Relaxation Techniques and States – Applications to Physical Therapy

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Relaxation Techniques and States – Applications to Physical Therapy

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1. Introduction

The chapter below is dedicated to relaxation techniques. It is an attempt to explain their main theoretical concepts and techniques and to describe some benefits of their application. The chapter is addressed primarily to professional people who work with patients, but may also interest those non-professionals who want to improve their general health and well-being. The material is divided into nine sub-chapters, each describing a different aspect of the technique and practice of relaxation. First, these techniques are described as part of the application of holistic concepts to health and illness, and of relaxation techniques grounded in such concepts. Subsequently, relaxation is defined and analyzed as both a process and a state of awareness. Within the chapter, there is a description of the dimensions, levels, and the two main ways of attaining the deepened state of relaxation. The final section describes five sets of relaxation techniques and examples of their implementation in therapeutic settings.

2. The unity of body, mind and spirit

Hippocrates was convinced that illness stems from natural causes which can and should be studied. However, he qualified this by stating that it required the broadest study of a patient's entire environment and should encompass many factors. One of his works included in Corpus Hippocraticum, is titled "On Airs, Waters and Places." It is a treaty about human ecology explaining that optimal health and well-being depends on many environmental factors, and above all, on wise management of one's life. Relaxation and meditation create the possibility of heightened insight into one's life and one's broader environment. Contemporary man, overwhelmed by modern technology, should be encouraged to rely more on his inner resources, and those of natural environmental resources available to him. The development of practical methods of relaxation is a manifestation of this search for balance. Their purpose is to provide the feeling of greater control over the flow and type of reactions to undesirable stimuli and to magnify the effect of those which can help us achieve a healthy development and well-being.

There exist known cases where mental disturbances impact upon physical health causing "physio-pathology." The body may revert to this language, expressing as physical symptoms what is at root a mental disturbance. Some forms of convulsions, paralysis,

blindness or muteness, are examples of these conversions known as "dissociative disturbances" – illnesses caused by some type of psychological distress. The medical literature uses the term "somatization" to describe this general process. An example of the above are organ neuroses, including a wide range of heart ailments, respiratory problems, and some disorders of the digestive system (Pelletier 1977; Astin et. al. 2003; Harrington 2008). Often the psychological factor is the only cause of ailments. It is known that the patient's unresolved, negative feelings caused by problems or conflicts are transformed into physical symptoms, while there are no changes in the body organs that could explain their origin. However, the psychological origin is discernible.

The conventional notion of health and disease was rebutted in the work of another holistic thinker, Aaron Antonovsky. Antonovsky was a strong proponent of well-person care, believing that doctors and therapists should focus on "strengthening the health pole" rather than on treating disease. Yet Antonovsky did not emphasize balance; in fact, he described the normal condition of the human body as a mess characterized by entropy and disturbances in homeostasis. This condition of abnormal 'normality' arises from the dynamic of life itself, which involves activity, motion, and variation as integral parts. Within this theoretical framework it is also an error to posit health and disease as static and opposite conditions. Health and disease are matters of degree, and largely depend on the individual himself. In order to approach the pole of health, one must be sensitive to the signs of good and ill health, and one should adopt practices which will strengthen immunity and promote well-being. In this view, the person should be able to understand the most important stressors in life, and realize these have the power to undermine one's vitality (Antonovsky, 1993).

The psychosomatic nature of health and illness furnishes the rationale for a therapeutic approach directed at the mind. The close association of body and mind requires the patient to be an active participant in the healing process. At a minimum, he should be aware of the fundamentals of a healthy lifestyle. In addition, each person should have the opportunity to learn techniques and methods to gain more control over his health and well-being. Until the very end of life, even the sick retain an element of health and some ability to improve their condition. When illness is present, a patient may compensate for it, or do so with the support of friendly people. Blaxter has concluded that throughout history, the notion of disease has varied from one period to the next, that views of health and illness are largely social constructs (Blaxter, 2004). Different ages have been preoccupied with different diseases, and the same disease has been viewed quite differently depending on the century or even the decade (Herzlich, 1985; Herzlich & Pierret, 1987).

3. History of western relaxation techniques

Relaxation techniques and methods have always been rooted in the prevailing philosophical and religious systems of a given society. Australian Aborigines, Native Americans, Africans, or Siberian shamans, Christian mystics, saints, Indian, Chinese, Tibetan Buddhists, and Taoists have each developed their own relaxation methods. The condition of deep relaxation was not considered to be sacred as such, but was viewed as a prelude to transcendental experience. It seems as though the rationalist West is the only culture in history that

considers spirituality to exist outside the realm of everyday life. Only in our culture does the phrase "human nature" appear to be an oxymoron. It is as if Western man has a longing to experience a deeper subjectivity, but does not want to give up the habits that impede spirituality. The material world, alluring and diverting, is difficult to abandon.

