

This article was downloaded by: [Andreas Stötter]

On: 09 June 2013, At: 11:25

Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tbmd20>

Mindfulness-based touch therapy and mindfulness practice in persons with moderate depression

Andreas Stötter ^c, Marion Mitsche ^a, Peter Christian Endler ^a, Patricia Oleksy ^b, Dietmar Kamensчек ^c, Wilhelm Mosgoeller ^d & Christian Haring ^e

^a Graz Inter-University College/Seggau Castle, Graz, Austria

^b Research Division for Mental Health, UMIT-Private University, Hall in Tirol, Austria

^c Yoni Academy, Andreas Hofer Str. 40, A-6020, Innsbruck, Austria

^d Institute of Cancer Research, KIM-1, Medical University of Vienna, Austria

^e Department of Psychiatry and Psychotherapy 1B, State Hospital, Hall in Tirol, Austria

Published online: 04 Jun 2013.

To cite this article: Andreas Stötter, Marion Mitsche, Peter Christian Endler, Patricia Oleksy, Dietmar Kamensчек, Wilhelm Mosgoeller & Christian Haring (2013): Mindfulness-based touch therapy and mindfulness practice in persons with moderate depression, *Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice*, DOI:10.1080/17432979.2013.803154

To link to this article: <http://dx.doi.org/10.1080/17432979.2013.803154>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Mindfulness-based touch therapy and mindfulness practice in persons with moderate depression

Andreas Stötter^{a,c,*}, Marion Mitsche^a, Peter Christian Endler^a, Patricia Oleksy^b, Dietmar Kamenschek^c, Wilhelm Mosgoeller^d and Christian Haring^{b,e}

^aGraz Inter-University College/Seggau Castle, Graz, Austria; ^bResearch Division for Mental Health, UMIT-Private University, Hall in Tirol, Austria; ^cYoni Academy, Andreas Hofer Str. 40, A-6020 Innsbruck, Austria; ^dInstitute of Cancer Research, KIM-1, Medical University of Vienna, Austria; ^eDepartment of Psychiatry and Psychotherapy 1B, State Hospital, Hall in Tirol, Austria

(Received 7 September 2012; final version received 16 April 2013)

The goal of the study was to explore the effects of mindfulness-based touch therapy, a passive body-therapy intervention, in combination with the practice of mindfulness as an active meditative discipline, in patients with moderate recurring or episodic depression. The method under study is seen as a possible adjunct to psychotherapy and psychopharmacotherapy. The degree of depression before and after the therapy phase was determined according to Hamilton's scale. The outcome was a highly significant improvement in depressive illness, with a general alleviation of depressed mood, reduction in feelings of guilt, in suicidal thoughts and in sleep maintenance insomnia; increase in motivation in carrying out everyday activities; reduction in feelings of anxiety at both psychological and somatic levels and easing of general somatic symptoms. The results show that the method under study can serve persons suffering from depression as an adjunct to conventional therapeutic measures.

Keywords: depression; mindful touch; mindfulness; manual therapy; massage; body work

1. Introduction

A low capacity for self-awareness makes it difficult for depressed individuals to recognise and reflect on destructive behavioural patterns, negative thoughts and feelings, anxiety, tension, physical pain, exhaustion and inner restlessness. Segal, Williams, and Teasdale (2002) have shown the association between lack of mindful self-awareness and depression.

Furthermore, insights into attachment research indicate that insecure attachment between a child and its parents in an early phase of development can lead to depression later on in life. In its earliest phase, the dialogue from which attachment evolves is almost exclusively tactile (Montagu, 1986). A child's first emotional attachment is thus based on physical contact, creating the foundation for its further

*Corresponding author. Email: as@yoni-academy.com

emotional and intellectual development (Bowlby, 1969, 1973, 1980; Field, 2001; Turp, 1999, 2000).

1.1. Prevalence of depression

Depression is a worldwide phenomenon. Estimates show that the number of people affected worldwide is beyond 100 million and those newly affected are more than 800,000 per year (Jütte, 2001).

The prevalence of psychological and psychosocial problems among patients of general practitioners is high, representing the most frequent psychological disorder seen in general practitioner care. According to Wittchen, Jakobski, Klose, and Ryl (2010), around 19% of the population are affected by depression at some point in their life. The 12-month prevalence of depressive disorders in the average German population is 11%, amounting to around six million individuals. (In slightly more than half of these, the severity of depression reaches a level requiring treatment.)

A largely underestimated aspect is the bodily manifestation of depression (Latin: *depressere* = to press down or weight down). Besides having a cognitive component, every emotion also manifests itself in the physical realm of feeling. This fact is often not adequately addressed in the treatment of depression. This study proposes that this somatic perspective contributes an important aspect in considering possible approaches and therapeutic interventions for persons suffering from depression. It is the authors' experience that other forms of therapy besides psychotherapy and pharmacotherapy are needed in order to do justice to the many different levels of this illness.

