

Breathing: A Sign of Life and a Unique Area for Reflection and Action

Kirsten Ekerholt, Astrid Bergland

K Ekerholt, PT, is Leader of the Advanced Course in Norwegian Psychomotor Physiotherapy and is Associate Professor, Division of Physiotherapy, Oslo University College, Faculty of Health Sciences, Box 4, St Olavs Plass, 0130, Oslo, Norway. Address all correspondence to Dr Ekerholt at: kirsten.ekerholt@hf.hio.no.

A Bergland, PT, PhD, is Leader of Research and Development and Professor, Division of Physiotherapy, Oslo University College, Faculty of Health Sciences.

[Ekerholt K, Bergland A. Breathing: a sign of life and a unique area for reflection and action. *Phys Ther*. 2008;88:832–840.]

© 2008 American Physical Therapy Association

Background and Purpose. The aim of this study was to clarify patients' experiences of breathing during therapeutic processes in Norwegian psychomotor physical therapy (NPMP).

Subjects and Methods. A qualitative approach was used based on interviews with 9 women and 1 man aged between 41 and 65 years. The data were analyzed with the aid of grounded theory.

Results. Three categories were identified from the participants' experiences: (1) "Breathing: An Incomprehensible and Disparate Phenomenon," (2) "Breathing: Access to Meaning and Understanding," and (3) "Breathing: Enhancing Feelings of Mastery." Initially, breathing difficulties and bodily pains were described as physical reactions that seemed utterly incomprehensible to the participants. Communication, both verbal and nonverbal, between the patient and the physical therapist was described as vitally important, as was conscious attention to occurrences during the treatment sessions. The participants learned to recognize changes in their breathing patterns, and they became familiar with new bodily sensations. Consequently, they acquired new understanding of these sensations. The feeling and understanding of being an entity (ie, "body and soul") emerged during therapy. The participants increased their understanding of the interaction between breathing and internal and external influences on their well-being. Their feelings of mastery over their daily lives were enhanced. The therapeutic dialogues gave them the chance to explore, reflect, and become empowered.

Discussion and Conclusion. In experiencing their own breathing, the participants were able to access and identify the muscular and emotional patterns that, linked to particular thoughts and beliefs, had become their characteristic styles of relating to themselves and the world.



Post a Rapid Response or
find The Bottom Line:
www.ptjournal.org

Of all of the body's functions, breathing is unique in that it is characterized by both automatic and "conscious" control. The relationship between respiratory patterns and personal experiences is a basic feature of how our bodies function. It is part of the "background" of our bodily being and is implicated in the very basis of social organization.¹

Breathing and Emotion

Reports linking overbreathing and emotions can be found as far back as the 16th century, especially when symptoms are related to anxiety.^{2,3} Our emotions are clearly expressed through our breathing through changes in rhythm, depth, location, or regularity. If the immediate future is uncertain and the next breath depends on what happens next, the rhythm is lost.⁴ When examining breathing from different medical perspectives, the centrality of breathing is found in both a biological and a psychological framework.⁵ Gilbert⁶ stated that it is important to understand how emotional input interacts with the breathing and muscular systems and to incorporate this knowledge into various therapies.

Lowen⁷ suggested that every difficulty in breathing creates anxiety, breathing creates feelings, and people are afraid to feel. Tomkins⁸ stated that the breathing mechanism continually reflects the emotions. Breathing patterns may be created as means of defending the person from potentially painful experiences. These response patterns remain in the body even though the originally perceived dangers have long since passed.^{4,9} Wilhelm Reich is given credit for having developed the concept of "character armor" (ie, habitual patterns of muscle tension and constricted breathing that keep strong feelings from conscious attention by blocking both awareness and expression).⁶

Being in touch with breathing and the spontaneity of breathing is a unique way of accessing one's own emotions. Controlled breathing can be understood as a way of avoiding feelings and one's own reactions.¹⁰ Bodily experience is a fundamental aspect of emotion, because emotion links the mind and the body. Emotion also links the minds and bodies of the patient and the therapist.¹¹ The necessary working through of painful events—accepting, understanding, and integrating them—may be neglected.⁴ "Cues" that are associated with the original experience can trigger a change in breathing that may have been helpful originally, but is redundant later. If such a cue stimulates anxiety, the person is not only "reminded," but will also physically "re-embody" the old associations that include physical reactions, such as tense muscles and disordered breathing.⁶

