peacefully.

In February 2005, while doing tsunami relief work in southern India, Dietrich treated a 15-year-old girl who had been affected by the disaster. An Indian nurse, who acted as an interpreter, related that the girl had been alone on the beach when the tsunami wave hit the village where she lived with her parents and two siblings. She managed to get herself to safety immediately. But several hours passed before she discovered that nothing had happened to either her parents or her siblings and friends. Six weeks after the event, she complained of the following symptoms: Every time she closed her eyes she saw an enormous wave in front of her and was gripped by fear for her life. She was also immediately overcome by worry about her parents, siblings and friends and felt unsure about whether they were still alive. She reported not being able to sleep properly, waking up frequently and feeling very concerned. In school she was finding it extremely difficult to concentrate. Her situation was discussed for a while; she spoke of her family and her friends. Afterwards she was treated with the body tambura. In the presence of the Indian nurse she lay on her back and closed her eyes. When the strings were played softly she relaxed somewhat. Her eyelids fluttered. Through the nurse the patient was asked about her experience while the music played. She reported seeing the wave again - it was huge and threatening. Terrified, she opened her eyes. The nurse held her hand until the music came to an end. The patient relaxed, and her eye movements decreased. This 10-minute therapy was followed by a number of body stretches. This treatment protocol was repeated on four further days. On the last day of treatment the patient brought her friend along and asked to be allowed to hold her hand during the therapy. Afterwards she reported that her pattern of sleep had normalized. She was able to sleep through the night again and her concentration at school was much better.
In this case, short-term treatment with the body tambura allowed the patient to achieve psychic relaxation. In a therapeutic setting where trust had been established, she was able to re-experience the traumatic event. Having direct physical contact with her friend during the treatment had a supportive effect on therapeutic process.

One-time body therapy sessions lasting 10 minutes

A single, 10-minute body therapy session with the body tambura was offered by Dietrich to 46 volunteers. Afterwards a questionnaire was to be completed. All volunteers (men and women) subjectively felt healthy and complained only of non-specific general physical symptoms. The group consisted of 12 men aged between 30 and 75 as well as 34 women aged between 24 and 68 with a wide variety of occupations. The physical symptoms described by six of the male volunteers were non-specific lower back pain as well as shoulder and neck tension (1) and pain in all joints (1). The female volunteers reported the following symptoms: 12 volunteers complained of lower back pain, 10 had shoulder and neck tension, 3 complained of headache. After treatment they answered the following questions:

1. Do you suffer from any particular disease?
2. Are you taking any medication?
3. Do you have any physical symptoms?
4. How did you feel physically during the treatment? (Heat, increased pain, tension, lightness…)
5. Where in your body did you feel the strongest sound resonance?

6. Please describe briefly how you felt physically/mentally after the treatment.
7. Did you find the treatment pleasant?

A gender-specific evaluation of the questionnaires was carried out. It was striking that over half of the men and women who rated themselves as subjectively healthy complained of lower back pain. Similarly, tension in the shoulders and neck was a frequently reported physical symptom. None of the volunteers were on medication. The volunteers' descriptions of their physical well-being before, during and after treatment was clearly more differentiated for the group of women interviewed. (This observation raises the question of gender-specific experience. Obviously, the influence of the respective gender-specific socialization on perceptions of physical well-being must be taken into consideration as well.)
Cultural influences support or block our perception and experience of the body. During treatment with the body tambura, two thirds of those treated reported physical sensations only. Imaginations seldom occurred. Frequently, changes in breathing patterns, in the sense of deeper and freer breathing, were described. The body was experienced both as very light and very heavy; feelings of warmth and relaxation were reported.
In terms of well-being before and after treatment, a marked improvement was shown in cases of non-specific back pain and shoulder and neck tension. Almost all volunteers described a very relaxing physical effect. Two volunteers reported feeling no physical change. All others evaluated the treatment as pleasant.