1.2. Mindfulness and touch as therapeutic principles

1.2.1. Mindfulness

Mindfulness as a therapeutic principle is gaining significance (Ott, 2010). The concept of a 'mindful attitude' relates to a state of absolute presence which is achieved through consciously directing one's attention, allowing both internal and external stimuli to come to awareness, without judging or classifying one's experience in doing so. Weiss refers to the state of consciously focused attention as 'meta-cognition' (Weiss, Harrer, & Dietz, 2010). In a state of mindfulness, one is not dissociated but rather participates as an empathic observer. Practising meta-cognition means to refrain from automated reactions as much as possible (Kabatt-Zinn, 1994), but it also requires not identifying oneself with the person or object one is observing (non-identification). An accepting, non-judgmental attitude makes it possible to experience human relationships with incomparably greater intensity. A mindful state of consciousness thus has not only an intrapsychic aspect to it, but is also significant for interpersonal communication at an emotional level.

Among the depth psychology approaches where mindfulness is practised for therapeutic purposes are focusing (Gendlin, 1996), internal family system therapy (Schwartz, 1995) and the Hakomi method (Kurtz, 1990). These methods give full appreciation to the role and importance of radical acceptance in a mindfulness-based therapeutic process (Weiss et al., 2010).

The effects of mindfulness on the mind are accompanied by physiological changes (Siegel, 2007). Schwartz was able to show in positron emission tomography

(PET) scans that mindfulness-based cognitive therapy leads to systematic changes in brain synaptic activity patterns (Schwartz, 1996). Davidson et al. (2003) concurred with this in their functional magnetic resonance imaging, PET and electroencephalography studies on meditating Tibetan monks, in whom they found enhanced activity of the left prefrontal cortex, an area of the frontal brain which is crucial for maintaining an overall positive mood, heightened attention and emotional self-regulation. By contrast, depressed individuals with an overall negative mood are reported to show elevated activity of the right frontal lobe (Davidson & Coleman, 1974; Davidson et al., 2003; Davidson, Schwartz, & Rothman, 1976). It thus appears that the relation between left side and right side of prefrontal neural activity may correlate with the aspects of an individual's tone of mood.

Ma and Teasdale (2004), Segal et al. (2002), Teasdale et al. (2000) and Williams and Kuyken (2012) reported positive results from studies investigating the effectiveness of mindfulness-based cognitive therapy in preventing recurrence of depression.

1.2.2. Touch

Methods based on touch count amongst the oldest healing methods known and have been practised across all cultures over the millennia. Their therapeutic healing effects have been proven since centuries – no less than the effects of touch deprivation.

Touch allows humans to convey essential messages to one another which cannot be communicated in any other way.

Reich (1987, 1989) deserves credit for having been one of the first analysts who dedicated himself to body work as a means of dealing with issues of posture and muscular organisation. He developed the concept of muscular armour as the bodily aspect of emotional repression and himself used touch interventions as a means of releasing the hold of muscular armour and allowing repressed experiences to emerge.

Balint (1981), Boyesen and Boyesen (1987), Groddeck (1988), Keleman (1986), Lowen (1967), Rank (1998) and others contributed to the further development and modification of therapeutic touch methods towards more active, dialogic techniques (Marlock & Weiss, 2006; also see Ferenczi, 1988).

The Hakomi method, an experientially, body-oriented form of psychotherapy, involves the use of touch experiments while the client is in a state of inner mindfulness in order to facilitate access to his or her unconscious (Kurtz, 1990).

Turp (1999, 2000) has published some noteworthy work on touch and handling in young children and adults in the context of depressive illness. She writes 'Many clients who express their distress through psychosomatic illness or physical self-harm describe a very poor history of touch' (Turp, 2000, p. 9).

Research carried out at the Touch Research Institute at the University of Miami in the USA has likewise demonstrated the positive effects of therapeutic touch in depression (Field et al., 1997). The effectiveness of this therapeutic concept was demonstrated in a study on what has come to be known as slow stroke intervention (Müller-Oerlinghausen, Berg, & Droll, 2007). Summing up the evidence, a recent meta-analysis by Hou, Chiang, Hsu, Chiu, and Yen (2010) has confirmed the clinical

potential of therapeutic touch intervention or massage in depressed individuals. Westland's (2010) question on *Physical touch in psychotherapy* is 'Why are we not touching more?'

1.2.3. Synergies of touch and mindfulness

In his work in attachment research and mindfulness practice, Siegel (2007) describes how early experiences of secure attachment and the capacity for mindfulness relate to one another. He says that the reciprocal attunement that occurs in association with secure attachment between parent and child is reflected in an intrapsychic form of attunement that occurs in mindful awareness. Both forms of attunement foster the capacity for close relationships as well as resilience and well-being (Siegel, 2007).

Neurobiological studies indicate a similar connection. This research has demonstrated high levels of left prefrontal cortical activity in individuals who practise mindfulness as well as in securely attached babies (Davidson & Fox, 1989). By contrast, depressed individuals have low levels of left frontal cortical activity according to Davidson and Fox (1989).

Insights gained in the positive therapeutic effects of mindfulness practice and mindfulness-based touch interventions on mood and well-being, particularly in persons suffering from depression, indicate that synergy effects may be achievable from a combination of the two approaches.

This can be made plausible by reference to Odgen's model of hierarchical information processing (Odgen, Minton, & Pain, 2006), which describes how cognitive, emotional and sensorimotor information is processed.

According to this model, touch is processed via sensorimotor pathways, that is the touch stimulus initially elicits a sensorimotor reaction, which itself is sensed and experienced as an emotion and eventually interpreted cognitively. Here, the information-processing pathway leads from the body via the emotions to the cognitive faculties; in hierarchical terms this means from bottom to top (bottom-up pathway).