In this article, we will focus on patients' experiences of their breathing during treatment processes in Norwegian psychomotor physical therapy (NPMP). The theory of NPMP claims that there is a vital interaction among emotions, breathing, muscular conditions, posture, movements, and autonomic functioning.⁹ In the examination, these elements are considered in relation to the case history, the patient's reaction to the examination itself, and information on the patient's general body awareness and self-image. The treatment is based on the understanding that the body is an integrated physical-psychological phenomenon⁹ and that emotions and feelings are expressed in the way we breathe as well as in the way we use the body.¹²⁻¹⁴

Norwegian psychomotor physical therapy was developed by the Norwegian physical therapist Aadel Bülow-Hansen and the Norwegian psychiatrist Trygve Braatøy during the period from 1946 to 1952. Braatøy was psy-

choanalytically trained, and Bülow-Hansen was a skillful orthopedic physical therapist. They found that a local examination according to the patient's symptoms was not enough and that the whole body had to be examined.⁹ The main difference between psychomotor physical therapy and "traditional" physical therapy is the emphasis on breathing. Breathing is evaluated as an integrated part of the examination and treatment.⁹ Using massage, exercise, and movements, one is working with a readjustment process that involves the whole body (ie, the whole person). Consequently, NPMP is not a standardized treatment but rather a continual adjustment of the treatment to the patient's reactions.⁹ Advanced courses in psychomotor physical therapy have been given in Norway since 1970.

Quantitative research regarding breathing in NPMP exists.^{15,16} Bunkan et al¹⁵ concluded that patients with rigid breathing, being unable to adjust to movement and positions, are considered to be more seriously ill than patients who can adapt and vary their breathing. Kvåle et al¹⁶ concluded that breathing seems to be an important factor when screening and planning treatment for patients with musculoskeletal problems. To our knowledge, there have been no published studies of how patients have experienced their breathing during therapeutic processes with NPMP, which was the aim of this study.

To contextualize, this article is one of 3 articles reporting the results from the Psychomotor Physiotherapy-Patients' Experiences: Intervention and Mutual Interaction study. In an earlier article,¹⁷ we presented patients' experiences with the examination in NPMP, and in another article,¹⁸ we presented patients' experiences with massage in NPMP.

Materials and Methods

In order to access relevant subjects, 11 experienced psychomotor physical therapists were asked to send an explanatory letter to 2 former patients. Twelve patients contacted the researchers and agreed to participate in the study. The first 10 respondents were chosen because this number was sufficient for the study.¹⁹ Nine women and 1 man participated. This ratio of women and men corresponds to the data on NPMP received from the Norwegian Labour and Welfare Administration,²⁰ where the female:male ratio is 10:1. The participants represented different adult ages (41–65 years) and working situations. One of the participants had retired from work; the others were full-time employees. They worked as teachers (n=3), in health care (n=1), as secretaries in private business (n=4), and as secretaries in the civil service (n=2).

One inclusion criterion for the study was that the participants have a history of psychosomatic or musculoskeletal disorders. In addition, the participants had self-reported complaints of anxiety (n=8), depression (n=4), sleeping disorders (n=5), and suicidal tendencies (n=2). We wanted adults as participants, and the treatment was to have lasted at least 6 to 12 months. According to Thornquist and Bunkan,⁹ the NPMP processes take time (ie, months or years), depending on the patient's condition and life situation. According to our personal experience, 6 to 12 months represents the average length of weekly NPMP treatment. The treatments should have been completed at least 3 months prior to the interviews. It is possible to investigate whether the treatment had any lasting effects only if assessed some time after the completion of treatment.²¹

The main questions addressed during the interviews were: (1) What

are your experiences and thoughts about your treatment process in psychomotor physical therapy? and (2) Can you remember any particular bodily experiences or changes in connection with the treatment process? Other questions also were addressed during the interviews, such as, "Could you describe your experience with: (1) massage, (2) movements and exercises, (3) verbal communication, and (4) any alteration in your pains and complaints?"

The method used was qualitative interviews. The interviews were conducted by one of the authors (KE) in her office. The interviewer is an experienced physical therapist who has carried out clinical work with NPMP for 10 years, followed by 8 years of teaching this branch of physical therapy in Scandinavia. The average length of the interviews was 1½ hours.

