The effectiveness of body-oriented psychotherapy: A review of the literature

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Introduction

"Body-oriented psychotherapy interventions" is an umbrella term for all psychotherapies "that explicitly use body techniques to strengthen the developing dialogue between patient and psycho-therapist about what is being experienced and perceived ... In most schools of body psychotherapy, the body is considered a means of communication and exploration" (Heller, 2012, p. 1)

Body-oriented or somatic psychotherapy is a very diverse field (Röhricht, 2009; Young, 2011). The common theme is the connection between body and mind and the underlying premise that our relationship to ourselves, others and the world is not only rooted in our mind and thoughts but also in our bodies.

The focus of this literature review is on body-centered and somatic psychotherapies and is structured according to the modalities outlined below. These are the only empirically researched areas in the field (for a detailed description see Appendix 1).

- Body-oriented psychotherapy interventions (including Breathwork, Relaxation Therapies, Sensorimotor Psychotherapy, Somatic Experiencing, Affect-focused Body-Psychotherapy, Body Awareness Group Therapy, Body-oriented Group Psychotherapy, Gerda Boyesen's body psychotherapy)
- Acupoint Tapping Therapies (Emotional Freedom Therapy, Thought Field Therapy)
- Touch Therapies (Healing Touch, Therapeutic Touch)
- Mindfulness-based Therapy

Eye Movement Desensitization and Reprocessing (EMDR)

Mindfulness-based Therapy and Eye Movement Desensitization and Reprocessing are already established modalities and given the large body of existing research and the overlap with other modalities they have been excluded from the current review.

Methodology

The review of international research focused on papers published in the last five years (i.e., 2008 onwards), and the review of Australian literature concentrated on studies published during the last 10 years (i.e., 2003 onwards). Limits were applied to language (English only) and publication type (periodicals, peer reviewed). The databases searched included the Cochrane Library, Google Scholar, Medline, PsycINFO and PubMed. These databases were selected to include a broad search of the literature.

The following search terms were used: body-centered psychotherapy; body-oriented psychotherapy; Radix psychotherapy; breathwork; healing touch; touch therapy; somatic psychotherapy; mind-body or body psychotherapy; combined with effectiveness; efficacy; trial*; evidence-based; intervention; outcome*; study or studies; were employed using Boolean operators 'AND' and 'OR'. Each database was searched separately. Studies were selected using the following inclusion criteria for effectiveness:

- · publication date
- English Language
- meta-analysis of randomised controlled trials
- · randomised controlled trials
- controlled studies without randomisation
- · quasi-experimental studies
- · comparative studies
- · correlation-based studies or

case-control studies

Studies were excluded based on:

- unsound methodology
- non peer-reviewed articles
- narrative studies
- purely descriptive studies

not a primary study

Potentially eligible studies on the effectiveness of body or somatic psychotherapies were included if they met the inclusion criteria.

Effect-size

For effect size calculation, we chose Cohen's d as it allowed immediate comparison with increasingly larger numbers of published studies. <u>Cohen's (1992)</u> suggestion that effect sizes of 0.20 are small, 0.50 is medium, and 0.80 is large enabled us to compare effect-size results to known benchmarks. In studies where effect size was not reported, we calculated Cohen's d as the pre-treatment mean minus the post-treatment mean, divided by the pooled standard deviation.

Body-oriented psychotherapy interventions

This section presents reviews, meta-analyses and empirical studies that met the inclusion criteria outlined above.

Previous reviews and meta-analyses of body-oriented psychotherapy interventions

Seven reviews of body-oriented psychotherapy interventions were found (see Table 1).

Röhricht (2009) empirically evaluated the effect of body-orientated psychotherapy in the treatment of mental disorders. He found that body-oriented psychotherapy has generally good effects on subjectively experienced depressive and anxiety symptoms, somatisation, psychosomatic disorders and social insecurity, as well as improved psychomotor behaviour and social and emotional interaction in people living with schizophrenia.

<u>Ventegodt and Merrick (2009)</u> reviewed 857 records from a combined Medline/PubMed and PsycINFO search and found that non-drug therapies such as psychotherapy, bodywork (without high-energy manipulations), mind-body medicine, body-psychotherapy, sexology, clinical holistic medicine, and complementary and alternative medicine had no significant negative side effects (NNH (number needed to harm) > 18,000). The authors concluded that the likelihood of significant side effects with body-oriented psychotherapy interventions is insignificantly small, compared to the likelihood of having significant side effects with psycho-pharmacologic drugs (NNH=2) (<u>Adams, Awad, Rathbone, & Thornley, 2007</u>)

Another review (Allmer, Ventergodt, Kandel, & Merrick, 2009) investigated the adverse effects of Gerda Boyesen's type of body psychotherapy. They reviewed 13,500 patients who were treated during 1985 and 2005. The review found that at least one in two individuals was helped to improve their quality of life, or physical, psychological, sexual, psychiatric and existential issues. No patient committed suicide or attempted to commit suicide during the treatment.