Mindfulness is initially processed cognitively (Ogden et al., 2006; Schwartz, 1996), that is mindful awareness begins as conscious cognition, becomes emotion and ends as a bodily sensation. Here, the information-processing pathway leads from cognition via the emotions to the body, that is from top to bottom (top down).

Mindfulness practice and mindfulness-based touch interventions thus work from opposite ends of the information-processing hierarchy, resulting in the integration of immediate bodily experience with mindful cognitive self-awareness.

On account of its frequent association with touch deprivation during early childhood, depression in adults typically also manifests itself in a low level of mindful bodily awareness, a lack of trust in the body and a feeling of being helplessly exposed to bodily/sensorimotor reactions such as muscle tension, shallow breathing, low energy level, exhaustion and a loss of feeling (Müller-Oerlinghausen et al., 2007). In other words, the depressed individual's sensorimotor processing has become dysfunctional. This is most often associated with a loss of sensory perception and a sense of being caught in negative emotions, resulting in frequent brooding and thoughts of anxiety, that is dysfunctional cognitive processing (Müller-Oerlinghausen et al., 2007; Segal et al., 2002).

We believe that this vicious circle of the loss of physical self-perception and dysfunctional cognitive processing can be interrupted through the synergy effects of the two therapeutic methods described above. To our knowledge, there has been no research on their combined use to date.

1.3. Rationale for the study

Thus, if mindfulness, practised as a meditative discipline, and mindfulness-based touch, practised as a body therapeutic method, act from opposite ends of the neural communication path, then a concept based on this very insight may be able to meet the requirements for a holistic, integrative therapeutic approach that can serve those in need of help as an adjunct to other therapies.

The goal of this study was, therefore, to determine whether or not mindfulness practised in conjunction with touch therapy can have a positive influence in states of moderate depression.

2. Study design and methods

2.1. Patients

All patients were informed about the purpose and procedure of the study, including matters of data privacy and data utilisation, and subsequently gave written consent to their participation and the electronic storage of their personal data. The study proposal was considered by the ethics commission of the Graz Inter-University College at Seggau Castle and approved following minor modification.

The design was that of a prospective, randomised, single-blinded study. Twenty-eight patients of the psychiatric hospital of Hall in Tirol were enrolled by an assisting clinical psychologist based on the criterion of moderate depression [ICD-10, subgroup F32.1 (episode) or F33.1 (recurring)] and assigned to the two groups at random. There were 14 patients in both the test group (TG) and the control group (CG). Patient mean age was 42.8 ± 12.6 (mean \pm standard deviation) years in the TG and 41.4 ± 8.2 in the CG.

Table 1 gives an overview of the patients' recruitment and participation. There were more female than male participants entering the study, and five males and one female who dropped out. The gender ratio of patients still participating at the end of the study was identical in the two groups (Table 1).

After enrolment, patients were assessed for the degree of their depression based on Hamilton's scale (start of observation: 'before'). All patients were receiving medicinal therapy over the entire duration of the study.

Table 1. Gender ratio of participants at recruitment and over the course of the study.

Status	TG	CG	Total
Consent	18 (6 M, 12 F)	16 (5 M, 11 F)	34
Enrolment	16 (5 M, 11 F)	15 (4 M, 11 F)	31
Conclusion	14 (3 M, 11 F)	14 (3 M, 11 F)	28

Note: For further explanations, see text.

Treatment in the TG differed from that in the CG only in that these patients additionally received sessions in mindfulness-based therapy. After 8 weeks, the degree of depression in the two groups was determined again to permit a direct comparison between them (end of observation: 'after').

2.1.1. Test group

Every patient of the TG received 16 × 60-min sessions of mindfulness therapy over a period of 8 weeks. There were three therapists working in the group. Every patient received all 16 sessions from the same therapist. Three sessions per week were given during the first 3 weeks, and the remaining seven sessions were distributed over the following 5 weeks. This regimen of 16 sessions distributed over 8 weeks stems from the proven basic programme in mindfulness-based stress reduction (MBSR) used by Kabatt-Zinn (1994, 2003). The treatment was the same for all participants, especially the therapeutic procedure and time structure of the sessions.

2.1.2. Control group

The patients in the CG only received their basic medicinal therapy and were otherwise largely left to themselves during the observation period. They were unaware of which group they belonged to, that is they were not informed that they were in the CG. After 8 weeks, the patients of this group were likewise reassessed for their degree of depression to permit a comparison with the TG. After the end of the observation period, each participant in the CG received eight sessions in mindfulness therapy. Again, they were unaware that the observation phase had ended with the second assessment and that the remaining sessions were of no relevance to the study.

2.2. Description of the therapeutic method

The method under investigation in this study was developed and tested in practice by the first author. He combines different approaches based on experiences from Buddhist mindfulness practice, MBSR according to Kabatt-Zinn (2003), the Hakomi method (experience-oriented psychotherapy; Kurtz, 1990) and various forms of massage and body work. It comprises touch exercises for deepened bodily awareness and gentle massage techniques. These were carried out according to a standardised protocol to facilitate comparability. The treating therapists were all trained in bodywork and massage and had additional qualification in mindfulness practice and mindfulness-based touch therapy.

2.2.1. Touch

The touch interventions consist of gentle, rhythmic, flowing massage movements derived from holistic massage techniques as well as from the touch without movement akin to the elements of Hakomi therapy. Both the patient and the therapist go into a state of mindfulness.