Using the grounded theory approach, data were gathered and interpreted consecutively.¹⁹ In the initial phase of the data analysis, all of the interviews were transcribed and coded. Each interview was analyzed in order to reveal thoughts, ideas, and the meaning contained therein, an approach known as "open coding."¹⁹ In open coding, data are broken down into discrete parts, closely examined, and compared for similarities and differences. Events, happenings, objects, and actions and interactions that are found to be conceptually similar in nature or related in meaning are grouped under more abstract concepts termed "categories." Each interview was coded and gathered into a new story, where important elements in the original text were collated with regard to different areas of the participants' experiences. In this way, experiences that were found to be of a similar nature were grouped in the same categories. All of the participants were represented among 3 categories, which

indicates that these categories have considerable analytical effectiveness because they have the potential to explain critical phenomena.¹⁹

During a further step in the coding process called "axial coding," data were put together in new ways, making connections between categories and subcategories, thereby linking subcategories around the axis of a main category.¹⁹ It would be too ambitious to claim that any theory was built into this project. However, Strauss and Corbin¹⁹ pointed out that if theory building is the goal of the grounded theory approach, findings could be presented as a set of interrelated concepts. We decided on a central category (sometimes called the "core category") by a process known as "selective coding." The central category¹⁹ represents the main theme of the research. In the current study, "Breathing: a Sign of Life and a Unique Area for Reflection and Action," was the main category and, therefore, was chosen as the title of this article. The criteria for choosing the core category are that it is central, appears frequently, and relates to the other categories logically, that its described name is sufficiently abstract while being analytically useful, and that it explains the variation and main points in the data.²¹

The analysis was a collaborative process, with both authors participating. They first examined and coded the transcripts independently. The codes then were compared, scrutinized, discussed, and categorized. Continuous checking was necessary to secure a mutually consistent understanding of the text. The categories were not defined in advance, but were derived from the material. The essence of grounded theory is its inductive nature. This inductiveness requires researchers to approach the data from a perspective of relative neutrality regarding our knowledge

about breathing in NPMP. Performing the analysis together tends to evoke an attentiveness about taken-for-granted aspects of the material.

Results

The information that emerged during the analyses will be presented in 3 categories: (1) “Breathing: An Incomprehensible and Disintegrated Phenomenon,” (2) “Breathing: Access to Meaning and Understanding,” and (3) “Breathing: Enhancing the Feeling of Mastery.” The first category relates to reports describing experiences that were difficult or impossible to understand or comprehend. The second category involves text showing processes by which individuals make sense of their experiences. The third category relates to material about feeling in control and being able to solve one’s problems.

The number of participants is shown in brackets after each quotation. This number could vary between 1 and 10. For instance, when a quotation represents only 1 informant, $n=1$; if 3 participants reported similar experiences, $n=3$.

Breathing: An Incomprehensible and Disintegrated Phenomenon

Breathing difficulties are described as an incomprehensible phenomenon, a physical reaction that seems utterly incomprehensible to the person experiencing them:

I was almost locked in my jaws, I was breathing in a sort of “tube.” Everything felt so stretched that I was completely tied up. ($n=5$)

I hardly dared breathe any way at all, even though I have sung in a choir for years and know how to breathe. But all that was gone. ($n=1$)

I never could enter a shop unless I really had to buy something because then I would have trouble breathing. I would get very hot, and my breathing would be shallow and rapid. At the same time, my mouth would feel

parched; this had something to do with nerves. ($n=1$)

Several informants recalled how breathing difficulties could be connected with sleep, either as they were dozing off or when they awoke abruptly:

For years I could not lie on my back. It was too hard to breathe. I always curled up like an embryo. Hyperventilation wove itself into the asthma when an asthmatic attack was on its way. It often troubled my sleep, particularly as I was dozing off. Other than that, it was mainly in connection with meetings. ($n=2$)

I would wake up at night unable to breathe. I had to sit on the side of the bed until I regained my breath, terrified until I got my breath back. I hated this happening while I was sleeping. ($n=3$)

Changes in the breathing pattern also could be experienced as something unpleasant:

In the beginning, when the breathing changed, I felt a bit nauseous and unwell; maybe that was what the anxiety was about, that I was scared of letting go. ($n=5$)

Breathing: Access to Meaning and Understanding

The therapy introduced a new way of understanding somatic complaints:

It had never occurred to me that my past experiences might have anything to do with my pains and breathing. But I realized it was so because she [the physical therapist] released so much, and when things happened again, I would get worse; my shoulders would tense, I got stomach pains, I was out of breath—I reacted with my body. ($n=5$)

I realized that my entire life history was what surfaced. [It was very] much more than just that one symptom with which I had presented. ($n=7$)

Communication, both verbal and non-verbal, between the patient and the

physical therapist is described, as well as the importance of attentiveness during the treatment session:

The touch of the therapist’s hands sort of drew my breathing along the spine and down to the pelvis and to my stomach. It was a new feeling. I had to concentrate, had to be mentally present. It was a little bit scary, but it felt good. ($n=6$)

My consciousness increased, and I tried to lead my breathing down there. ($n=1$)

You can’t talk yourself through these experiences. They must be felt and experienced through the body. ($n=3$)