The yoga of India provides the earliest, comprehensive account of relaxation and its broader connection to mind-body states. The inspiration of many contemporary techniques is found here. In the West, the precursors of relaxation technique worked in psychosomatic medicine or in the specialties like integrative psychology. They were able to see the relationship between the scientific and spiritual mind sets, denying that the two were in contradiction profiles the scientists who affirmed that psychology could affect the body and its functioning (Harrington 2008). Their work demonstrated the practical implications of this idea, such as the discovery of the placebo effect, the benefits of positive thinking, and the use of oriental techniques in therapeutic environments. Other more sensational phenomena such as exorcism, mental suggestion, and trance states were also included as indicative of the mind-body connection. In Europe after Franz Anton Messmer, a Viennese physician, had claimed to establish the effect of so-called "animal magnetism" on bodily fluids, the field gained a more empirical dimension with the discovery of hypnosis by James Braid, a physician from Manchester. This was the epoch of Sigmund Freud and Carl Jung, the great twentieth century investigators of the human psyche. Specialists in hypnosis such as the Italian psychiatrist (and Jung disciple) Roberto Assagioli, developed the concept of psychosynthesis (Kulmatycki 2008). In 1932 the German psychiatrist and neurologist Johannes Heinrich Schultz published his ground breaking work *Autogenic Training,* which presented the fundamental postulates and practical implications of his theory. "Autogenic" means relying on the patient's subjectivity to create a mental and physical state of relaxation. In the United States, the potential of relaxation in clinical practice was elaborated by Edmund Jacobson, the Harvard-trained physician, physiologist, and father of biofeedback. His 1929 work "Progressive Relaxation" concluded that one of the most important conditions of effective therapy was to teach patients how to relax. Jacobson was instrumental in helping organize professionals who had an interest in the field (Jacobson, 1987). The post-World War II period included thinkers from a variety of disciplines who attempted to synthesize eastern and western traditions. In medicine, the 1960's witnessed the development of sophrology, a precursor of the human potential movement. Sophrology, a personal development method designed to reduce stress and promote mental and physical well-being, was developed by the Spanish psychiatrist Alfonso Caycedo. The outreach of holistic medicine to broader social strata also characterized the work of Henry Wintrebert, a physical education teacher and neuro-psychiatrist who treated children at La Salpetriere, a rehabilitation clinic in Paris. (Kulmatycki 2004, 2007). By the end of the 60's, Polish scientists Tadeusz Pasek and Wieslaw Romanowski developed an original system of exercises based on Indian yoga (Grochmal, 1979). During the 1970's and 80's it was used in psychiatry for the treatment and rehabilitation of patients with neuroses and psychosomatic problems.

The transactional theory of Richard Lazarus and Susan Folkman found that stress was caused by certain ways of relating to the broader environment. According to Lazarus, stress

occurs when a person experiences stimuli as exceeding his resources and threatening his welfare. It was generally held that if stress was repetitive and persistent, the psychological discomfort would contribute to serious, chronic somatic diseases. The primary diseases that were thought to be psychosomatic in origin had already been described by Franz Alexander during the decade of the forties. These included idiopathic hypertension, bronchial asthma, ulcerative colitis, atopic dermatitis, ulcers, hyperthyroidism, and chronic progressive rheumatism, among others.

In the 1970's, new concepts appeared in studies of the stress response. An original questionnaire for measuring stress, known as The Social Readjustment Rating Scale, was developed by Thomas H. Holmes, Richard H. Rahe, Meyer Friedman, and Ray Rosenman. They determined that the so-called "Type A Personality" was the most susceptible to stress reactions. The attempt to counteract stress gained new impetus when developments in electronic technology permitted the measurement and control of biofeedback. Other assistive techniques were developed to engage the mind, even in potentially fatal diseases. The 1978 book *Getting Well Again* by Stephanie Simonton, Carl Simonton and James Creighton noted the role that the patient's mind could play in cancer therapy. Another area of research was initiated by cardiologist Herbert Benson, who pioneered the notion of a "relaxation response." He found that this was a distinct physiological and metabolic state characterized by a reduction in heart rate, breathing, blood pressure, and brain activity. (Benson & Proctor 1974; Benson & Klipper, 1975). During the 1980's and 90's Jon Kabat-Zinn used meditation to bring his patients to a state of awareness known as "mindfulness." (Kabat-Zinn et al. 1992; Kabat-Zinn, 1995) We can complete our historical survey of Western relaxation techniques by mentioning the Mind and Life Institute, established in the mid-80's by Chilean scientist Francisco Varela. The Institute provided a venue in which Western scientists could create a dialogue between themselves and Buddhist monks, drawing on the field's ancient foundations and yielding new possibilities for experimentation and theory.