These reviews indicate that body-oriented psychotherapy interventions provide safe and effective help for clients with physical, mental, sexual, quality of life-related psychological and existential problems as well as suicide prevention (<u>Allmer et al., 2009</u>). The interventions appear to offer promising additional psychotherapeutic tools in areas where traditional talking psychotherapies seem to fail, such as somatoform disorders, medically unexplained syndromes, Posttraumatic Stress Disorder (PTSD), anorexia nervosa and chronic schizophrenia (<u>Röhricht, 2009</u>).

Empirical studies using body-oriented psychotherapy interventions

Seventeen international efficacy studies met the inclusion criteria (see Table 2). The designs used in these studies were: randomised controlled trials (n=10), quasi-experimental (n=1), outcome studies (n=4), comparison study (n=1) and an uncontrolled clinical trial (n=1). No Australian body-oriented or somatic psychotherapy intervention study met the eligibility criteria for this review.

Dejian Mind-Body Intervention

Three randomised controlled trials compared the effect of a Chinese Chan-based Dejian Mind-Body Intervention (DMBI) with Cognitive Behavioral Therapy (CBT). In two of the studies a waitlist group was also included.

In a 2011 randomised controlled trial, Chan, Cheung, Tsui, Sze, and Shi compared the efficacy of DMBI with CBT on improving depressive mood in an adult community sample. Both the DMBI and CBT groups demonstrated significant reduction in depressive mood according to the *Beck Depression Inventory*. However, only the DMBI group demonstrated a significant increase in prefrontal activation asymmetry which suggested an increase in positive affect.

<u>Chan, Wong, Kwong, Han, and Cheung, (2012)</u> conducted a RCT study of the use of DMBI for improving sleep disturbances in patients with major depression. The DMBI group demonstrated significantly reduced ratings by psychiatrists for overall sleep problems after treatment (d=1.00, p < 0.01) and improved total sleep time (d=0.48, p < 0.05), however this was not reflected in the CBT or waitlist groups, which indicates that DMBI can be beneficial for improving sleep outcomes.

A similar group of Chinese researchers, Chan, Wong, Sze, Kwong, Han, and Cheung, conducted a RCT in 2012 comparing the effect of DMBI with CBT and waitlist, examining improving depressive symptoms in patients with depression. Both groups showed a significant reduction in the overall depressive syndrome after the intervention (CBT, d=1.03, p<0.01 and DMBI, d=0.93, p<0.01). Furthermore, the DMBI group demonstrated a significant reduction in gastrointestinal health, which was not seen in the other two groups.

Dohsa-hou relaxation

In an explorative study, <u>Fujino (2012)</u> investigated the effects of Dohsa-hou relaxation on body awareness and psychological distress. The results indicate significant differences between the Dohsa-hou relaxation and control groups in walking and standing awareness, bodily distress, awareness of bodily feeling, and psychological distress.

Functional relaxation is an effective treatment for somatisation (<u>Lahmann, Loew, Tritt, & Nickel, 2008</u>), asthma (<u>Lahmann, Nickel, Schuster, Sauer, Ronel, Noll-Hussong, Tritt, Nowak, Röhricht, & Loew, 2009</u>) and Irritable Bowel Syndrome (<u>Lahmann, Röhricht, Sauer, Ronel, Noll-Hussong, Henrich, Nickel, Tritt, K. & Loew, 2010</u>).

Progressive Muscle Relaxation Technique

A quasi-experimental study investigated the effect of Progressive Muscle Relaxation Technique on health-related quality of life in Multiple Sclerosis patients (<u>Ghafari, Ahmadi, Nabavi, Anoshirvan, Memarian, & Rafatbakhsh, 2009</u>). Participants were equally assigned to experimental or control groups (either usual care or waitlist). The experimental group received 63 progressive muscle relaxation sessions over two months,

while the control group received no intervention. The results indicate that progressive muscle relaxation significantly improved physical well-being and mental functioning, which remained stable after the two month follow up.

Mind-body interventions

Gordon and colleagues, (2008) conducted a random controlled trial investigating the effects of mind-body interventions (including meditation, biofeedback, autogenic training, guided imagery, movement, and breathing techniques) on war-exposed Kosovar high school students. The adolescents showed significantly lower symptoms of PTSD compared to the initial values. The lower PTSD symptoms remained for over a year after the group finished, whereas PTSD symptoms increased for the students who did not participate.