Sometimes, there were an awful lot of emotions, so I started to cry. In the beginning, just that she touched me was enough. I would start crying. ($n=4$)

The participants learned to recognize new sensations from their bodies, and they learned new ways to interpret the sensations:

The breathing was different when she massaged my neck, and when I didn’t think it was okay anymore, she would notice this. Then she would teach me about it, before I noticed on my own, and then I would feel it. She taught me that I should recognize my limits because I lacked the mechanism to notice them. ($n=5$)

“Take your time. Probe your pain limit.” This was a new theme. ($n=1$)

Standing firmly, stabilizing myself and my breathing. The soles of my feet, my breathing, that was something real and solid and very, very nice. ($n=3$)

The participants recognized changes in their breathing patterns in different ways:

I remember when my breathing became an independent movement, filling the body . . . not just a sort of a tube, but lungs, stomach, and out by the mouth . . . a vital function for the body. ($n=1$)

The participants' breathing became different, they felt relaxed, and new thoughts emerged:

Gradually, as I managed to breathe all the way down into my stomach, I relaxed in my entire body and then also in my thoughts. I concentrated more on what I was doing. Lots of things from the past surfaced, and it struck me that "Of course! That's why!" My life was sort of on hold inside my body, the issue of my entire childhood. I found answers to questions I've had for years about the way I tend to react. (n=6)

My thoughts had hurt too much, so they had been locked out—or rather, locked in. When anything unpleasant happened, it became an inexorable idea that affected my muscle tissue and my breathing. It expressed itself in physical pain; there was no getting away from it emotionally either. I hadn't known how to handle it. (n=5)

Breathing: Enhancing the Feeling of Mastery

To be relaxed seemed to be important for reflection.

Nothing started happening until I made contact with my body and breathing. The body as well as the mind sort of let go—opened up again. More positive thoughts started taking root. (n=5)

An understanding of being an entity—"body and soul"—emerged:

I have realized how easily my body reacts to physical and psychological pain. It's in the entire body, from head to toe, muscles and my way of breathing. It is all linked together. (n=5)

You can't separate the body from emotions. (n=8)

I take note of the feeling and of my attention to it. I wonder what came first: the feeling or the thought? (n=1)

I learned to dare to react; it loosened up tension, I could breath more

freely. I finally dared to try. I'm still not very good at expressing my feelings or letting go of my aggression, but I'm much better. I don't get those physical reactions so frequently anymore. (n=8)

The feeling of control is an issue touched on by several participants:

The exercises did something to my breathing patterns, so they gave me a feeling of controlling the hyperventilation . . . to feel you've got control when you really don't have it. (n=4)

I have gained the ability to live with the anxiety. I don't get such heavy panic attacks anymore. I can still sometimes feel the distress, feel that the heart beats faster, that my pulse rises, that my way of breathing changes. I can live with it—"you're not going to die, nothing serious, relax, it'll pass." (n=5)

It's a matter of daring to go through all that anxiety, to stay put when you feel it coming, try to relax and wait till it passes. (n=3)

New ways of interpreting bodily sensations emerged.

I can feel uneasiness and restlessness in my chest and in my stomach when something happens that I disagree with or don't want to participate in. I only breathe right under my bra. (n=3)

My breath stops flowing. I am straining in my neck and shoulders and in the chest. (n=6)

I lie down and breathe in, right down to the groin. (n=3)

I breathe deeply and calmly to get rid of the tensions. Breathing relieves the tensions and pain in my stomach, instead of there being knots there. (n=1)

I couldn't have gone through the process without help; it's important to feel supported. (n=6)

I still have far to go, but I don't need help anymore. I can manage on my own. (n=3)

Discussion

The therapeutic process increased the participants' ability of self-reflection. Although the meaning of breathing seemed to differ among individuals, there were commonalities that can be used to guide clinical work. All of the participants seemed to agree that the meaning of breathing involves reflection on their experiences at various levels. Participants gradually found the words that gave them an increased understanding about breathing as a source of learning and development concerning the way they lived their lives. They could look back and remember sorrow and happiness in their lives and their interactions with others. They sought a balance between finding the meanings of their own histories and of their present and future lives.

Park and Folkman²² have differentiated between global and situational meaning. They defined *global meaning* as a person's basic goals and fundamental assumptions, beliefs, and expectations about the world. Global meaning encompasses beliefs about global cross-situational issues. *Situational meaning* relates to the interaction between global beliefs and goals and the circumstances of a particular person-environment interaction.

The interpretation of the results relates to the 3 categories that emerged after axial coding: (1) "The Sense of Me: An Increased State of Consciousness," (2) "Therapeutic Awareness—Dialogues of Exploration in the Therapeutic Process," and (3) "Empowerment, Self-efficacy, and Building Confidence."