4. The four dimensions of relaxation – systems, methods, techniques, exercises

The scientific description of relaxation depends on the relevant methods, techniques, and exercises employed. I propose a four-dimensional typology based on the therapy's intended effect on the patient, and the specifications of a given technique. The table below summarizes this relationship. We may condense the intended effects into four categories. These are:

- Relaxation as a system or way of life usually refers to relaxation within a particular philosophy or spiritual system. In this case, applied relaxation is only one aspect of a broader set of practices or exercises (Irwin; 1999). These may be derived from a system designed to attain something other than, or more than, ordinary health and well-being as such. For example, the synoptic, coherent, and complex philosophies of Hinduism or Buddhism may lead an individual to reside in a yoga ashram or Zen meditation center. In such instances, relaxation is practiced but it may be incidental to a much broader set of practices designed to promote a holistic human awareness.

- Relaxation as an instrumental method used in the context of another activity, or as a means to attain some end other than itself. Examples of such external activities include dancing, dynamic movement, static meditation, work with the voice and work with the body. The use of technology, for example the technique of *biofeedback* relaxation for the relief of stress, might be particularly suited to this kind of practice.
- Relaxation is sought for its own sake, and a comprehensive set of protocols or techniques is followed. This approach often bears the label of a particular system, teacher, or set of exercises. Examples of such would include for example, the Alexander technique, or the breathing techniques of the "ashtanga yoga" school. A particular technique may be common to several of these systems, but will occupy a greater or lesser degree of significance, or perhaps in a different sequence, depending of the methods and goals of the particular school.
- Relaxation practiced simply as a specific exercise. This is the foundation of all the other categories of practice. It is characterized by a specific and well defined technique that prescribes and defines which body postures, breath controls, and mental images will be used. The procedure is couched in a language of moving from one step to the next, and will often require a repetition of the procedures, with some modification or variation. An example of relaxation as an exercise would be the counting of breaths that is often used in Zen meditation to concentrate the mind. The count may be increased or decreased depending on the progress of the student.

The state of relaxation can also be related to states of being in general, or dimensions of subjective consciousness. Each of these dimensions has an associated set of bodily conditions and mindsets. The following table (Table 1) shows the most characteristic features of each of the four dimensions.

Dimension	**Dominant characteristics of the channel dimension and impact**	**An example of modern technique of relaxation**
Ecstatic	Ritual, symbol, magic, trance, movement, body	Relaxational dance of G. Roth
Receptional	Silence, observation, passivity, immobility, case	Relaxation Response by H. Benson
Imaginative	Imagination, vision, game, staging, unreality	Yoga nidra S. Satyanandy
Training	Repeatability, control, body, physiology, rivalry,	Autogenic training by J. Schultz

Table 1. Characteristics of the four dimensions of relaxation and sample techniques (my own description).

5. Nature of relaxation and nature of relaxation states

Relaxation is a complement to the normal states of wakefulness, sleep and dreaming, one which provides an opportunity for a more informed understanding of the inner world. The relaxation process involves going beyond the rational, discursive mind through the "suspension" of its activity. The ability to turn away from ingrained habits of linear, logical

thinking opens the way to new associations, feelings and insights into the self. It is worth noting that the quality and depth of relaxation is related to the subject's distance from habitual thought patterns, to his ability to approach the pole of intuition. Of course, the body is a unity and life requires both logical and intuitive thought processes. But emotional disturbances can disrupt the balance of body, mind, and spirit. They may impinge on somatic processes and disrupt the balance of the neurohormonal systems. These imbalances may be experienced as disease symptoms. In turn, these symptoms may further aggravate the person's emotions in a vicious circle. This dilemma provides a rationale for the use of relaxation techniques. These can be applied methodically to treat the ailments of one individual, but they also offer a means for a more complete development and a more fulfilling life for human beings generally.

As a process, relaxation is a specific activity which is characterized by two features. The first of these is introspection, meaning a focusing of the consciousness "within oneself;" the second is mindfulness, which involves centering the consciousness on "what is" in a particular place and at a particular time. Regardless of which feature is emphasized or of which technique is used, several criteria must be met in order for the practice of relaxation to be successful.

Dedication of a special place and time - the process of relaxation should be a distinct reality, experienced in its own space within a delimited time of minutes or hours, an experience deliberately segregated from "ordinary" life as much as is practicable. This means that the activity should take place within a suitable setting, one free from random stimuli and distracting noise.

Freely chosen participation - participation in relaxation should be solely at the direction of the participant. The element of spontaneity and the person's own commitment are absolutely necessary. Relaxation should never be imposed on anyone for whatever reason, nor should a person be required to demonstrate his proficiency in any given technique. Relaxation is not a course of study and the participant is not striving to pass with honors.

Focusing on process, not on result - to focus on results is an obstacle to relaxation. It is essential to preserve openness to "what appears at the moment." In most techniques, it is not advisable to prescribe certain levels or goals in the process of relaxation. The unexpected is very much a part of relaxation, arising naturally in the process of observation.

