

A tale of two therapies: psychotherapy and complementary and alternative medicine (CAM) and the human effect

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ABSTRACT – Meta-analyses show that psychotherapy and complementary and alternative medicine (CAM) are effective primarily or entirely due to contextual factors rather than the specific disease-treating factors suggested by the therapy. Therapists are the most important contextual factor. Psychotherapy research shows that therapist effectiveness varies from zero to about 80%, but has failed to identify what makes a good (ie charismatic) therapist. Therapist effects are unrelated to experience or training or type of therapy. The conclusion that CAM and psychotherapy are effective due to the human effect leads to more questions than it answers. We do not know what charismatic therapists communicate to patients, we do not know the mechanism of communication, and we do not know how this communication influences the patient therapeutically. The therapist matters, but how or why we do not know. We need a better understanding of therapist effects, in psychotherapy, in CAM and also amongst physicians.

KEY WORDS: CAM, common factors, complementary and alternative medicine, context, efficacy, meta-analysis, psychotherapy, therapist effects

Psychotherapy and complementary and alternative medicine (CAM) are both popular but controversial therapies and both involve quality therapist–patient contact. The increasing popularity of CAM¹ is matched by a reduction in the use of psychotherapy.² Research into psychotherapy is better established: there are about five times as many psychotherapy publications as there are on CAM (Box 1). This paper uses meta-analyses to: (a) draw attention to similarities in the ‘research stories’ of these two therapies, and (b) come to some conclusions about the human effect in therapy.

The psychotherapy research story

In any psychotherapy, two types of factor can have a therapeutic effect: specific factors and incidental (or non-specific) factors. The specific factors are specific to a particular psychotherapy, they correct the

assumed underlying pathology, and are commonly assumed to be the major contributor to therapeutic outcome. For example, in cognitive behavioural therapy (CBT), the underlying pathology is assumed to be erroneous cognitions, and the specific factors are the therapist–patient interactions that correct those erroneous cognitions. The incidental factors are factors that are incidental to the process of delivering the specific factors. They include emotional contact with the patient, a shared interpretation of the problem, and expectancy of a positive outcome. Because the incidental aspects are common across all psychotherapies, they are also known as common factors.

The majority of research in psychotherapy is designed to demonstrate the superiority of one set of specific factors over another or in contrast to the common factors. Many studies demonstrate superiority. However, efficacy research in psychotherapy is confounded by the researcher’s allegiance to a therapy (and consequently the therapist’s allegiance), and allegiance correlates with outcome. When allegiance is taken into account, meta-analyses lead to the conclusion that all psychotherapies are equally effective. This finding was first proposed in 1936³ and is known as the Dodo bird effect (the authors quote from *Alice in Wonderland*, ‘At last the Dodo said, “Everybody has won and all must have prizes”). The Dodo bird effect is a consistent finding of meta-analyses.^{4–8}

There are two responses to the Dodo bird effect. The first is to argue that all specific factors are

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Key Points

Both psychotherapy and complementary and alternative medicine (CAM) provide a context that enhances the patient’s ability to self-heal

The therapist, not the therapy, is the important factor

We do not understand why some therapists have a much greater therapeutic effect than other therapists

To protect the public in the use of CAM, we should evaluate therapist outcomes, not the efficacy of therapies nor whether therapists have had sufficient training

Because modern medicine has specific effects, the human effect of physicians receives insufficient attention

effective, but patient characteristics determine which is effective in a given situation. Therapists use a variety of techniques 'without necessarily subscribing to the theories that spawned them'.⁹ This response is called *technical eclecticism* or *integration*^{9,10} and is consistent with the observation that psychotherapists tend to be pragmatic and use whatever techniques are appropriate for dealing with a particular case. The second response is to argue that none of the specific factors are effective

Box 1. Psychotherapy and complementary and alternative medicine research: an overview.

Psychotherapy

Number of therapies: about 250⁷

Number of publications since 1987: 105,224

Number of publications since 1899: 184,180

(Based on the following search terms entered into PsychInfo: Psychotherapy or counselling or counseling or psychoanalysis or analytic psychology or psychodynamic or cognitive behaviour therapy or cognitive behavior therapy or Rogerian therapy or client centered therapy or client centred therapy or existential therapy or humanistic therapy or behaviour therapy or behavior therapy.)

Types of psychotherapy

There are four main types or theoretical orientations:

Psychodynamic: psychopathology is due to conflicts involving the unconscious mind.

Behavioural: psychopathology is due to incorrect learning.

Cognitive: psychopathology is due to incorrect cognitions.

Humanistic/phenomenological/existential: psychopathology is due to failure to be true to oneself: people self-heal if the circumstances are right.

Complementary and alternative medicine (CAM)

Number of therapies: about 47 plus at least 42 herbal remedies⁴¹

Number of publications since 1987: 30,656

(Based on the following search terms entered into AMED: Complementary and alternative medicine or complementary medicine or alternative medicine or herbal or chiropractic or osteopathy or cranio-sacral therapy or acupuncture or Chinese medicine or Ayurvedic medicine or homeopathy or Bach flower or flower essence or spiritual healing or Reiki or naturopathy or massage or aromatherapy or Alexander technique.)

Types of CAM

The House of Lords report⁶⁴ suggests three categories of CAM:

Category 1 consists of those that have an individual diagnostic approach and are the principal therapies: osteopathy, chiropractic, herbal medicine homeopathy, acupuncture.

Category 2 consists of those 'most often used to complement conventional medicine and do not purport to embrace diagnostic skills'. These include massage, aromatherapy, Alexander technique, meditation, reflexology and hypnotherapy.*

Category 3 consists of those that 'purport to offer diagnostic information as well as treatment and which, in general, favour a philosophical approach and are indifferent to the scientific principles of conventional medicine, and through which various and disparate frameworks of disease causation and its management are proposed'. Crystal healing, radionics, naturopathy, Ayurvedic medicine, and Chinese herbal medicine are included.