The Sense of Me: An Increased State of Consciousness

One inclusion criterion in the study was having a history of psychosomatic or musculoskeletal disorders. Psychosomatic symptoms can be understood as a failed integration of body self and psychological self ex-

periences.¹¹ The feelings of the self are illegible when there are no corresponding words. When there are no corresponding words, the body can express the person's feelings, tensions, and conflicts in a body language.¹¹ This fits in with the participants' stories of having no words for their feelings and of not understanding what could cause their bodily reactions when they had breathing problems, muscular tension, or stomach pain.

The concept of "phenomenal body" is central to interpretation of the results. This means that the body experiences and expresses meaning through its manner of being in a reciprocal relationship with the surrounding world. It is inter-subjective in the sense that one's own body and the phenomenal bodies of others comprise a basic reciprocity.²³ The question thus becomes, How is the body connected to meaning in a concrete relationship?²⁴ Through becoming increasingly attentive to bodily reactions, the participants were able to access and identify experiences of muscular and emotional patterns that were linked to particular thoughts and beliefs and had become their own characteristic styles of relating to the world. Our participants realized that their life history—the family scenes and painful thoughts of the past—could have an influence on their bodily functioning today.

Damasio²⁵ stated that the simplest kind of consciousness, *core consciousness*, provides the sense of one moment—now—and about one place—here. Our participants talked about their experiences during therapy. They had to concentrate and to be mentally present, being aware of what happened when they were touched by the therapists or when they should stand up and find the center of gravity in the body and feel the impact that this could have on

their breathing pattern and muscular tension.

Consciousness is an entirely subjective phenomenon, occurring as part of the private, first-person process we called "mind." Consciousness and mind, however, are closely tied to external behavior observable by others.²⁵ One participant observed that previously she could not enter a shop without having trouble breathing. She realized that this had something to do with anxiety. Other participants talked about hyperventilation in connection with meetings or waking up during the night being unable to breathe, or feeling that they were losing their breath when bad things happened in the family. Consciousness must be present if feelings are to influence the person having them, beyond the immediate here and now, and make the person able to understand what is happening.²⁵

Emotions cannot be perceived by an individual before there is consciousness about the emotions (ie, sensing that emotion is something happening in the body).^{11,25,26} We know that we have an emotion when the sense of a feeling self is created in our minds. Emotions are linked to breathing,³ they are primarily a bodily state, and they are an important dimension of the lived experiences of the body.²⁷ Our breathing is both an autonomic function and an access for us to get in touch with internal and external stimuli. Damasio²⁵ suggested that people who are unable to make changes in their breathing seem to respond to demands in a categorical and rigid manner because such people perceive themselves as having fewer coping resources. According to the results of our study, unfavorable breathing patterns can impede the optimal development of good health and a sense of understanding, managing, and meaning. When some-

thing unpleasant happened, tension increased, thus affecting muscle tissue and the breathing pattern; it hurt and demanded all of the attention of the person. One of our participants stated, "Nothing started to happen until I could relax in my body and breathing; thus, my thoughts grew lighter. The body as well as the mind sort of opened up again." Earlier negative experiences could be reactivated during the intervention if the therapy is too challenging and thus impede a beneficial outcome.

Therapeutic Awareness— Dialogues of Exploration in the Therapeutic Process

The space between the patient and the therapist is a symbiotic union, where the patient-therapist dyad becomes the subject and object for mutual observation and experience. The first step in conveying an understanding of the patient's experience is to be, in essence, inside it together and listen from the allied vantage point of the patient's internal experience.¹¹ The touch of the therapist's hands helped our participants to be mentally present, they were given time to explore their own reactions, and they learned to value these reactions. The therapist became an important person in mirroring bodily reactions (ie, slight changes of autonomic characteristics, such as breathing pattern, skin temperature, muscle tension, and so on) before the patient could notice.

This can be understood as detailed attention to certain parts of a behavior, expression, or verbalization and as reflecting an inner experience that is an analogue rather than a copy or imitation of that experience. This "analogue matching" is a manifestation of empathy specifically applied by a therapist to a patient.¹¹ Our data showed that "here-and-now" reflection was an important aspect of the dyadic therapeutic work. The importance of the thera-

pist being attentive and focused and the feeling of being supported are emphasized as vital in the process of taking “hold of me and my life.” Gyllensten et al²⁸ stated the importance of the therapist helping patients to help themselves and to gain self-awareness and self-confidence, giving the patients sufficient time to do so.