Being Receptive to the Unreal - the experience of relaxation has a strong imaginary element. This can range from the mildly imaginary to the unreal, or even the delusional. This unreality may be perceived as relating to the physical body, sense perceptions, or imaginative images. It is inherent in the relaxation process. (see the characteristics of relaxation).

Understanding the structure that underlies the process - in other words, a comprehensive view of how specific methods and techniques are integrated into the overall process. In each type of relaxation there is a sequence that involves an introduction, which is followed by the prescribed exercises, and then a phase of return once the technique has finished. Normally when contact with the surrounding world is reestablished, we can expect this return phase to be one of deep tranquility and insight. Of course, the more one becomes familiar with the techniques, the less important a conceptual understanding becomes.

There is a clear difference between relaxation as a process, and relaxation as a state of being. The process consists of specific practices, including methods, techniques and relaxation exercises. It has a specific methodology and structure. However, the state of relaxation is an experience which occurs spontaneously. There is no prescribed schedule for its occurrence or inception, and it is not easy to categorize or to describe. The state of relaxation is characterized by: a feeling of balance, a muting of thoughts and sensations, a sense of slowness and non-action. It has specific features. Session participants who experienced deep relaxation (Kulmatycki 2008) commonly reported:

- Experiencing the unimportance of time. Having the feeling that time slowed down or stopped. Most of the participants who experienced deep relaxation training were not able to determine the duration of the session. They felt that much less time had elapsed than was objectively measured.
- A loss of the sense of physicality, or a distinct change in the perception of the body. In deep relaxation, one gives up control over the body. Often participants described this physical experience as total submergence or collapse, including the feeling that their body did not belong to them, that it was just "there."
- A diminished connection to one's own ego, or a loss of the sense of "I" as an identity. Relaxation session participants sometimes had the feeling that it did not matter what or who was in control, or who was the subject, or the object of consciousness. Often after the relaxation session, people were not able to describe what had happened during the session, comparing it to a half-remembered dream or to a blank space in their memory. In such cases the subjects could not have been asleep, because they had responded to the leader's instructions. Afterward, though, they could not remember these.
- An alteration of normal thought processes, losing the discursive ego or the inner monologue. This was supplanted by a more intuitive kind of thinking. Over time, and as the length of sessions increased, subjects reported that the mind suspended its usual activity in favor of spontaneously arising thoughts and insights – intuitive thinking. Often, the content of these insights were surprising or revealing to the subjects.
- Emotional changes brought about by a deeper contact with one's inner world. In the process, hidden or repressed feelings and experiences could come to the surface. Because the subject releases control, relaxation may produce a kind of spontaneous emotional catharsis which may be experienced as either positive or negative.
- Changes in sensory perception due to a reduction in sensory stimuli. When relaxation follows a reduction of external stimuli, the participant may experience illusions, visions or hallucinations.
- A more complete understanding of oneself. A sense of increased insight into one's actions and motivations, or into the nature of personality as such. These insights were sometimes described as "beyond words" or "unspeakable." In these cases, participants defined the experience as something mysterious or even as transcendentally mystical.
- A renewed feeling of vitality, energy, and a more positive attitude about oneself, others, and the world. An accompanying sense of being more open to others.

6. Relaxation directed to three states of being

There are three levels of a person's being which may be the object of relaxation techniques: the psychosomatic, the mental, and the transpersonal (metaphysical). This study focuses on the psychosomatic. In this case, the most important practices are aimed at harmonizing the

body and mind. The second, or mental level, involves practices for the relief of physical tension, mental stress, or for the enhancement of interpersonal relationships. The third level goes beyond the interpersonal and might be termed the transpersonal, or metaphysical state, in which the subject is open to the highest levels of consciousness. For each state, relaxation has a definite goal. The first mostly involves the health of the body; the second, relief of the negative effect of mind on the body (or enhancing the positive effect), and the third, on intellectual and spiritual development. Subject and therapist may collaboratively decide to focus on one of these, or the focus may evolve spontaneously.

In most real-world situations, relaxation training begins with the first level. As experience is accumulated, it becomes easier to go on to the others. However, it should be emphasized that these levels are not a rigid hierarchy. There are situations when beginning at the second or third level may be most suitable. It depends on the needs of the subject and on the instructor's or therapist's experience and preferences. A knowledge of these levels can make the process more focused and effective.

The psychosomatic level of relaxation is characterized by three types of experience:

Physical sensations. The patient focuses primarily on muscular and visceral sensations, becoming aware of their location, origin, and quality.

Experience within the mind-body. The patient becomes aware of how his physical state, such as the quality and depth of breath or the speed of heartbeat, is linked to prevailing thoughts, emotions, and ideas.