Functional relaxation

A German trial (<u>Lahmann, Loew, Tritt & Nickel, 2008</u>) assessed the effect of Functional Relaxation in participants with non-specific chest pain. Participants received 10 sessions of Funtional Relaxation and a 60-minute education session in the treatment of non-specific chest pain. After treatment, there were significantly reduced ratings in psychosomatic strain, anxiety scores and cardiovascular complaints.

Lahman and colleagues (2009) randomised asthmatic patients to receive either Functional Relaxation, Guided Imagery, both treatments combined or a placebo relaxation technique as the control intervention (CI). Results showed that Functional Relaxation had a positive effect on lung parameters in patients with bronchial asthma and that these remained stable at a four month follow-up.

<u>Lahmann, Röhricht, Sauer, Noll-Hussong, Ronel, Henrich, and Loew (2010)</u> then examined Functional Relaxation as a complementary therapy for Irritable Bowel Syndrome (IBS) where participants were randomly allocated to either relaxation sessions or to enhanced medical care. Functional Relaxation seemed to decrease bodily complaints associated with IBS (d=0.85, p < 0.01) which remained stable over a three month follow-up (d=0.48, p < 0.05).

Sensorimotor psychotherapy

Ten women with a history of childhood abuse participated in a pilot study that explored the effects of Sensorimotor Psychotherapy on interpersonal trauma (<u>Langmuir, Kirsh, & Classen, 2012</u>). Results of the study provided preliminary evidence of the effectiveness of Sensorimotor Psychotherapy in reducing trauma-related symptoms. Twenty weeks of group therapy resulted in a significant improvement in body awareness, which remained at the six month follow-up. However, there was no significant change in somatic aspects of dissociation, dissociative experiences and the receptivity to soothing.

Somatic experiencing/Trauma resiliency model

A US comparison study (Leitch, Vanslyke & Allen, 2009) examined a group of social service workers who were given Somatic Experiencing/Trauma Resiliency treatments to relieve the effects of *secondary trauma* after treating people affected by Hurricane Katrina.

The researchers administered Somatic Experiencing/Trauma Resiliency therapy and psychoeducation against a matched comparison group. Significant differences between the treatment and comparison group were found for PTSD symptoms, psychological distress factor and resiliency, but not for coping or the physical symptoms factor of the *Somatization* and *Anxiety* of the *Symptom Checklist* (*SCL-90-R*).

Body awareness group therapy

A Norwegian investigative study (<u>Leirvåg</u>, <u>Pedersen & Karterud</u>, <u>2010</u>) compared the treatment effects of psychodynamic group therapy and body awareness group therapy. Female patients diagnosed with severe personality disorders (comprising *avoidant*, *borderline*, *dependent*, *obsessive—compulsive*, *histrionic*, *paranoid*) were given psychodynamic group therapy whilst another group received body awareness group therapy. The average length of outpatient therapy was 24 and 25 months respectively. The magnitude of change on the *Global Assessment of Functioning* (GAF) and *Circumplex of Interpersonal Problems* (CIP) was significantly higher in the body awareness therapy sample compared with the psychodynamic therapy sample who displayed only minor changes after outpatient treatment. Results showed that patients receiving BAGT improved significantly on GAF and CIP and remained stable after 25 months of follow up. They also reported high ratings of satisfaction with therapy and group climate at the end of outpatient treatment.

Affect-focused body-psychotherapy

A Swedish randomized controlled trial (<u>Levy Berg, Sandell & Sandahl, 2009</u>) examined the effects of Affect-focused body-psychotherapy on Generalized Anxiety Disorder (GAD). Participants diagnosed with GAD were randomized into Affect-focused body-psychotherapy or psychiatric treatment as usual. Affect-focused body-psychotherapy patients were seen for an average of 37 sessions over one year, while treatment length for the control condition varied. Affect-focused body-psychotherapy was found to significantly reduce anxiety while participants' sense of well-being increased (d=0.71, p < 0.1). The changes remained stable at the one year follow up. Although patients in the Affect-focused body-psychotherapy condition experienced significantly greater reductions in general psychiatric symptoms, differences in anxiety were not significant between the two groups at follow up.

Color breathwork method

A pilot study using a one-group pre and post test design (<u>Sand-Jecklin, 2008</u>) investigated the effects of a single relaxation session called the Color breathwork method on patients' anxiety levels. Women scheduled for a gynaecology examination received a

single session of Color breathwork method. It was found that the intervention significantly reduced anxiety, systolic blood pressure, diastolic blood pressure and heart rate.