Several patients described a direct effect of the treatment with the body tambura on their breathing – in the sense of deeper, freer breathing, coupled with a relaxed and comfortable physical state. During the application of sound therapy to a dying patient with pulmonary edema, deeper and easier breathing was observed. Through its sound, the body tambura can help to improve breathing in immobile, critically ill patients as well as patients who are dying. Evidently, this is an important starting point for treatment with the tambura.
Hence, in the following we will take a closer look at the special role of the breath in the interaction between body and spirit.
From a strictly anatomical perspective breathing is understood as the supply of oxygen to the organism and the "disposal" of carbon dioxide. A distinction is made between diaphragmatic and rib cage breathing as well as abdominal and chest breathing (Lippert 1990, p. 142). Due to the connection between the diaphragm and the abdominal muscles, movements of the diaphragm are partially compensated by it, so that diaphragmatic breathing is also simply referred to as abdominal breathing. Every movement of the breath is made up of two phases, the in-breath (inspiration) and the out-breath (expiration). The most important breathing muscle is the diaphragm.
Physical exertion but also strong emotions can alter breathing rhythm and frequency. In addition to the purely physiological and anatomical, the breath also has an emotional connection to the human body. It is a sign language gesture, a form of behavioral expression in interpersonal communication and, not least, a representative of our condition (Lippert 1990, p. 143). In the breath, three pairs of aspects of breathing experience can be described: participation and exchange, power and impotence, attraction and repulsion. Sighing is the concealed expression of worry, longing, fatigue and also relief. Coughing can be a sign of protest and aggression and, finally, in communication with the outside world, language is carried by the breath (Klausmann 1992, p. 108). Emotional conflicts can be expressed through the breath causing severe physical symptoms as, for example, in psychogenic bronchial asthma or hyperventilation tetany.
The patients' responses to these one-off treatments show that targeted application of the body

tambura as a body instrument is possible. The contact between the therapist and the patient is very direct and the sound gets through to the body of the patient immediately.

Fig. 4 Indian patient receiving sound therapy

First experiences related by therapists working in other areas

Developing new therapeutic instruments involves linking artistic-creative elements and craftsmanship with musical and therapeutic aspects and problems. Therefore, in the following we wanted to give other therapists who are already working with the body tambura and whose feedback was useful for the further development of the instrument a chance to relate their experiences.
As an instrument maker, Deutz relies primarily on a very intuitive approach, among other things, to the ergonomics of the resonance body, its application possibilities, and the spectrum of effectiveness of the sound. This makes the ongoing exchange of information and an interdisciplinary dialogue with music therapists that both promotes and demands creative imagination and openness all the more important. New instruments need to be tested. For what reasons, for which patients and under what conditions their application appears useful can only be answered in the day-to-day therapeutic setting.
All fascination for the spectrum of effectiveness of the sound aside, it must be considered in the light of the therapeutic setting and not in a mechanical sense, "as if the sound represents a stimulus which simply triggers a certain effect" (…). However, what is of vital importance is the therapeutic relationship and the question whether communication does come about through the sound" (Strobel, 1999, p. 127).
The surprising level of interest shown in the body tambura prompted Deutz to make some minor modifications in the construction within a relatively short space of time and to question a number of therapists about their initial experiences.
In February 2004, Deutz gave a talk at the 16th Workshop for Music Therapy Basic Research in Ulm and he used this opportunity to conduct an in-depth survey of those therapists. The summary below is the result of 12 responses (11 women, 1 man) from the following fields: music therapy (6), psychotherapy (3), ergotherapy (1), coaching (1), end-of-life care (1).
Those questioned work in a wide range of areas: with severely handicapped children and adults, patients in a persistent vegetative state (PVS), patients with psychological and/or psychosomatic disorders, in relaxation work, in the field of palliative care, and with the dying.
The results presented below were gleaned from the questionnaires. In the process, some questions were omitted because the answers provided seemed to bear little relevance to the given context. All citations in the following, some mentioned by name, were derived from the completed questionnaires.
The survey was not designed to comply with scientific standards. Although the statements made were subjective and varied greatly in detail given the timeframe of experience with the instrument, an attempt was made to summarize the essence of the answers or to quote statements word for word in order to provide an overview of these first experiences with the new instrument.

Results of the survey of therapists conducted by B. Deutz

According to your experience and/or perception, for which clients is the receptive application of the instrument indicated or not indicated?