2.2.2. *Counselling*

The patient is made familiar with the theoretical background as well as the practical procedure of the therapy.

Counselling in mindfulness-based therapy differs from psychotherapeutic counselling in that it focuses exclusively on the verbal communication of bodily reactions and reactions of mood. The client is in a state of inner mindfulness as she converses with the therapist. This dialogic form of mindfulness practice can be regarded as ‘assisted meditation’ (Weiss, 2009). The therapist guides the patient from a state of everyday consciousness to one of inner mindfulness while focusing her attention on the patient’s sense of well-being. The patient directs her attention to her bodily experience of self, actively reflecting and commenting on her bodily sensation.

There is no discussion of psychological or biographic aspects or their causal relationship with the client’s symptoms, nor are psychodynamic or psychoeducative components involved in this form of counselling.

After the session, the patient’s reactions to the treatment and exercises are reviewed verbally. The therapist guides the patient through the mindfulness exercises, repeating and detailing her instructions as required.

2.2.3. *‘Homework’ as part of therapy*

Mindfulness exercises which the patient can perform between therapy sessions form an integral part of the therapy. They comprise mindful breathing practice and the body scan as taught by Kabatt-Zinn (1994).

2.3. *The metric – Hamilton’s scale*

The Hamilton Depression Rating Scale is a multiple-item questionnaire used to assess the levels of depression (Hedlund & Viewig, 1979). The degree of depression before and after the observation period was documented in both groups (one receiving medication only, and the other additionally receiving mindfulness-based therapy). The assessment was carried out by a clinical psychologist at the recruiting hospital by way of an expert interview, on the basis of which 17 items were rated on a scale from 0 to 4 (nine items) or 0 to 2 eight items) to judge the severity of the illness.

2.4. *Statistics*

Data from 56 survey sheets were entered into a database, checked, corrected where necessary and analysed by descriptive and inferential statistics using the PASW Statistics (version 17, formerly SPSS) software.

The number of evaluable participants in the test and control being equal, it was possible to directly compare the total scores obtained in either group. Data were analysed by χ^2 tests to gain an impression of the severity of illness in the test and the CGs prior to and after therapy. Patients were randomly assigned to each group.

Therapeutic efficacy was determined by calculating the difference between the baseline value and the end-of-treatment value of each parameter. A positive

difference thus signified a decrease in symptom severity, whereas a negative difference, equivalent to an increase in a Hamilton parameter, signified aggravation of a symptom. The pattern of improvement and aggravation across items in the two groups was analysed by χ^2 tests.

The number of improved symptoms (items) observed in both groups was determined and compared, and the significance of the differences was determined using the Mann–Whitney U -test (SPSS).

Specific levels of significance were assumed for the following error probabilities: $p \leq 0.05$, significant; $p \leq 0.01$, highly significant.

3. Results

3.1. Comparison of symptom severity in the two groups

The differences obtained per item ('before' minus 'after') show whether the score given for an item improved, remained unchanged or grew worse over the course of the study. Since the number of participants who completed the study was the same in either group ($N = 14$, see Table 1), the outcome can be determined by directly comparing the total score for all 17 items in each of the two groups. Out of the total of 238 items (100%) under survey, the TG showed improvement in 123 items (51.7%), aggravation in 4 (1.7%) and no change in 111 (46.6%).

In the CG, there was improvement in 17 (7.3%), aggravation in 9, whereas the great majority, namely 212 items (89.1%) remained unchanged. A comparison between the two groups in terms of the number of items showing aggravation or improvement shows a highly significant outcome in favour of the TG ($p < 0.001$; Table 2).

3.2. Comparison by item

Table 3 shows means and standard deviations by items in the two groups.

Table 4 shows the percentages of patients by items in whom symptom severity decreased.

On comparing the rate of improvement in the two groups by items, it is seen that in 15 out of 17 items the TG experienced a greater benefit than the CG. In eight items, the difference between the two groups was highly significant ($p \leq 0.002$).

4. Discussion

The purpose of the study was to explore the effects of mindfulness-based touch therapy, an interpersonal body-therapy intervention involving a passive recipient, in combination with the practice of mindfulness as an active intrapersonal intervention,

Table 2. Global symptom improvement and aggravation in the TGs and CGs.

Item	TG	CG	Significance
Improved	123	17	$p < 0.001$
Aggravated	4	9	
No change	111	212	
Total	238	238	

Table 3. Hamilton scores by item – absolute scores; before = start of observation; after = end of observation after 8 weeks.