Body-oriented group psychotherapy

Three studies investigated the effect of body-oriented group psychotherapy. Röhricht, Papadopoulos, Suzuki, and Priebe (2009) investigated the effect of body-oriented group psychotherapy on symptoms of schizophrenia. Outpatients with persistent negative symptoms of schizophrenia (blunted affect, emotional withdrawal, poor rapport, passive/apathetic social withdrawal, difficulty in abstract thinking, lack of spontaneity and flow of conversation, stereotyped thinking) received 20 sessions of 90 minutes duration of body-oriented group psychotherapy, while the comparison group received supportive counseling. The body-oriented psychotherapy sample showed significantly lower negative symptoms post -therapy compared to the supportive counselling sample. The pre-post treatment comparison for the body-oriented psychotherapy sample also revealed significant improvement in ego-pathology scores for the subscales 'body', 'activity', 'consistency', and 'demarcation'.

Similarly, in their uncontrolled trial, <u>Röhricht, Papadopoulos, Holden, Clarke, and Priebe</u> (2011) found that body-oriented group psychotherapy was associated with reduced marked negative symptoms in participants with chronic schizophrenia. Their results showed a significant reduction from pre-post therapy in the negative symptoms of emotional withdrawal, motor retardation, uncooperativeness and blunted affect.

A recent randomised control trial evaluated the effectiveness of body-oriented group psychotherapy on chronic depression ($R\ddot{o}$ hricht, Papadopoulos & Priebe, 2013). Thirty-one participants were included in the trial, and of these 21 received the body-oriented group psychotherapy intervention. The control group received treatment as usual. The results indicate that body-oriented group psychotherapy significantly improved core symptoms of chronic depression (d=0.93, p < 0.05) in comparison with the control group which showed no changes from pre to post assessment.

Effective interventions summary

All of the reviewed studies employed valid and reliable assessments such as the Beck Anxiety Inventory (Levy Berg et al., 2009), Hamilton Rating Scale for Depression (Chan et al., 2012; Röhricht, et al., 2013), Harvard Trauma Questionnaire (Gordon, Staples, Blyta, Bytyqi, & Wilson, 2008), the PTSD checklist (Leitch et al., 2009), Positive and Negative Syndrome Scale for Schizophrenia (Röhricht et al., 2009; 2011) and Symptom Checklist (Leitch et al., 2009; Levy Berg et al., 2009) as called for in APA standards, to measure symptom levels before and after treatment to determine any decrease with treatment (Church, 2013). Several of the studies outlined above have large effect-sizes, which indicates the effectiveness of body-oriented psychotherapy as treatment for certain psychosomatic and/or physiological disorders. These can be summarised as:

- The Chinese Chan-based Dejian mind-body intervention is an effective treatment for depression (<u>Chan et al., 2012</u>) and sleep disturbances in depressive patients (<u>Chan et al., 2011</u>).
- Mind-body interventions (meditation, biofeedback, autogenic training, guided imagery, movement, and breathing techniques) are an effective treatment for PTSD (Gordon et al., 2008).
- Affect-focused body-psychotherapy is an effective treatment for anxiety (<u>Levy</u> <u>Berg et al., 2009</u>).
- Body awareness group therapy is an effective treatment for personality disorders (<u>Leirvåg et al., 2010</u>).
- Color Breathwork Method is an effective treatment for anxiety (<u>Sand-Jecklin</u>, <u>2008</u>).

Body-oriented group psychotherapy is an effective treatment for schizophrenia (<u>Röhricht, et al., 2009</u>; <u>2011</u>) and depression (<u>Röhricht, et al., 2013</u>).

Although these empirical studies indicate that body-orientated therapy interventions are effective for treating somatization, anxiety symptoms, PTSD and schizophrenia, there is a need for further rigorous research to increase the generalisability of results on body-oriented interventions with larger sample sizes and controlled conditions.

Acupoint stimulation

Acupoint stimulation has been shown to release serotonin (Ruden, 2005) to normalise brainwave patterns (Diepold & Goldstein, 2009) and to reduce blood cortisol levels (Church, Yount & Brooks, 2012; Feinstein & Church, 2010). Feinstein (2012) suggests that brain imaging studies provide a possible explanation of how acupoint tapping reduces stress levels and regulates emotions. A ten year research program at Harvard Medical School Neuroimaging confirmed that stimulating certain meridian points produced decreased activity in the amygdala, hippocampus and other brain areas associated with fear (Hui, Liu, Marina, Napadow, Haselgrove, Kwong & Makris, 2005). This finding was supported by further research that linked acupuncture to extensive deactivation of the limbic-paralimbic-neocortical system (Fang, Jin, Wang, Li, Kong, Nixon & Hui, 2009).