Experiences within the process of awareness. The patient becomes more discerning of different types of awareness, and becomes sensitive to the intellectual, emotional and intuitive faculties of consciousness. The experience may be cognitive-rational or metaphysical.

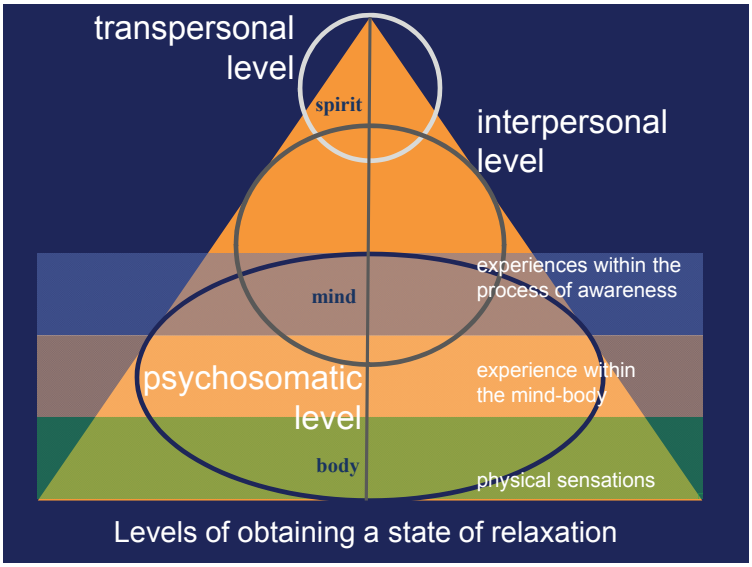

Fig. 1. Levels of obtaining a state of relaxation (my own).

7. Two main ways of achieving relaxation states

In the literature about relaxation techniques, researchers have formulated different classifications based on a variety of criteria. Rosemary A. Payne distinguishes two types of technique, the somatic and the cognitive (Payne, 2005). In contrast, based on their work in practical stress relief, Paul M. Lehrer and his team (Lehrer et. al. 2008) divided their techniques into seven groups: muscle relaxation, methods of hypnosis, breathing exercises and practices, methods based on Eastern meditation and therapy, cognitive methods, and miscellaneous techniques. The classification schema published by Jonathan C. Smith was also based on clinical practice (Smith, 2007). He divided techniques into six categories. He identified the bodily areas experiencing stress, and then recommended the appropriate technique. Alternatively, the Polish rehabilitation expert Stanislaw Grochmal defined methods of relaxation in light of psychotherapy. His scheme was comprehensive and has greatly influenced thinking in the field. He distinguished three classical methods of relaxation (Grochmal 1979). The first was global, viewing stress in terms of the overall development of the personality. Secondly, he cited analytical methods that were focused on particular symptoms or parts of the body. His third category was the narrowest and reflected the most common type of practice, the intuitive-physiotherapeutic approach designed to achieve relaxation quickly and with the least expenditure of effort. This intuitive method was always conditioned by the particular relationship of therapist to patient.

Increasingly, techniques are being described in terms of their reliance on physical activity or passivity. According to this approach, techniques can be divided into two main groups: ergotropic and trophotropic.[1] Ergotropic techniques involve practice-oriented activity of the body, body work and movement meditation (Fischer, 1971; Kulmatycki, 2002, 2005). Trophotropic techniques focus more on the content of consciousness while maintaining the passivity of the body and passive meditation. The two approaches occasionally use the same technique, for example in the reduction of hypertonia. They should be treated as equivalent in their potential effect on subjects. Each can be effective in improving the comfort and quality of life of the healthy, as well as that of patients in rehabilitation. The choice of one type or another depends largely on the personality and predisposition of the subject. Below there is a short description of the two groups of techniques. Thanks to functional magnetic resonance imaging or MRI (fMRI), researchers may attempt to measure activity in the brain regions associated with emotion, cognitive activity and imagination.

The Montreal experiment (Grant & Rainville, 2009) did so to investigate the phenomenon of pain. Previous studies had showed that advanced students of Zen meditation were much less sensitive to pain. Experiments in Wroclaw (Kulmatycki, 2011), Poland investigated whether and to what extent trophotropic and ergotropic activities affected the perception of pain. At a four-day short course in relation, subjects participated in the different approaches. Ergotropic techniques were presented in a trial of "movement meditation." In this group,

[1]This typology of scope and methods is similar to the one presented in sub-chapter 4. Here, the four dimensions of relaxation are have been modified, taking into account the specific characteristics of the participants. The division in to trophotropic and ergotropic techniques takes physical activity into greater account and also considers interaction among particpants. The terms trophotropic and ergotropic, as defined in the work of Roland Fischer.