Item	Description	TG		CG	
		Before Mean \pm SD	After Mean \pm SD	Before Mean \pm SD	After Mean \pm SD
1	Depressed mood	3.0 \pm 0.68	0.9 \pm 1.29	3.1 \pm 0.27	3.1 \pm 0.27
2	Feelings of guilt	1.6 \pm 0.94	0.7 \pm 0.73	0.9 \pm 0.83	0.9 \pm 0.83
3	Suicidality	1.1 \pm 0.53	0.2 \pm 0.58	1.6 \pm 1.16	1.6 \pm 1.16
4	Sleep-onset disorders	1.1 \pm 0.83	0.6 \pm 0.76	1.1 \pm 0.95	1.3 \pm 0.91
5	Sleep maintenance disorders	1.2 \pm 0.70	0.4 \pm 0.65	1.2 \pm 0.97	1.3 \pm 0.91
6	Terminal sleep disorders	0.8 \pm 0.80	0.4 \pm 0.63	0.8 \pm 0.89	0.5 \pm 0.76
7	Work and interest	2.4 \pm 1.01	0.9 \pm 1.27	3.3 \pm 0.91	3.2 \pm 1.05
8	Slowed activity	0.9 \pm 0.92	0.5 \pm 0.85	0.3 \pm 0.61	0.2 \pm 0.58
9	Restlessness/agitatedness	0.6 \pm 0.63	0.2 \pm 0.58	1.1 \pm 0.66	1.2 \pm 0.89
10	Anxiety (psychological symptoms)	2.6 \pm 0.65	0.9 \pm 0.62	2.9 \pm 1.07	3.0 \pm 1.04
11	Anxiety (somatic symptoms)	1.5 \pm 0.94	0.4 \pm 0.51	2.0 \pm 1.36	1.9 \pm 1.29
12	Gastrointestinal symptoms	0.5 \pm 0.76	0.2 \pm 0.43	1.5 \pm 1.16	1.5 \pm 1.16
13	General somatic symptoms	1.4 \pm 0.63	0.4 \pm 0.65	1.9 \pm 0.36	1.8 \pm 0.58
14	Loss of libido	0.9 \pm 0.95	0.2 \pm 0.58	1.1 \pm 0.83	1.0 \pm 0.88
15	Hypochondria	0.2 \pm 0.58	0.1 \pm 0.27	1.4 \pm 1.08	1.2 \pm 1.12
16	Lack of awareness of being ill	0.6 \pm 0.76	0.1 \pm 0.36	0.8 \pm 1.05	0.6 \pm 0.85
17	Weight loss	0.0 \pm 0.00	0.0 \pm 0.00	0.3 \pm 0.73	0.1 \pm 0.53

Table 4. Hamilton scores by item – comparison between the test and control groups.

Item	Description	TG	CG	Group deriving greater benefit	<i>p</i> (<i>U</i> -test)
		% of benefiting patients			
1	Depressed mood	93	0	TG	0.001
2	Feelings of guilt	71	0	TG	0.001
3	Suicidality	86	0	TG	0.001
4	Sleep-onset disorders	43	7	TG	0.114
5	Sleep maintenance disorders	64	0	TG	0.003
6	Terminal sleep disorders	29	14	TG	0.541
7	Work and interest	79	14	TG	0.003
8	Slowed activity	36	7	TG	0.210
9	Restlessness/agitatedness	43	7	TG	0.114
10	Anxiety (psychological symptoms)	93	0	TG	0.001
11	Anxiety (somatic symptoms)	79	14	TG	0.003
12	Gastrointestinal symptoms	21	0	TG	0.352
13	General somatic symptoms	64	7	TG	0.009
14	Loss of libido	36	7	TG	0.210
15	Hypochondria	14	7	TG	0.769
16	Lack of awareness of being ill	29	29	–	1.000
17	Weight loss	0	7	CG	0.769

in patients with moderate recurring episodic depression. The degree of depression before and after the therapy phase was determined according to Hamilton's scale. The outcome was a highly significant improvement in both psychological and somatic levels and easing of general somatic symptoms. The results show that the present therapeutic approach of combining mindfulness-based touch therapy with mindfulness practice provided significant additional benefit in the treatment of depressed persons.

The comparison of symptom severity (Hamilton item scores) yielded significantly more improvements in the TG compared to the CG (Table 3). Both somatic and psychological symptoms showed highly significant improvements even when considered individually:

- Depressed mood
- Feelings of guilt
- Suicidal feelings
- Sleep maintenance disorders
- Work and interest
- Anxiety (psychological symptoms)
- Anxiety (somatic symptoms)
- General somatic symptoms.

4.1. Possible action mechanism

4.1.1. Mindfulness

Mindfulness has attracted great interest in the fields of psychotherapy, psychology and medicine over the past years (Weiss, 2009). Some 1400 scientific publications

have appeared on this topic since the year 2000 (Ott, 2010). These include ample evidence of the positive effects of mindfulness practice in depression and other psychological disorders, stress syndromes, trauma, addiction, etc. (Bondolfi et al., 2010; Brittany & Labbé, 2011; Evans et al., 2007; Ma & Teasdale, 2004; Michalak, Heidenreich, Meibert, & Schulte, 2008; Segal et al., 2002; Splenvins, Smith, & Simpson, 2009; Williams & Kuyken, 2012). Neurobiological research on mindfulness practice extending back to the 1970s (Davidson & Coleman, 1974; Davidson et al., 1976, 2003; Schwartz, 1996) has shown that mindfulness practice influences the brain's neuroplasticity.

Weiss (2009) names the following major action mechanisms of mindfulness practice in the context of body therapy:

- Activation of the observer state makes it possible to sense inner somatic processes, allowing them to come to awareness.
- Mindfulness allows simple regulation of attentional processes, which in turn makes it possible to examine unconscious processes in a slow but direct manner.
- Mindfulness practice facilitates non-judgmental self-examination. It creates a benevolent, accepting attitude towards dissociated parts of self.
- The process of establishing an inner observer through repeated practice has in itself an aspect of transformation to it. The observer facilitates a process of dis-identification from automated and self-limiting ways of being as it can emerge in states of depression.