Systematic reviews on acupoint stimulation

Seven systematic reviews on acupoint stimulation/tapping have been identified (see Table 3). Previous reviews have covered the efficacy of acupoint stimulation (<u>Feinstein, 2012</u>), the underlying physiological mechanism of energy therapies (<u>Lane, 2009</u>), its application for PTSD (<u>Feinstein, 2008; 2010</u>) and its validation as an evidence-based clinical practice (<u>Church, 2013</u>).

The reviews concluded that a considerable body of research has validated acupoint simulation as an efficacious or probably efficacious treatment for several conditions according to APA standards. These conditions include phobias, PTSD, anxiety, food

cravings, physical pain, athletic performance and depression (<u>Church, 2013</u>; <u>Feinstein, 2012</u>). The results of neuroimaging studies of acupoint stimulation suggest that tapping sends signals to the amygdala and other brain structures that rapidly reduce hyperarousal (<u>Fang et al., 2009</u>; <u>Hui et al., 2005</u>).

Touch therapies

Physical touch plays an important role in the healing practices and religious ceremonies of various cultures, and many research studies have validated the importance of touch for physical and emotional well-being (<u>Hunter & Struve, 1998</u>; <u>Levitan & Johnson, 1986</u>; <u>Miller, 1997</u>). Touch therapies are often used in collaboration with other approaches to health and healing. Similarly, most somatic and body psychotherapists regularly use touch as part of their interventions.

The most widely used touch therapies are Healing Touch and Therapeutic Touch. Both therapies are forms of biofield energy therapy. The term biofield describes the concept that humans are surrounded by an energy field formed by the body, mind, and emotions. This energy can be manipulated or changed for the purpose of healing (<u>Anderson & Taylor, 2011</u>).

Recent studies suggest that touch therapies may be effective in treating pain (<u>So, Jiang, Quin, 2008</u>), PTSD (<u>Jain,McMahon, Hasen, Kozub, Porter, King, & Guarner, 2012</u>), symptom relief in patients with cancer (<u>Wilkinson, Barnes, & Storey, 2008</u>), reduction in symptoms of clinical depression (<u>Stötter, Mitschea, Endler, Oleksy, Kamenschek, Mosgoellerd & Haring, 2013</u>) and providing psychological support (<u>Jones & Glover, 2012</u>).

Systematic reviews of touch therapies

Four systematic reviews of touch therapies have been identified (see Table 4). Bonitz (2008) provides a comprehensive review of how therapists in traditional verbal psychotherapy used physical touch with their clients over the last century. Studies on the frequency of the use of nonsexual touch (for example, hugging, shaking, or holding hands) yielded mixed results. In a psychotherapeutic setting, touch can have considerable healing effects; however there is a risk that clients may misinterpret the touch and the possibility of fostering dependency. The author concludes with practical recommendations for maximizing the potential benefits while maintaining appropriate safeguards to protect the welfare of both clients and therapists. Bonitz notes the importance of having a clear rationale for using touch and that it should be embedded in a larger therapeutic context, where permission is always requested and the clients are made aware that they have the right to refuse. The potential for erotic transference and countertransference reactions also need to be considered and assessed appropriately. Additionally, client characteristics (diagnosis, developmental history, prior experience with touch, or sexual abuse history) need to be considered when deciding whether touch therapy is appropriate.

A Cochrane review (<u>So et al., 2008</u>) found significant effects for touch therapies (Healing Touch, Therapeutic Touch and Reiki) in reducing pain intensity compared to "sham touch" and no-treatment control groups. The review found studies involving experienced practitioners tended to yield greater effects in pain reduction. The greatest effects on pain reduction were found in studies of highly experienced Reiki practitioners. Although the Cochrane study was inconclusive due to the lack of sufficient data, existing evidence supports the use of touch therapies in pain relief.

Another literature review explored the duality of touch and talk between therapist and client in the psychotherapy setting (Phelan, 2009). Phelan's research identifies several modalities in which the application of touch and contact are integrated within a therapeutic framework. These modalities include Thought field therapy, Gestalt therapy, and various forms of body-oriented psychotherapy. Clients' responses to touch are based on a complex interaction of perceived intention, expectation and prior experience. Touch as a therapeutic intervention appears to be effective and in turn leads to greater self esteem and reinforces trust and bonding between client and therapist. Clients were found to perceive touch as nurturing and communication enhancing. However, when clients perceived the touch as being used for the therapist's own well-being, negative outcomes were reported, such as feeling trapped and guilty. Phelan concludes that guidelines around the appropriate use of touch in therapy need to be included in clinical training programs and continuing education forums (2009).