participants had contact with each other. Each session included three recurring parts: an introduction to working with the body, practice meditation exercises, and 10 minutes of passive relaxation. At the end of each session there were questions and discussion. Trophotropic techniques at the trial took the form of "sitting meditation". Participants in this group spent the sessions in complete silence. During each session, there were three blocks of meditation: focused, analytical and receptive. Every 20 minutes there was a 7 minute break with stretching exercises. After each session there was time for questions and conversation, the same as with the ergotropic group. Afterward, the participants in both groups were randomly reassigned to two non-specific groups and their experience of pain was evaluated on the VAS (Visual Analog Scale). The results were similar for each group (within a range of 4.0-5.5). Thereafter, a proposal to participate in either "movement meditation" or "sitting meditation" was correlated with the responses to a CSQ (coping strategies questionnaire) that identified preferred methods of coping with pain. The average reading on the VAS scale was 2.7 for those who favored ergotropic techniques, and 3.8 for those who preferred trophotropic methods. The correlations achieved statistical significance. The experiment indicated that techniques of dynamic relaxation were more effective in reducing pain than passive ones. Perhaps more fundamental in the choice of relaxation techniques, however, is the individual's ability to deal with pain as such. The choice of one technique or another must be suited to each person.

Features of the characteristics of groups	**Ergotropic relaxation techniques**	**Trophotropic relaxation techniques**
Outside-inside	Outer-directed, plosive and transformative	Inner-directed, emphasizes desensitization, acceptance.
Body-mind	A significant degree of movement and involvement of the body	Favors working with the mind and consciousness
Individually-collectively	Utilizes forms of collaboration and cooperation among participants	Focuses on individual approaches, self-directed activities in the arts.
Structure-improvisation	In the first phase structure is important as the basis for subsequent improvisation	Advisable to maintain a specific structure for the next phase of work
Sample technique	Dance relaxation, massage techniques, contact improvisation, shiatzu, tai-chi, meditation movement	Autogenic training, Alexander Technique, FeldenkreisMethod, Zen meditation, Mindfulness, Yoga Nidra

Table 2. Characteristics of Ergotropic and Trophotropic Groups and Applicable Relaxation Techniques (my own).

8. Five strategic types of relaxation techniques

Based on prior experience, the various techniques were classified into five strategic groupings (Table 3, below). Each group is determined by the modality or focus of its

techniques. The first two of these strategies involve techniques that focus on the physical body. The body, either at rest or in motion, is the means to achieve a state of relaxation. The third strategy links the body with the mind. Here, techniques mostly involve the flow of energy and control of the breath. The final two strategic groups involve techniques that work with the psyche, including both mental-imaginative and emotional- intuitive faculties. Each group of techniques has, in turn, been analyzed according to six criteria. The first of these assesses the importance of the body in implementing the techniques, the second assesses the importance of the mind, the third and fourth involve the degree of activity or passivity, the fifth and sixth the individual or cooperative focus. Each of these criteria is referenced to the five strategies, and a numerical value from 1 (lowest) to 4 (highest) indicates how often a given criterion occurs as part of a given strategy. For example, for the strategy that uses mental relaxation and concentration techniques, the physical body is minimally represented (1), while the mind is rated as 4.

Five strategic types of relaxation techniques					
Features description of the strategy	Stretching techniques and physical postures	The techniques of body movement	Relaxation techniques and breathing energy	Techniques of mental relaxation and concen-tration	Techniques of physical expression of emotional
The physical body	4	4	2	1	3
Mind	2	2	2	4	2
Activity	2	4	3	1	4
Passivity	4	1	2	3	1
Own person	4	3	4	4	2
Cooperation with others	1	2	1	1	3

Table 3. The five strategic types of relaxation technique, referenced by six criteria. Incidence is rated numerically on a scale of 1-4 (my own).

Stretching techniques and physical postures. The primary objective of this strategic group is to promote a physiological balance by affecting the nervous system. Stretching postures and physical postures interact, massage the internal organs, and especially stimulate the nerve centers and endocrine glands. The isometric extension of individual muscle groups results in an increase in blood supply and oxygenation.

Techniques of body movement. The purpose of this strategy is to control the fluid movements of the body with the aim of providing "physical frame" in support of the mind. Typically, those who work in this field must thoroughly understand a precise sequence of exercises or movements.

Relaxation techniques with the energy and breath. The purpose of this group strategy is to become aware of one's breathing and bodily energies, and to modify them in order to achieve a state of internal calm.

Mental Relaxation techniques and concentration. The goal here is to guide the processes associated with the mind and imagination. Mastery of this approach requires long preparation and training. In the first stage of this work, the essential part of practice is the restriction of conscious attention to what is happening at the given moment and in the given place, and the maintenance of this attention. The next phase is directed explicitly at an awareness of the workings of the mind.

Techniques of physical emotional expression. The aim of this strategic group is to remove or expel negative emotions through the use of physical expression or vocalization. The techniques usually rely on simple, repetitive forms of movement. An important element of work is improvisation within the overall structure. Movement serves as a pretext or vehicle to enable an individual to better contact his emotions. Typically, the first stages of practice involve an individual emotional catharsis. Later on, there may be work in groups, introducing the important element of interpersonal contact.