The act of being mindfully aware of one's body, feelings and thoughts, practised with an empathic, non-judgmental attitude as in this study, could thus help to bring about a change of perspective on one's identity and a new sense of self.

4.1.2. Touch

The positive effects of touch observed in this study can be accounted for in particular by studies in the area of attachment research. Some authors believe the tactile quality of touch experienced immediately after birth and during the first months of life to be decisive for a person's development and ability to build healthy relationships (Bystrova et al., 2009; Cullen-Powell, Barlow, & Cushway, 2005; Field et al., 1969, 1997; Haxton, Doering, Gingras, & Kelly, 2012; Montagu, 1986; Vincent, 2011).

According to Montagu (1986), a baby's primary sensory experience is tactile. Tactile experience comes before that gained through the other sensory organs, and it is stored in implicit memory. If the earliest phase of life is associated with tactile deprivation, it will lead to a burdened concept of self and of relationship. According to Montagu, it significantly increases the probability of developing depression later in life.

Turp (1999) has likewise pointed out the consequences of touch deprivation during early childhood: 'The implication is, that we are unable to hold ourselves well if we have not been well enough held, and that this will be reflected in muscle tone and posture.' Emotional and physical aspects of such a state are simply two sides of the same coin, with the collapsed and sagging posture, described by both

Hopkins and by Bick (1968), encapsulating feelings of hopelessness, of passivity and of depression (Turp, 1999, p. 10). She also observes that

To judge from the anecdotal evidence available, the role of touch deprivation in depression in various sub-sections of the population warrants considerably more research than has been undertaken to date. (Turp, 2000, p. 9)

The European Association for Body Psychotherapy names the following basic assumptions made by body therapy methods:

- The body is an inseparable part of human existence and therefore deserves to be taken into account in any kind of therapeutic treatment.
- Processes of the soul and body run parallel in time and interact.
- Verbal communication is preceded ontogenetically by an extended phase of non-verbal communication.
- In adults too, the cognitive and verbal levels represent only a part of the entire information processing and communication processes taking place at any given moment.
- It is possible for memory content and unconscious material to be activated and brought to consciousness through sensorimotor stimuli.
- Health and vitality are not only the result of a clear mind but have also to do with good equilibrium and regulation at physiological and emotional levels.
- Body therapy methods are characterised by the inclusion of non-verbal communication techniques, action dialogues, touch, a diagnostic approach that takes account of verbal as well as non-verbal information and therapeutic goals that are defined in psychosomatic terms (Koemeda-Lutz et al., 2006).

The present experience-oriented method uses a combination of perceptive, mindful touch and gentle massage to provide the client with a direct bodily, sensory experience. This quality of mindful attentiveness had been a missing experience for the study participants. They experienced being touched as relaxing, soothing and nourishing and reported having a new, more mindful quality of access to their own body.

Although it is new to them, mindful touch may be encoded as a corrective experience in depressed individuals. Ideas to this end go back to Alexander and French (1946), who introduced the concept of ‘corrective emotional experience’ to psychotherapy, and Ferenczi (1988), whose ‘reparenting’ approach from 1932 may enable patients to develop a more congruent relationship with their own body and in this way change their body image and their concept of self. This allows the conclusion that the mindfulness-based touch therapy can have positive effects in individuals, in whom tactile deprivation experienced in early childhood has become established in implicit, that is bodily memory.

The results of this study confirm previous research carried out on the topics of mindfulness and therapeutic touch.

4.1.3. *Integration of mindfulness practice and therapeutic touch*

To our knowledge, the synergy effects of a combination of mindfulness practice and therapeutic touch have not been the subject of research to date.

Inspired by observations of Siegel (2007) as well as the research conducted by Davidson and Fox (1989) and Davidson et al. (2003), on questions relating to

attachment and mindfulness, we endeavoured to look for possible synergy effects resulting from a combination of mindfulness-based touch interventions and mindfulness practice. In due course, we were able to show that a combination of the two methods, with mindfulness practice as an active and therapeutic touch as a passive intervention, does indeed lead to positive results, in some cases even to a highly significant degree.

A possible explanation for the positive results obtained, and for synergistic effects of a combined use of the two methods, may be found in a hierarchical model of information processing that distinguishes cognitive, emotional and sensorimotor processing modes, as described in Section 1.2.3 (Ogden et al., 2006). Depressive individuals whose early childhood attachment experiences were marked by insecurity are often lacking in mindful body awareness (Segal et al., 2002). They lack confidence in their own body and are easily overwhelmed by their own bodily or sensorimotor reactions according to Müller-Oerlinghausen et al. (2007). Individuals suffering from depression typically show muscular tension, shallow breathing, lack of energy, a predisposition to exhaustion and loss of sensory awareness. This was confirmed by our observations in study participants, especially regarding the somatic items.

Mindfulness-based touch interventions and the practice of mindfulness lead to an integration of sensorimotor bodily experience with mindful cognitive self-awareness (such that top-down and bottom-up mechanisms complement and amplify each other).