A systematic review of randomised control trials of Healing Touch was performed by Anderson and Taylor (2011). Five studies were selected from 332 potential studies based on inclusion criteria (random assignment, Healing Touch as a single intervention, and Healing Touch with a comparison group) and exclusion criteria (no statistical information reported, methodology not aimed at outcomes, or Healing Touch was used as part of a complex intervention). The findings suggest no known side effects of Healing Touch and a significant decrease in heart rate, respiratory rate, blood pressure, pain and total mood disturbances, although none of these variables were associated with statistical evidence. Limitations include the fact that many biofield practitioners have no research expertise and therefore studies may lack scientific rigor.

While there is evidence that touch therapies may be effective in decreasing heart rate, respiratory rate, blood pressure, pain, and total mood disturbances, there is a need for more high quality studies in this area.

Empirical studies using touch therapies

Only two empirical touch therapy studies (see Table 5) met the eligibility criteria for this review and fit within the psychotherapeutic framework.

Healing Touch effects on PTSD

A US randomised control trial (<u>Jain et al., 2012</u>) looked at whether complementary medicine interventions (Healing Touch and Healing Touch with Guided Imagery) reduced PTSD symptoms compared to treatment as usual. The participants were post-deployed

from a combat zone and suffered from PTSD symptoms. Participants randomised to the Healing Touch with Guided Imagery condition experienced a significant drop in PTSD symptoms (d=0.85, p < 0.01) and in depression (d=0.70, p < 0.01) as well as improved quality of life and reduced cynicism. Limitations include the lack of follow-up and control group as well as the combined therapy interventions, all of which weaken the validity of the study.

Mindfulness-based touch and depression

An Austrian study (Stötter et al., 2013) explored the effects of mindfulness-based touch therapy, in combination with mindfulness practice in patients with moderate recurring or episodic depression. The outcome was highly significant with a general alleviation of depressed mood (d=2.04, p <.01), reduction in feelings of guilt (d=1.07, p <.01), suicidal thoughts (d=1.62, p <.01) sleep maintenance disorders (d=1.18, p <.01); increase in motivation in carrying out everyday activities (d=1.31, p <.01), reduction in feelings of anxiety at both psychological (d=2.68, p <.01) and somatic levels (d=1.45, p <.01) and easing of general somatic symptoms (d=1.56, p <.01). Limitations are due the relatively small sample size and the lack of follow-up.

The studies summarised above provide promising results for touch therapies as an effective intervention for PTSD and depression, although higher quality research is needed with different populations. Future studies need to focus on establishing the efficacy of touch therapy as a single intervention.

Conclusion

The aim of this literature review was to determine the effectiveness of body-oriented psychotherapy interventions. The review focused on body-centred, somatic, body-oriented and mind-body therapy efficacy studies and include only those studies that potentially meet American Psychiatric Association (APA) criteria.

While the review set out to include Australian research within the last ten years, apart from three acupoint studies (<u>Stapleton, Sheldon, Porter & Whitty, 2011</u>; <u>Stapleton, Sheldon & Porter, 2012</u>; <u>Stapleton, Church, Sheldon, Porter & Carlopio, 2013</u>) which had already been included in two previous reviews (<u>Church, 2013</u>; <u>Feinstein, 2012</u>), no other Australian studies met the inclusion criteria.

The international effectiveness studies on body-oriented psychotherapy interventions were predominantly European and American. Modalities included breathwork, relaxation therapies, sensorimotor psychotherapy, somatic experiencing, affect-focused body-psychotherapy, body awareness and body-oriented group therapy, body oriented group psychotherapy and touch therapies. Progress has been made by the UK National Institute of Health and Care Excellence in incorporating body-oriented psychotherapy in the guidelines for treatment of schizophrenia (Röhricht, 2009).

Body-oriented psychotherapy interventions have been demonstrated to be effective with different populations and settings (<u>Loew, Tritt, Lahmann & Röhricht, 2006</u>; <u>Röhricht, 2009</u>). However, in comparison with established modalities such as EMDR, Mindfulness-based therapy and acupoint stimulation, body-oriented psychotherapy interventions require further empirical research to be deemed effective according to the APA standards. A difficulty in standardising treatments and comparing effectiveness is that body-oriented psychotherapy includes a range of different approaches and protocols.