9. Therapist-patient relationship

The therapist-patient relationship sets the context in which relaxation occurs. This context involves particular people and settings, the universe of meanings and values, and other distinct features. The patient is more than a mass of symptoms or the expression of his disease. No matter what his condition, he brings his feelings, will, thought and spirit to the practice setting. The patient expects professional, technical assistance but also has a right to expect the therapist to care about him as a suffering person. The therapist-patient relationship is as much a part of the practice as any other element (Kulmatycki & Szczuka, 2007). It is an essential complement of the therapy, a link between the particular and the universal (Fig. 2).

Fig. 2. Three spheres of the patient-therapist relationship (substantive, relaxational and universal) (my own).

The substantive sphere is determined simply by the content of a given specialty, and by the professional competence of the practitioner. The particular practices of a physiotherapist, for example, will obviously differ from those of a social worker. Each specialty will differ in terms of professional knowledge, skills, the quality of contact with the patient and in the formal relationship (contract) with the patient.

The universal sphere is much broader and its effect on the patient is more diffuse. Psychological factors are very important, even if the practice is not psychotherapeutic per se. These are multifaceted, extending to the personality traits of those involved, their personal lifestyles and outlooks, and their general sociability. The most important personal traits

include verbal communication skills, the ability to listen or maintain a silence, the manner of expressing emotion and the ease of establishing an emotional bond with the patient universal sphere constitutes the most fundamental relationship of therapist and patient. The given professional specialty is not important as such, nor is the particular health problem of the subject. Each relationship is unique, but they all share three basic characteristics. The first is the establishment of a relationship which is a true partnership, one that displays authenticity, acceptance, openness, and empathy. The second is the ability to gauge the nuances of the patient's health and illness, to see his problem in a broader environmental context. The third feature is the way in which the practitioner's own environmental and cultural background, his values and ethics, come into play in the therapeutic process. Thus, the universal sphere and the substantive represent the context or boundaries within which the actual technique is practiced.

The relaxational sphere from a therapeutic practical standpoint, is something natural, and simple to apply. Three types of relaxation due to the impact of:

- **intermediary** relaxation, as a means or a way to establish better contact with the patient both in substance and universal.
- **supportive** relaxation, support and supplement other techniques and methods of work with the patient or patient as a preparation for another phase of his treatment or rehabilitation, for example: treatment, surgery.
- **targeted** relaxation, as having end in itself, it is associated with a reduction of excessive tension and control stress levels.

10. Practical application of relaxation techniques

Holistic therapists view disease as having multiple determinants, and consider patients' suffering and the healing process from a broad perspective. Generally they seek to improve the resilience of patients and to rely on the self-healing properties of the organism to restore homeostasis. In coming decades, these therapies will increasingly consider the question of how to improve the quality of life in the health as well as in illness. This question raises two sets of issues: the first concerns the science involved in choosing appropriate techniques. What criteria will the average person use when deciding on a technique that suits his health problems, physical capabilities, and personality traits? Second, which techniques will provide tangible benefits?

A summary of some of the practical benefits from rehabilitation therapy and relaxation techniques is shown in Table 4. These benefits fall into four categories. The first category refers to techniques directed at somatic problems, mainly the treatment of cardiovascular disease, cancer, and traumatic injuries. The second group includes psychosomatic diseases whose origin is psychological, but which manifest in some type of somatic, functional impediment. The third group includes psychological and interpersonal problems that are most often manifest in addiction, neurosis, depression, problems of interpersonal communication, and difficulties in interpersonal relationships. The fourth and last group involves philosophical and spiritual pursuits; it is not appropriate to view these benefits as the result of particular techniques, as here, the techniques evolve from a philosophical or religious world view. The overall view or system takes precedence (see sub-chapter.3).

Problem	Relaxation technique	Approach / Objective
Existential	Yoga (the system) Zen (the system)	Inner transformation / change their relationship to each other and the world
Mental	Meditation Schultz Autogenic Training (Phase II) Sofrologic Meditation of Caycedo Psychosyntesis of Assogioli Relaxation Response of Benson Gurdzijew Meditation Joganidra	Personal development / self-acceptance and self-fulfillment
Psychosomatic	Relaxation Response of Benson Schultz Autogenic Trening (phase I) Feldenkrais Method Relaxation Dance of Roth Mindfulness Kabat-Zinn'a Transcendental Meditation	Anti-stress / coping with the challenges
Somatic	Progressive Relaxation of Jacobson Relaxation of Witrebert Alexander Technique Shiatsu Massage Postural yoga Dynamic yoga Tai-chi	Physiological / back to internal balance and strengthen the positive health and welfare