People with somatic and psychosomatic disorders were frequently mentioned: those who have difficulty with their own body perception, low body awareness or loss of feeling (in the case of depression) or emotional separation from parts of the body, also patients suffering from chronic pain, trauma patients, people with breathing problems (e.g. asthma) and PVS patients.

Here the use of the instrument can represent a bid to (re-)establish contact with the body. A number of therapists speak of the great need for physical relaxation, physical contact and security experienced by many patients – and of their equally great shying away from it. "The massaging effect of the instrument satisfies many desires and can perhaps be accepted more easily than a direct body massage" (Birgit van Beuningen).

There were opposing responses to the question of indications/contra-indications in cases of abuse or psychosis. One therapist expressly approves the application of the instrument in early disorders, abuse, incest and trauma – on condition that the therapeutic relationship between the therapist and the client is very stable. She uses the instrument to treat all patients "where connection and attachment is interrupted".

The only male therapist among those questioned strictly ruled out the use of the instrument (for himself as a man) in the treatment of female clients if even the slightest suspicion exists that the client may have experienced abuse.

At which point in the therapeutic process do you apply the instrument? Please give a short description of the therapeutic setting in which it is used.

The body tambura is often used for relaxation and release – as an introduction at the beginning of a therapy session or (more frequently mentioned) to close the session. "Usually at the end of the session, whereby there must be enough time left at the end for tracking. However, it can also be applied right at the beginning, e.g. when tension, uneasiness or distress is so great that the patient is hardly able to speak" (Annette Cramer).

One music therapist uses the tambura in individual therapy sessions with severely handicapped children for relaxation and to activate their own impulses as well as to initiate vocal reactions through singing along with the instrument; in group sessions she uses it to activate very reticent children.

Birgit van Beuningen writes about her work with PVS patients "(I) begin (…) with an initial phase – a ritual consisting of a constantly recurring song or a physical touch or a personal address. Then I switch over to the other side of the patient's body and start as close to the same place as possible. When treating some patients, I move around the entire body and accompany this journey verbally in order to give the PVS patient feedback on perception."

One psychotherapist works with the instrument "in everyday deep psychology-oriented therapy sessions with patients covered by statutory health insurance. Whenever it comes to consolidation, intensifying contact to oneself, increased trust, assurance or security."

What effects/reactions (physical, psychological) do you expect or have you been able to identify?

The answers to this question revolve in various ways around the theme of relaxation. One psychotherapist reported relaxation, a sense of well-being, many mental images, warmth, strong body sensations and ease of breathing (also in the dying).

Another psychotherapist's patient who suffered chronic abdominal symptoms (severe obstipation) "saw wonderful colors in the area of her abdomen, felt internally enlightened, floating, blessed." Other patients of the same psychotherapist had "similar, on all accounts exhilarating experiences."

A severely handicapped, wheelchair-bound woman who does not communicate at all and also prefers not to be touched, experiences the sound – at first very reluctantly – purely acoustically. But in the course of the session she gradually establishes more and more contact with the instrument until, finally, she takes it into her arms and would like nothing better than to crawl inside it. Afterwards she is much more open to making contact with her occupational therapist.

A music therapist observed in severely handicapped children "primarily relaxation, but also the urge to try it out for themselves and vocalizations".

In PVS patients one music therapist observed a mainly physical relaxation and a synchronization of the breathing with the oscillations of the instruments began, sometimes after an "initial deterioration in the homeopathic sense" (i.e. initially tension and breathing irritation). In her experience caution should be exercised in patients with spontaneous, severe spasms.

Another music therapist reported that PVS patients frequently react with laughter and are very much "present".

One music therapist emphasized that the sound experience initially evokes strong association potentials; then, with greater familiarity with the instrument, relaxation also sets in.

One music therapist writes: "An feeling of inner space, light enters the body, images of water, drops…, currents of energy that flow through the whole body… areas of weakness in the body are gently activated."

One psychotherapist speaks of particularly deep relaxation, being wrapped in a cocoon, secure, peace, a sensation of groundedness and at the same time lightness, connectedness, a reversal of the feeling of detachment, and a feeling of love. "Being stretched out between heaven and earth".