As <u>Röhricht (2009)</u> recommends, from a scientific perspective, further research on the interface between neuroscience and psychotherapy should be conducted, in order to understand the therapeutic processes in body oriented psychotherapy interventions more fully, particularly with regard to emotional processing, movement behaviour and body/self perception.

Additionally, more qualitative research is needed to further investigate the unique interactive therapeutic relationships in body-oriented psychotherapy, the dynamics of touch in psychotherapy and the additional self-helping potential of creative/arts therapy components. Once these requirements are fulfilled, body-oriented psychotherapy interventions could be established as one of the main psychotherapeutic modalities in clinical care, alongside other mainstream schools such as psychodynamic, cognitive-behavioural and systemic psychotherapies.

Randomised controlled trials are regarded as the gold standard of research and are the type of experimental design usually used to evaluate a therapy against APA standards; consequently more trials are needed in body-oriented psychotherapy evidence-based research. However, randomised controlled trials may not necessarily be the best form of research for the more human-oriented and psychosocial sciences, given that the effectiveness of body-oriented psychotherapies is strongly dependent on the interpersonal relations within the therapeutic context (Slade & Priebe, 2001). Slade and Priebe (2001, p. 287) questioned: "Are randomised controlled trials the only gold that glitters?" They proposed that:

Mental health research needs to span both the natural and social sciences. Evidence based on RCTs has an important place, but to adapt concepts from only one body of knowledge is to neglect the contribution that other well-established methodologies can make (Slade & Priebe, 2001, p. 287).

Conflict of Interests

Alexandra Bloch-Atefi and Julie Smith confirm that there are no known conflict of interests associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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Appendix 1

Description of the modalities

Body-oriented psychotherapy interventions

Gerda Boyesen's bodypsychotherapy

Gerda Boyesen's body psychotherapy includes a combination of intensive psychodynamic psychotherapy with therapeutic bodywork, healing massage, acupressure and body-energy-work. This psychodynamic body psychotherapy is of the Jungian and Reichian type, with focus on archetypes, energy, charkas, and the human collective unconscious. The bodywork is of the psychodramatic type, where central gestalts of life – birth, all kinds of human interactions and finally death – are confronted, and old repressed emotions released (Allmer et al., 2009, p. 286).

Functional Relaxation (FR)

FR is a commonly-used method in psychosomatic medicine in German-speaking countries. It combines a body and symptom-centered approach, together with a psychodynamic and analytically-oriented background. This treatment modality is therefore not only a relaxation, but also a psychotherapeutic technique (<u>Lahmann et al., 2008</u>).

Chinese Chan-based Dejian Mind-Body Intervention (DMBI)

DMBI was developed upon the medical principle of the Shaolin Temple. The intervention consists of psychosocial education, mind-body exercises, and diet modification (<u>Chan et al., 2011</u>).

Dohsa-hou relaxation

Dohsa-hou is a Japanese body-oriented psychotherapy that works with relaxation techniques, posture and movement (<u>Fujino</u>, <u>2012</u>).

Somatic Experiencing/Trauma Resiliency (SE)

SE is an integrative (mind-body) approach developed by <u>Peter A. Levine (1997, 2005)</u> that focuses on identifying the psychophysiological patterns that underlie the traumatic responses (<u>Leitch et al., 2009</u>). SE develops sensory resources (e.g., places in the body that do not feel pain but feel strong) that help the client feel safe in developing sensory awareness and the corresponding self-regulation (<u>Leitch et al., 2009, p. 11</u>).

Sensorimotor Psychotherapy

Sensorimotor Psychotherapy is a body-oriented talking therapy that integrates verbal techniques with body-centered interventions such as mindfulness. It incorporates theory and technique from psychodynamic psychotherapy, cognitive-behavioral therapy, neuroscience, and theories of attachment and dissociation. Clients are taught how to use their somatic awareness to reduce their trauma-related symptoms and improve their affect regulation skills (Langmuir et al., 2012).

Color Breathwork Method (CMB)

CBM is a holistic intervention that combines the relaxation techniques of breathing, muscle group relaxation, and visualization (<u>Barry, 1996</u>).

Affect-focused body-psychotherapy

Affect-focused body-psychotherapy is a combination of bodily intervention developed in Psychomotor Physiotherapy with a focus on affect exploration which aims to increase the tolerance for affects in general and anxiety in particular (Monsen & Monsen, 2000).

Body awareness group therapy (BAGT)

The intention of BAGT is to improve the clients' emotional and bodily awareness, their verbalising capacity and their interpersonal and psychomotor function. The therapy approach consists of individual exercises such as grounding, bodily relaxation and free

breathing as well as partner and group activities (<u>Skatteboe, Friis, Hope, & Vaglum,</u> 1989).