Repeatedly establishing an atmosphere of trust, openness to experience and reflection, and keeping the focus on emotions and affects during the therapy²⁶ are vital in a therapeutic process of becoming “an embodied subject.”¹⁴ Our participants realized that it was impossible to separate the body from the emotions. The data showed that enhancing knowledge and understanding how to handle one’s symptoms were important themes during therapy. Psychosomatic processes may be driven by complex psychic scenarios (ie, internal “scripts” that were established in the patient’s earliest attachment patterns and experiences). In periods of stress, these patterns may be re-enacted on the theater of the body.²⁹ When feelings are experienced and expressed directly and fully, they form a bridge between mind and body so that psychosomatic symptoms are no longer necessary. When this bridge is undeveloped or lacking, psychosomatic symptoms bring mind and body together.¹¹ The participants learned to dare to react, to open up to painful thoughts, and to express their feelings. They realized that a human being is a totality, and that body and emotions form an entity. When their breathing patterns changed and their emotional content became vivid, participants sometimes became overwhelmed by emotions. When unfamiliar, these changes could be scary and unpleasant, giving a feeling of uneasiness, anxiety, and nausea. Some participants realized that their previous thoughts and feelings were

so painful that they were “locked in.” When defensive patterns are interrupted and released, it is common for clients to relive the original experience.^{4,25} This can create opportunities for re-examining and reintegrating previous traumatic events.^{4,6,12,30}

Empowerment, Self-efficacy, and Building Confidence

The term “empowerment” embodies the concept of power. *Empowerment* is a process in which individuals are enabled to take control of their own lives.³¹ *Self-efficacy* refers to a person’s confidence in his or her ability to make specific changes in behavior.³² In this sense, empowerment must focus on strengthening the skills people need to regain power in their lives.³³ The data revealed information about the strengthening of relevant skills and knowledge to give the patients more mastery over themselves (ie, giving contact with their body and breathing, taking note of the feeling and of the attention to it). Increased attention and consciousness of bodily reactions and the context in which they occur seemed to empower our participants in different ways. They talked about assuming control over hyperventilation and about pain and muscular tensions. To understand one’s own bodily reactions gives a sense of mastery that is—in itself—relaxing, promoting the realization that this uneasiness is not dangerous (eg, “I am not going to die; this is nothing serious, and it will pass”). Stiles³⁴ attempted to clarify the concept of boundaries in order to apply the concept therapeutically to assist clients in healing their boundaries. Stiles defined *personal boundary* as “an invisible demarcation that surrounds a person’s physical, emotional, and psychological space and controls the flow of information, feelings, and physical contact between two or more people.”³⁴ Boundaries provide a sense of safety

and a means of regulating interaction with others, and they describe an individual’s rights and responsibilities. Boundaries are essential in regulating the balance between privacy and intimacy, and they vary in permeability and flexibility as they filter incoming and outgoing stimuli. *Balanced boundaries* or *flexible boundaries* describe the boundaries between 2 or more individuals who have unique psychic spaces or identities and know who they are (ie, self-awareness). Those with balanced or flexible boundaries know what they value and that the other person is also unique and valuable even though different.³⁴

Damasio²⁵ focused on boundaries as being both intrapsychic and interpersonal, making it possible to have autonomy as well as relatedness, and—above all—choices. People with a clear sense of their own boundaries are able to claim their own physical space, identify and embrace their own feelings, be spontaneous, and make decisions appropriate to their own needs while remaining sensitive and responsive to the needs of others.²⁵ Our data showed that the participants became concerned about their own boundaries by “listening to the body” and being conscious about their bodily uneasiness when something happened that they disagreed with or in which they did not want to participate. During therapy, they learned to take note of what was pleasant or unpleasant in the therapeutic interaction. They learned to use their bodily reactions, such as changes in breathing, muscular tension, or an increase in the pulse rate, to recognize pleasant and unpleasant experiences in their daily lives. People who fail to develop effective boundaries cannot live in their bodies in the here-and-now.²⁵

All of our participants experienced better confidence in self-control and an increased ability to relax and to

be mentally present. Self-esteem can mediate the effects of attachment style on several health-promoting practices.³⁵ Self-knowledge becomes equated with understanding the characteristics of the person.³⁶ Self-knowledge builds on concepts such as “mentalization” (ie, the capacity to recognize conscious and unconscious mental states both in oneself and in others, being able to interpret one’s reactions and feelings), which are the key to developing the conscious self. Breathing seems to give access to a repudiated emotional nature, gradually allowing a verbal interpretation of their experiences. Breathing may represent the contact between the body and conscious thought, meaning that the body’s autonomic functioning is of vital importance for establishing an inner room for reflection and cognitive consciousness. This can help people to get to know their own feelings and body, and thereby their own identity.³⁷

The breathing influenced the therapeutic relationship and therapy outcome. This may be an important subject not only to NPMP practitioners but also to physical therapists in general. Observation of breathing should represent an important part of assessment and treatment in physical therapy. Further development of this useful skill is recommended.