Table 4. Relaxation techniques map for the four groups of health problems

Relaxation techniques at the somatic or psychosomatic level are inseparable from a knowledge of stress, its mechanisms, and its effects on the body. A number of studies have shown that anxiety and other forms of psychological distress lead to increased strain in the sympathetic nervous system (Carlson & Hoyle, 1993; Kulmatycki et al. 2006; Kulmatycki & Supiński, 2006; Kulmatycki & Burzyński 2007; Kulmatycki & Burzyński, 2008). Studies have shown specific, positive reactions after twelve minutes of sustained relaxation (Benson & Klipper, 1975). These include, first, a reduction in the level of lactic acid in the muscles – a consequence of relaxing large areas of the body (arms, legs, trunk), a reduction in oxygen consumption of from 10% to 20%, a calming of the heart and reduction of the heart rate, and a decrease in blood pressure (Kulmatycki 1994). There is also an increase in the frequency and intensity of alpha waves, which is perhaps even more important for patients' mental tranquility (Benson & Klipper, 1975). Some studies of psychological stress have demonstrated its effects on the immune system. Sometimes these effects manifest themselves as decreased resistance, sometimes as cancer, an autoimmune reaction (a destructive immune reaction that targets the body's own tissues) (Syrjala, et al. 1995; Burish, et al. 1988). Other studies concern the effectiveness of relaxation techniques for patients in rehabilitation after stroke (Gnat, et al. 2000).

The regular use of relaxation techniques has been found to reduce the stress response, especially the level of anxiety. The techniques allow patients to better cope with aggressive

behavior and negative emotions. (Borkovec & Costello 1993; Haaga et al. 1994; Andreoli et al. 1995; Scheufele 2000; Kulmatycki & Burzynski 2007; Kulmatycki & Burzynski 2008, Kulmatycki et al. 2010). Is should be noted than an increasing number of people who participate in relaxation exercises do so in order to improve their general health, rather than to treat a particular complaint. Studies of such individuals have shown that training in yoga relaxation significantly affected their subjective feeling of relaxation (Kulmatycki & Burzyński, 1999; Kulmatycki 2004). In other cases where specific complaints were present, research has shown that patients with chronic pain who used these therapies have become more active and have experienced less anxiety, anger, sadness or irritability compared to similar patients who did not. (Kulmatycki 2011). Research conducted by R.K. Wallace and H. Benson of Harvard University found that mental relaxation helped subjects perform cognitive tasks involving concentration, shifting their attention, and keeping their emotional balance. They were able to perform these tasks without tension, mental fatigue, or negative thoughts and emotions (Wallace & Benson; 1972). Research has shown the necessity of taking the subject's personality type into account when making this choice, whether the participant is healthy or ill. (Kulmatycki & Miedzinska, 1999; Kulmatycki 2011). Highly optimistic people who underwent autogenic training adopted the practice more easily compared to those who were pessimistic about the future or their ability to influence it. There is also a positive correlation between the level of dispositional optimism and the subjective level of relaxation. (Kulmatycki et al. 2006).

11. Conclusion

The growing popularity of alternative methods and techniques of relaxation necessitates a fair, scientific evaluation. Research design faces some difficulties, especially in dealing with the possibility of placebo effects. There is also no uniform method of assessing the physiological and psychological impact of these methods. Many studies are encouraging, but some do not show positive results. In many other cases, the methodology raises many doubts. However, we cannot emphasize enough that relaxation techniques are entirely free of side effects and that they are economical. It seems reasonable to accept them on the basis of the positive results that have in fact been demonstrated. These techniques may complement physical and somatic therapies. They can increase the effectiveness of any therapeutic relationship when personnel have been trained in their use. One of the best-known experts in relaxation techniques, Jonathan C. Smith of Roosevelt University Stress Institute, has written about a revolution that is occurring in approaches to treatment and patient care. He states that complementary methods and therapies must be used in addition to conventional approaches (Smith, 2001). These methods not only can reduce costs and increase the effectiveness of treatment; more importantly, they can increase the patient's sense of responsibility for and control over his health. It has been known for some time that patients who consider themselves healthy are treated differently than those who self-identify as sick.

relaxing setting off on a journey in search of deep relaxation ...
start with no action ... sit down, lie down ...
then I move on to the body, its center of gravity, feeling of warm, letting go ...
I notice a balanced breath ...
regular heart rhythm ...

I am aware of the thoughts that arise in the mind ...
I realize the emotions that accompany the tension releasing ...
and pictures showing themselves in the imagination ...
I remain with all of this for some time ...
suspended in time and space, I feel myself ...
and it just so much ... at the beginning
the next time I try to understand the profound peace is not something specific ...
what can be measured ...
but it is ephemeral ...
every time something else ...
and will come a moment ...
realize that I take from that is the only way to not follow self-assessment ...
where there is neither the observer nor the observed or process of observation.

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