In a training session for managers, the trainer observed deep relaxation in approx. 90% of participants with subsequent increased presence, greater openness and a better atmosphere within the group. The remaining 10% found the sound unpleasant.

What role does personal contact play in the application of this instrument and how does it change?

From many sides, the importance of a good, trusting therapeutic relationship as a basic precondition for the use of the instrument has been consistently stressed.

Only then can the sound take effect – one client claims with conviction.

"The personal contact deepens."

"The attitude and condition of the player, and the way the instrument is played are also important, because these are all transmitted to the client through the instrument," similarly a keen intuition for when to stop.

One end-of-life companion finds the playing of the instrument to be an intimate experience, since she too enters a meditative mood.

Many therapists concentrate their full attention on the patient while playing. "I observe the face, the color of the skin, the limbs, any restless movements with the fingers and hands, or with the feet, the breathing phases. When applying the instrument for the first time I also ask: ´How do you feel?' or 'Is it pleasant?' or 'Is everything alright?' Over the course of treatment the client can increasingly let him/herself go. While this is happening I can clearly feel the client's trust in me growing and at the same time my own growing responsibility" (Annette Cramer).

Can you achieve anything with this instrument that cannot be achieved with other instruments?

Responses to this question partially overlap with those given to the earlier question about effects and reactions, and some are a little unspecific.

One music therapist definitely sees other instruments as having a similar spectrum of effectiveness to the body tambura.

One therapist highlights in particular the aspect of intimacy in connection with the concurrent intense physical stimulation and the positive effect of the cheerful, bright sound of the tambura.

"Deep relaxation, which sometimes sets in after just a few minutes, without the patient having to consciously do anything (…). No other instrument allows this as well as a stringed instrument that can be placed on the body and that does not provide too much sound material" (Annette Cramer).

"Indeed, with no other instrument can I achieve this intimate contact to the self, to love, so well."

Can you say something about your perception of the spectrum of effectiveness of the tambura sound – as distinct from the sound of the monochord?

The sound of the tambura "is friendlier, lighter, more mood lifting. (…) allows more melodious vocal accompaniment, has often, in my view, a more inviting character" (Birgit van Beuningen).

"To many the monochord seems more stern, harsher – the body tambura softer, more gentle."

"I consider it to be more delicate."

"Due to the greater variety of sound, the mind, and hence the potential for association, is addressed more rapidly (…). This can be very pleasant for patients who come into the practice with an "overly intellectual" approach. The sound of the tambura has a "trickling" effect, whereas the sound of the monochord is more centering. It is first felt centrally in the abdominal and pelvic region and can spread out from there or settle - in areas of tension - anywhere.

Despite the associative effect of the tambura sound, for guided imagery through music, as e.g. in guided affective imagery, I prefer to use the monochord because it does not produce mixed sound, is more archaic, and therefore offers the client greater imaginative scope and freedom. The sound of the monochord has more "depth"; it can also very quickly reveal dark sides. The sound of the tambura is more innocuous because the sound mixture "attunes to" several areas of the individual. What could appear sinister is quickly "wiped away" by the ear, which searches for "its" sound mixtures in the sound of the tambura (Annette Cramer).

"The sound of the monochord takes one away to somewhere else, the sound of the tambura leads inwards towards oneself. I don't search out the sound as with the monochord, rather it comes to me, is at the centre of myself. It gives much more safety and security and a feeling of being loved, of having a home (…)."

Concluding observations on possible applications of the body tambura and its healing effect

The preceding descriptions of therapists' first experiences with the body tambura suggest that in a wide range of fields this new instrument represents a valuable addition to the set of tools available for body-based receptive therapy – even beyond the field of music therapy itself. As a growing number of people in our society are affected by complex syndromes and chronic ailments, there is a particular need for holistic health models. The treatment methods applied in psychosomatic medicine and psychotherapy understand the body, mind and spirit as one whole organism. Holistic concepts that can explain the relationships between body and spirit and encourage people to adopt a healthier lifestyle before disease sets in are also of value in preventive health care.