Limitations

It is not possible for a researcher to be completely free of bias. To avoid that bias in the analysis of the data, we tried to stand back and ask ourselves, “What is going on here?” As authors, we have considerable “inside” knowledge about the topic, although according to Kohler Riessman,³⁸ our inductive strategy could lead to discoveries that challenge prior assumptions. Kohler Riessman pointed out that reality should be interpreted and constructed, not merely reflected. The researcher’s

subjectivity becomes a source of knowledge, not viewed as something to be controlled, or defined as bias.³⁸ Furthermore, to limit bias, we constantly returned to the participants’ experiences; their experiences remained central to our analysis.³⁹

Further limitations to our study exist. We have only information on people who had positive results of NPMP treatment and a limited age range (41–65 years) and people living at home (outpatients). Thus, the results did not represent the whole age range for people receiving this kind of treatment. People who had experienced no help from the treatment were not included in the study. We are aware of that our results were obtained in the context of NPMP and cannot be directly transformed into the practice of physical therapy outside of NPMP. There also are problems associated with interviewing people such a long time after the events, because we know there are difficulties with comprehensive recall.⁴⁰ However, the treatment had to be completed when the interviews took place so that there would be no interference in the relationship between the patient and the therapist. We also wanted the participants to have had time to reflect on the examination and the treatment process. The study was undertaken in a primary health care setting, and results, therefore, may not be valid for institutions.

Conclusion

By experiencing their own breathing, our participants seemed to become better able to access and identify the experience of the muscular and emotional patterns that, linked to particular thoughts and beliefs, had become their characteristic style of relating to themselves and the world. Breathing could be beneficial and could be experienced as an involuntary movement that filled

the body, creating relaxation. Getting to know one’s own breathing pattern seems to make experiences during the therapeutic process more understandable, manageable, and meaningful.

Both authors provided concept/idea/research design, writing, data analysis, and project management. Dr Ekerholt provided data collection, subjects, and institutional liaisons. The authors acknowledge Nina Bugge Rigault, Head of Division of Physiotherapy, Oslo University College, for administrative support.

The Regional Committee of Ethics approved the study.

This article was submitted October 17, 2007, and was accepted March 28, 2008.

DOI: 10.2522/ptj.20070316

References

- 1 Lyon M. Emotion and embodiment: the respiratory mediation of somatic and social processes. In: Hinton AL. *Biocultural Approaches to the Emotions*. New York, NY: Cambridge University Press; 1999:48.
- 2 Pfeffer JM. The aetiology of the hyperventilation syndrome: a review of the literature. *Psychother Psychosom*. 1978;30:47–55.
- 3 Boiten FA, Frijda NH, Wientjes CJ. Emotions and respiratory patterns: review and critical analysis. *Int J Psychophysiol*. 1994;17:103–128.
- 4 Gilbert C. Emotional sources of dysfunctional breathing. *Journal of Bodywork and Movement Therapy*. 1998;2:224–230.
- 5 Haruki Y, Homma I, Umezawa A, Masaoka Y, eds. *Respiration and Emotion*. Tokyo, Japan: Springer-Verlag; 2001.
- 6 Gilbert C. Breathing: the legacy of Wilhelm Reich. *Journal of Bodywork and Movement Therapy*. 1999;3:97–106.
- 7 Lowen A. *Narcissism: Denial of the True Self*. New York, NY: Macmillan Publishing; 1983.
- 8 Tomkins SS. *Affect, Imagery, Consciousness: The Positive Affects*. Vol 1. New York, NY: Springer Publishing Co; 1962.
- 9 Thornquist E, Bunkan BH. *What Is Psychomotor Therapy?* Oslo, Norway: Norwegian University Press; 1991.
- 10 Rosberg S. *Kropp: Varande och Mening i ett Sjukgymnastisk Perspektiv [Body, Being, and Meaning in a Physiotherapeutic Perspective]*. Göteborg, Sweden: Göteborg Universitet, Institutionen för Socialt Arbete; 2000.
- 11 Kreuger DW. *Integrating Body Self and Psychological Self: Creating a New Story in Psychoanalysis and Psychotherapy*. New York, NY: Brunner-Routledge; 2002.