Body-oriented group psychotherapy (BPT)

BPT incorporates movement/exercises and sensory awareness techniques to improve affect regulation and address suppressed negative and aggressive impulses (Roehricht et al., 2013)

Acupoint stimulation

Acupoint stimulation refers to a number of related energy therapies that are based on kinesiology and the Chinese Meridian system of medicine. The most widely practised are "Thought Field Therapy" (TFT) (Callahan & Callahan, 1997), the "Tapas Acupressure Technique" (TAT) by Tapas Fleming (Fleming, 1996), and the "Emotional Freedom Technique" (EFT) (Craig, 2010). Although these therapies employ different protocols, they share mindful exposure to traumatic memories combined with simultaneous acupoint stimulation.

Thought Field Therapy (TFT)

In TFT there are prescribed series of acupuncture points (so called algorithms) to tap on for each problem (<u>Callahan & Callahan, 1996</u>). Each algorithm is designed to treat a specific emotion such as panic, anxiety, phobia, addictive urges, anger, and more. The TFT practitioner uses muscle testing to determine meridian disturbances and instructs the person to gently tap on acupuncture points in the prescribed sequence to treat psychological problems.

Emotional Freedom Technique (EFT)

EFT is an exposure therapy combining cognitive and somatic elements. The cognitive element involves self-assessment of the degree of distress, and the pairing of an exposure statement and a self-acceptance statement. The somatic portion of an EFT treatment consists of the subject rubbing or tapping 12 acupressure points on the body with one or two fingertips (<u>Craig, 2010</u>).

Tapas Acupressure Technique

The TAT procedure combines acupressure with specific mental focuses, altering the energy patterns stored in the body. It uses touch at acupoints and other places on the head and focuses the mind on an issue, but does not incorporate a counteracting affirmation (Fleming, 1996).

Touch therapies

Touch therapies are practiced by either light touch, near touch, or self-directed mindful meditation (<u>Kerr, Wasserman, & Moore, 2007</u>). The mechanism is repeated sensory input, relaxation, attentional modulation, and behavioural relevance that has proven

efficacy in many trials (Kerr et al., 2007).

Healing Touch (HT)

HT uses non-invasive techniques that utilise the hands and gentle touch to clear, energise, and balance the human and environmental energy fields, thus affecting physical, emotional, mental, and spiritual health to facilitate healing (Mentgen, 2001). HT can reduce anxiety and stress, promote self-empowerment, and enhance spiritual development (Van Aken & Taylor, 2010).

Therapeutic Touch (TT)

TT was first developed in the 1970s by Dolores Krieger, then a nursing professor at New York University and Dora Kunz, a lay healer. Since its introduction, TT has gained widespread support in over 75 countries (Krieger, 1993). Previous studies have reported that TT can reduce anxiety in the elderly (Lin & Taylor, 1998) as well as in burn patients (Turner, Clark, Gauthier, & Williams 1998). Other studies have found no significant differences in the reduction of anxiety when TT is compared to control conditions such as mimic TT and routine treatment (Hale, 1986).

Mindfulness-based touch therapy

The intervention is comprised of touch exercises for deepened bodily awareness and gentle massage techniques based on experiences from Buddhist mindfulness practice, *Mindfulness-based stress reduction* (Kabat-Zinn, 2003), the Hakomi method (Kurtz, 1990) and various forms of massage and body work.

Mindfulness-based Therapy and Eye Movement Desensitization and Reprocessing

Mindfulness-based Therapy (MBT)

MBT represents a clinical integration of mindfulness and western psychotherapies. Based on ancient eastern meditation and yoga traditions, MBT programs involve the key element of non-judgemental observation of feelings, thoughts, external stimuli from the environment, physical pain or psychological distress (<u>Kabat-Zinn, 1990</u>). Participants are gradually taught to become more aware of their own body, and to use this awareness to process and regulate emotions and intense bodily sensations.

Eye Movement Desensitization and Reprocessing (EMDR)

EMDR is, a therapeutic approach introduced by Shapiro in 1987, EMDR integrates techniques from cognitive behavioural, psychodynamic, and body-oriented therapies as well as bilateral stimulation via eye movements, auditory tones, or hand taps. A core

feature of EMDR therapy is that the patient is asked to hold a disturbing memory in mind while engaging in sets of eye movements or other bilateral stimuli, such as taps or tones (<u>Lee & Cuijpers</u>, 2013).

Appendices 2-6

Download the The effectiveness of body-oriented psychotherapy: A review of the literature tables

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