The results of this study suggest a positive influence on both information processing modes, manifesting itself in an improvement in top-down items such as (1) depressive mood, (2) feelings of guilt, (3) suicidal feelings, (7) work and interest, (9) restlessness and agitation and (10) anxiety (psychological symptoms) as well as bottom-up items such as (4, 5, 6) sleep disorders, (8) slowed activity, (11) anxiety (somatic symptoms), (12) gastrointestinal symptoms, (13) general somatic symptoms, (14) loss of libido and (17) weight loss.

The results show that an experience-oriented approach aimed at allowing patients to directly experience their bodily self through mindful touch as well as mindfulness-oriented meta-cognition may have the potential to interrupt negative bottom-up or top-down neurophysiological feedback loops.

5. Outlook

It remains for further research to determine whether the observed improvements were entirely or only partially attributable to the specific methods presented here, that is whether the attention devoted to the patients may also have had a non-specific effect. This could be accomplished with a modified experimental design, aimed for example at comparing the effects of mindfulness-based touch therapy and conversational therapy. Accompanying measurements of biological parameters such as cortisol or oxytocin levels would possibly offer interesting insights into underlying physiological processes.

Regardless of what these processes may be, the observations made in this study demonstrate that mindfulness-based touch therapy in combination with mindfulness practice holds promise as an effective therapy for individuals with depression and deserves further exploration in controlled studies. Another project of interest could

be to investigate and document possible effects towards a reduction in required antidepressant medication, duration of sick leave or hospitalisation.

References

- Alexander, F., & French, T. M. (1946). *Psychoanalytic therapy*. New York, NY: Ronald Press.
- Balint, M. (1981). *Urformen der Liebe und die Technik der Psychoanalyse*. Frankfurt: Ullstein.
- Bick, E. (1968). The experience of the skin in early object relations. *International Journal of Psychoanalysis*, 49, 484–486.
- Bondolfi, G., Jermann, F., der Linden, M. V., Gex-Fabry, M., Bizzini, L., Rouget, B. W., ... Bertschy, G. (2010). Depression relapse prophylaxis with mindfulness-based cognitive therapy: Replication and extension in the Swiss health care system. *Journal of Affective Disorders*, 122(3), 224–231.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1 Attachment*. New York, NY: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2 Separation and anger*. New York, NY: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3 Loss: Sadness and depression*. New York, NY: Basic Books.
- Boyesen, G., & Boyesen, M. L. (1987). *Biodynamik des Lebens*. Essen: Syntesis.
- Brittany, F. E., & Labbé, E. E. (2011). Health care providers' mindfulness and treatment outcomes: A critical review of the research literature. *Journal of Mindfulness*, 2(4), 242–253.
- Bystrova, K., Ivanova, V., Edhborg, M., Matthiesen, A. S., Ransjö-Arvidson, A. B., Mukhamedrakhimov, R., ... Widström, A. M. (2009). Effects on mother–infant interaction one year later. *Journal of Birth*, 36(2), 97–109.
- Cullen-Powell, L. A., Barlow, J. H., & Cushway, D. (2005). Exploring a massage intervention for parents and their children with autism: The implications for bonding and attachment. *Journal of Child Health Care*, 9(4), 245–255.
- Davidson, R. J., & Coleman, D. J. (1974). The role of attention in meditation and hypnosis: A psychobiological perspective on transformation of consciousness. *International Journal of Clinical and Experimental Hypnosis*, 4, 291–308.
- Davidson, R. J., & Fox, N. A. (1989). Frontal brain asymmetry predicts infants' response to maternal separation. *Journal of Abnormal Psychology*, 98, 127–131.
- Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., & Santorelli, S. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Journal of Psychosomatic Medicine*, 65, 564–570.
- Davidson, R. J., Schwartz, G. E., & Rothman, L. P. (1976). Attention style and self-regulation of mode-specific attention: An electroencephalographic study. *Journal of Abnormal Psychology*, 85, 235–238.
- Evans, S., Ferrando, S., Findler, M., Stowell, C., Smart, C., & Haglin, D. (2007). Mindfulness-based cognitive therapy for generalized anxiety disorder. *Journal of Anxiety Disorders*, 22(4), 716–721.
- Ferenczi, S. (1988). *Ohne Sympathie keine Heilung. Das klinische Tagebuch von 1932*. Frankfurt: Hans Huber.
- Field, T. (2001). *Touch*. Cambridge: MIT Press.
- Field, T., Ironson, G., Scafidi, F., Nawrocki, T., Goncalves, A., Buman, I., ... Kun, C. (1969). Massage therapy reduce anxiety and enhances EEG pattern or alertness and math computations. *International Journal of Neuroscience*, 86, 197–205.