Breathing During Therapeutic Processes

- 12 Thornquist E. Varieties of functional assessment. *Scand J Prim Health Care*. 1994;12:44-50.
- 13 Steihaug S. Can chronic muscular pain be understood? *Scand J Public Health*. 2005; 33:(suppl 66):36-40.
- 14 Øien AM, Iversen S, Stensland P. Narratives of embodied experiences: therapy processes in Norwegian psychomotor physiotherapy. *Adv Physiother*. 2007; 9:31-39.
- 15 Bunkan BH, Opjordsmoen S, Moen O, et al. What are the basic dimensions of respiration? A psychometric evaluation of the Comprehensive Body Examination II. *Nord Psychiatry*. 1999;53:361-369.
- 16 Kvåle A, Backer Johnsen T, Ljunggren AL. Examination of respiration in patients with long-lasting musculoskeletal pain: reliability and validity. *Adv Physiother*. 2002;4:169-181.
- 17 Ekerholt K, Bergland A. The first encounter with Norwegian Psychomotor Physiotherapy. *Scand J Public Health*. 2004; 32:403-410.
- 18 Ekerholt K, Bergland A. Massage as interaction and a source of information. *Adv Physiother*. 2006;8:137-144.
- 19 Strauss A, Corbin J. *Basic of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, Calif: Sage Publications Inc; 1996.
- 20 Norwegian Labour and Welfare Administration Web site. Available at: <http://www.nav.no>.
- 21 Moyer CA, Rounds J, Hannum JW. A meta-analysis of massage therapy research. *Psychol Bull*. 2004;130:3-18.
- 22 Park CL, Folkman S. Meaning in the context of stress and coping. *Review of General Psychology*. 1997;1:115-144.
- 23 Merleau-Ponty M. *Kroppens Fenomenologi [Phenomenology of the Body]*. Oslo, Norway: Pax Forlag; 1994.
- 24 Moi T. *Hva er en Kvinne? Kjønn og Kropp i Feministisk Teori [What Is a Woman? Gender and the Body in Feminist Theory]*. Oslo, Norway: Gyldendal Norsk Forlag; 1998.
- 25 Damasio AR. *The Feeling of What Happens*. New York, NY: Harcourt Brace & Co; 1999.
- 26 Monsen K, Monsen JT. Chronic pain and psychodynamic body therapy: a controlled outcome study. *Psychotherapy*. 2000;37:257-269.
- 27 Rudebeck CE. Grasping the existential anatomy. In: Toombs SK, ed. *Handbook of Phenomenology and Medicine*. Boston, Mass: Kluwer Academic Publishers; 2001:297-317.
- 28 Gyllensten AL, Gard G, Salford E, Ekdahl C. Interaction between patient and physiotherapist: a qualitative study reflecting the physiotherapist's perspective. *Physiother Res Int*. 1999;4:89-109.
- 29 McDougall J. *Theatres of the Body*. New York, NY: Norton; 1989.
- 30 Kirkengen AL. *Inscribed Bodies: Health Impact of Childhood Sexual Abuse*. Boston, Mass: Kluwer Academic Publishers; 2001.
- 31 Cox J. An unwanted concept: empowerment. *Nurs Stand*. 1996;10:24-25.
- 32 Rollnick S, Mason P, Butler C. *Health Behavior Change: A Guide For Practitioners*. Edinburgh, United Kingdom: Churchill Livingstone; 1999.
- 33 Bent KN. "The people know what they want": an empowerment process of sustainable, ecological community health. *Adv Nurs Sci*. 2003;26:215-226.
- 34 Stiles AS. Personal versus relational boundaries: concept clarification and therapeutic interventions. *J Theory Construct Test*. 2004;8:72-78.
- 35 Huntsinger E, Luecken LJ. Attachment style and health behavior: the mediating—role of self-esteem. *Psychol Health*. 2004; 19:515-526.
- 36 Sugarman A. Mentalization, insightfulness, and therapeutic action: the importance of mental organization. *Int J Psychoanal*. 2006;87:965-987.
- 37 Anstorp T, Benum K, Jakobsen M. *Dissoiasjon og Relasjonstraumer [Dissociation and Relational Traumas]*. Oslo, Norway: Universitetsforlaget; 2006.
- 38 Kohler Riessman C, ed. *Qualitative Studies in Social Work Research*. Thousand Oaks, Calif: Sage Publications Inc; 1994.
- 39 Gregg R. Explanations of pregnancy and choice in a high-tech age. In: Kohler Riessman C, ed. *Qualitative Studies in Social Work Research*. Thousand Oaks, Calif: Sage Publications Inc; 1994.
- 40 Portney LG, Watkins MP. *Foundation of Clinical Research. Application to Practice*. Boston, Mass: Prentice Hall Health; 1999.