So far, no really convincing results are available on the healing quality of the tambura sound in comparison to the monochord. A scientific examination of the therapeutic use (among others) of the

tanpura in India and the application of a related sound instrument in Europe is needed in order to further explore the sound qualities and healing effects of both instruments.
However, reports to date show that the sound has a very direct effect on the patient being treated. In the therapeutic context, music therapy with the body tambura appears to be particularly useful whenever there is a need for rapid physical relaxation and when the focus is on tension, pain and impaired breathing. This includes psychosomatic and psychiatric syndromes which are often accompanied by physical impairments.
In an age when stress-related illnesses, in the form of states of physical tension, are on the increase, the impact of the sound of the body tambura on the body can provide immediate relief.
The instrument can be applied in the sense of a gentle sensitization of the body for body awareness disorders in general.
First, it allows the patient to be introduced to the immediate feeling of physical relaxation and makes it easier to learn other relaxation methods such as autogenic training.
Within psychotherapeutic processes the sound can also have a supportive and releasing influence on the patient's mood by helping to overcome strong psychological resistances, by activating resources and, of course, for general physical relaxation.
It also supports visualization/imagination processes which can be very useful for the further development of the therapeutic process.
Post-traumatic stress disorders (e.g. experience of abuse) and psychoses should be considered separately in the context of psychotherapeutic treatment with the body tambura. The use of the tambura can be very helpful in the treatment of these conditions, if the therapeutic relationship between therapist and patient is very stable.
In the treatment of seriously ill patients who have undergone surgery and also in the care of the dying, the patient's body is touched in a very gentle way without being burdened by this very lightweight instrument. In all of these cases the sound, as already mentioned, can have a direct effect on the breathing. It could conceivably be used in adjacent areas of health care and disease prevention, e.g. during pregnancy and in preparation for childbirth.
Older, bedridden patients could benefit in terms of their general physical and emotional well-being from regular sound therapy in their own homes. (In view of the continued rise in life expectancies in the developed world, the provision of social services and medical care to older people will inevitably pose huge challenges.) With this in mind, the body tambura could also be of interest in the field of preventive medicine.
Besides being flexible and easy to transport the instrument also has another advantage: special musical skills are not necessarily required and, given the right instruction, the playing technique is relatively easy to learn, even for those with no previous experience. Of course, intensive self-experience, i.e. the willingness to experience the spectrum of effectiveness of the sound at first hand, is immensely important here.
Wherever the body tambura is applied, a therapeutic setting in which trust has been established and an extremely careful and cautious approach by the therapist are essential.

List of References (available in German only)

Cramer, A. (1999). Wenn Klang fühlbar wird. In: Neander, K. (Ed.): *Musik und Pflege*. Stuttgart
Cramer, A. (2005). Erfahrungen mit dem therapeutischen Monochord der Ton-Transfer-Therapie. In: Dosch, J. and Timmermann, T. (Eds.): *Das Buch vom Monochord*. Wiesbaden

Dietrich, C. (2002). Siddhamedizin. Vorstellung einer traditionellen, ganzheitlichen Naturheilkunst. PhD dissertation. Cologne
Glorian, F. (1995). Indische Ragas – Inhalt und Struktur. In: Neubäcker, P. (Ed.): *Harmonik & Glasperlenspiel*. Munich
Hess, P. (2005). Der Einsatz des monochordes in der Psychiatrie. In: Dosch, J. and Timmermann, T. (Eds.): *Das Buch vom Monochord*. Wiesbaden
Klußmann, R. (1992). Psychosomatische Medizin. Springer, Berlin/Heidelberg
Küllmer, E. (1986). Mitschwingende Saiten. Bonn
Lippert, H. (1990). Lehrbuch der Anatomie. Munich/Vienna
Roche (1987). Lexikon der Medizin. Munich
Menon, R. (1988). Abenteuer Raga. Leimen
Meyers Großes Taschenlexikon (1991). Mannheim/Vienna/Zurich
Schmucker, A. (2004). Die klanggeleitete Trance nach Wolfgang Strobel. In: Frohne-Hagemann, I. (Ed.): *Rezeptive Musiktherapie*. Wiesbaden
Strobel, W. (1999). Die klanggeleitete Trance in der Psychotherapie. In: Strobel, W. (Ed.): *Reader Musiktherapie*. Wiesbaden