- Field, T., Sunshine, S., Hernandez-Reif, M., Quintino, O., Schanberg, S., Kuhn, C., & Burmann, I. (1997). Chronic fatigue syndrome: Massage therapy effects on depression and somatic symptoms in chronic fatigue syndrome. *Journal of Chronic Fatigue Syndrome*, 3, 43–51.
- Gendlin, E. T. (1996). *Focusing-oriented psychotherapy: A manual of the experiential method*. New York, NY: Guilford Press.
- Groddeck, G. (1988). *Verdrängen und Heilen. Ansätze zur Psychoanalyse und zur psychosomatischen Medizin*. Berlin: Fischer.
- Haxton, D., Doering, J., Gingras, L., & Kelly, L. (2012). Implementing skin-to-skin contact at birth using the Iowa model: Applying evidence to practice. *Journal of Nursing for Women's Health*, 16(3), 220–229.
- Hedlund, J. L., & Viewig, B. W. (1979). The Hamilton rating scale for depression: A comprehensive review. *Journal of Operational Psychiatry*, 10, 149–165.
- Hou, W. H., Chiang, P. T., Hsu, T. Y., Chiu, S. Y., & Yen, Y. C. (2010). Treatment effects of massage therapy in depressed people: A meta-analysis. *Journal of Clinical Psychiatry*, 71, 894–901.
- Jütte, R. (2001). *Anweisung für einen Abstieg zur Hölle*. Retrieved from <http://www.community-muenchen.de>; <http://www.deutsche-depressionshilfe.de/stiftung/wissen.php>
- Kabatt-Zinn, J. (1994). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness*. New York, NY: Random House.
- Kabatt-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology: Science and Practice*, 10(2), 133–156.
- Keleman, S. (1986). *Bonding. A somatic-emotional approach to transference*. Berkeley, CA: Center Press.
- Koemeda-Lutz, M., Kaschke, M., Revenstorf, D., Scherrmann, T., Weiss, H., & Soeder, U. (2006). Evaluation der Wirksamkeit von ambulanten Körperpsychotherapien – EWAK, Eine Multizenterstudie in Deutschland und der Schweiz. *Journal für Psychotherapie, Psychosomatik und Medizinische Psychologie*, 56(12), 6–19.
- Kurtz, R. (1990). *Body-centered psychotherapy: The Hakomi method*. Mendocino, CA: Life Rhythm.
- Lowen, A. (1967). *The betrayal of the body*. New York, NY: Macmillan.
- Ma, S. H., & Teasdale, J. (2004). Mindfulness-based cognitive therapy for depression: Replication and exploration of differential relapse prevention effects. *Journal of Consulting and Clinical Psychology*, 72(1), 31–40.
- Marlock, G., & Weiss, H. (2006). *Handbuch der Körperpsychotherapie*. Stuttgart: Schattauer.
- Michalak, J., Heidenreich, T., Meibert, P., & Schulte, D. (2008). Mindfulness predicts relapse/recurrence in major depressive disorder after mindfulness-based cognitive therapy. *Journal of Nervous and Mental Disease*, 196(8), 630–633.
- Montagu, A. (1986). *Touching: The human significance of the skin*. New York, NY: HarperCollins.
- Müller-Oerlinghausen, B., Berg, C., & Droll, W. (2007). Die Slow Stroke Massage als ein körpertherapeutischer Ansatz bei Depression. *Psychiatrische Praxis*, 34(Suppl. 3), 305–308.
- Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. New York, NY: W.W. Norton.
- Ott, U. (2010). *Meditation für Skeptiker*. München: O.W. Barth Verlag.
- Rank, O. (1998). Das Trauma der Geburt und seine Bedeutung für die Psychoanalyse. *Gießen: Journal of Abnormal Psychology*, 98, 127–131.
- Reich, W. (1987). *Die Funktion des Organismus*. Köln: Kiepheuer & Witsch.
- Reich, W. (1989). *Charakteranalyse*. Köln: Kiepheuer & Witsch.
- Schwartz, R. (1995). *Internal family system therapy*. New York, NY: Guilford Press.

- Schwartz, J. M. (1996). Systematic changes in cerebral glucose metabolic rate after successful behavior treatment of obsessive-compulsive disorder. *Archives of General Psychiatry*, 53, 109–113.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York, NY: Guilford Press.
- Siegel, D. J. (2007). *The mindful brain: Reflection and attunement in the cultivation of well-being*. New York, NY: W.W. Norton & Company.
- Splenvins, K., Smith, A., & Simpson, J. (2009). Do improvements in emotional distress correlate with becoming more mindful? A study of older adults. *Journal of Aging and Mental Health*, 13(3), 328–335.
- Teasdale, J. D., Segal, Z. V., Williams, J. M., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive. *Journal of Consulting and Clinical Psychology*, 68(4), 615–623.
- Turp, M. (1999). Touch, enjoyment and health: In infancy. *European Journal of Psychotherapy, Counselling and Health*, 2(1), 19–35.
- Turp, M. (2000). Touch, enjoyment and health: In adult life. *European Journal of Psychotherapy, Counselling and Health*, 3(1), 61–76.
- Vincent, S. (2011). Skin-to-skin contact. Part one: Just an hour of your time. *Journal of the Practising Midwife*, 14(5), 40–41.
- Weiss, H. (2009). The use of mindfulness in psychodynamic and body oriented psychotherapy. *Body, Movement and Dance in Psychotherapy*, 4, 5–16.
- Weiss, H., Harrer, M. E., & Dietz, T. (2010). *Das Achtsamkeitsbuch*. Stuttgart: Klett Cotta.
- Westland, G. (2010). Physical touch in psychotherapy: Why are we not touching more? *Body Movement and Dance in Psychotherapy*, 6, 17–29.
- Williams, J. M., & Kuyken, W. (2012). Mindfulness-based cognitive therapy: A promising new approach to preventing depressive relapse. *British Journal of Psychiatry*, 200(5), 359–360.
- Wittchen, H. U., Jakobi, F., Klose, M., & Ryl, L. (2010). *Gesundheitsberichterstattung des Bundes, Depressive Erkrankungen, Heft 51*. Berlin: Robert Koch Institut.