*Note: Hypnotherapy is a technique used by some psychotherapists who reject the label of CAM. It is also practised as a technique outside the psychotherapeutic framework.

as the therapeutic outcome depends on the incidental factors that are common to all therapies. This second response is called the *contextual model* of psychotherapy.

Despite the professional appeal of specificity or eclecticism, several kinds of research data support the contextual model. For example, in a typical dismantling study, Jacobson *et al*¹¹ identified three components of CBT, and then delivered therapy under three parallel conditions:

- (a) behavioural activation
- (b) behavioural activation plus coping skills to manage thoughts
- (c) all components of CBT that included, in addition, coping skills to identify and modify dysfunctional schemas.

There were no differences in outcome between these conditions, which suggests that the cognitive component of CBT is not necessary for successful outcome. A meta-analysis of dismantling studies failed to support any specific hypothesis.¹² Other data supporting the common factors model include the demonstration of large inter-therapist differences (ie that outcome depends far more on the therapist than the therapy),^{13,14} and the finding that training is not associated with outcome.^{13,14} Wampold⁷ concludes from his extensive review:

The evidence indicates that, at most, specific ingredients account for only 1% of the variance in outcomes. Decades of psychotherapy research have failed to find a scintilla of evidence that any specific ingredient is necessary for therapeutic change.

The most commonly accepted theoretical rationale for the contextual model is that of the therapeutic alliance,¹⁵ which comprises three factors:

- the therapeutic bond between therapist and patient
- the expectancy that the patient has of a positive outcome (also called the placebo effect)
- the shared goals of the therapist and patient (ie where the patient accepts that change is needed and is prepared to try to change).

A meta-analysis suggests that scales measuring therapeutic alliance correlate only modestly with outcome ($r =$ about 0.2).¹⁵

The contextual model suggests that the incidental factors are so intertwined that they cannot be separated out either clinically or statistically. Nevertheless, attempts have been made to provide estimates of the effect on outcome of various components (Table 1). Whatever one's views on specific versus contextual models (views differ), the data are clear: in clinical practice it is the incidental not the specific factors that matter most.

The contextual model of psychotherapy is associated with a humanistic perspective (Box 1), and has four main features:

- 1 There is no attempt to diagnose or correct a pathology.
- 2 There is an assumption that people are self-healing when placed in the right context.¹⁶
- 3 The therapeutic context is multifaceted but crucially involves the relationship with the therapist.^{16,17}
- 4 The patient perceives the context holistically, so the relation between the incidental factors and the patient's percept is complex.⁷

Table 1. Estimated contributions of various components of psychotherapy.

Source of effect	Design of studies used to investigate effect	Size of effect on outcome	Proportion of variance in outcome
Effectiveness of psychotherapy	Treatment vs natural history	0.80	13%
Relative efficacy of treatments	Treatment A vs Treatment B	0.00 to 0.20	0% to 1%
Effect of specific factors	Dismantling studies	0.00	0%
Common factors: placebo effects	Natural history vs minimal 'placebo' treatments	0.40	4%
Common factors: therapeutic alliance	Correlation between alliance and outcome	0.45	5%
Common factors: therapeutic allegiance	Correlation of allegiance and outcome OR difference between treatments	Up to 0.65	Up to 10%
Therapist effects	Designs where therapists are nested within treatments or where therapists carry out more than one treatment (crossed design)	0.50 to 0.60	6% to 9%

Source: adapted from Bruce E Wampold. *The great psychotherapy debate*. Mahwah: Lawrence Erlbaum, 2001, with permission from publisher and author.

Box 2 shows extracts from two classic, contextual psychotherapy textbooks that demonstrate two additional features. First, Rogers¹⁶ suggests that psychotherapist training should focus on the attitude of the therapist rather than on skills. Training in skills (ie a repertoire of behaviours) does not necessarily make a good therapist. Later authors have used the term 'therapeutic intent' to describe the therapeutic attitude.¹⁸ A second feature comes from the much-quoted list of contextual characteristics suggested by Frank and Frank¹⁷ (Box 2): a belief system does not have to be 'true' for it to have therapeutic benefit.

Despite the evidence from meta-analyses cited above, many researchers and many therapists support either a specific hypothesis (such as CBT) or technical eclecticism. There are several reasons for their commitment. First, many of the specific hypotheses are plausible, and in particular CBT provides an entirely plausible account of therapeutic change. Second, belief in a therapy (therapeutic allegiance) affects outcome: effective therapists need to believe in what they are doing. Finally, and perhaps most importantly, the professional context of psychotherapy is predicated on the specific or eclectic hypothesis. The professional dilemma faced by psychotherapists is expressed in an editorial comment:

That research has so far failed to find differences in outcome between therapist degrees, level of training or experience does not mean that these characteristics are irrelevant (I, for one, would not want to be treated by an untrained, uneducated therapist), only that we have not yet even begun to study them in meaningful ways.¹⁹

In addition, the social context of modern medicine requires treatments to be consistent with an underlying philosophy of specific pathologies corrected by specific treatments.²⁰ Psychotherapy can be justified within this philosophy if it demonstrates specificity – ie treats disease. Desire to demonstrate specificity is reflected in the empirically supported therapy (EST) approach to psychotherapy, which was developed in the USA to justify expenditure on psychotherapy treatments in contrast to phar-

macological treatments for mental health problems.^{21,22} A recent critical review of the EST approach highlights several methodological problems with this approach.²³

In sum, the story of psychotherapy research has led to two opposite views. One is that psychotherapy is a specific therapy and fits, albeit perhaps uncomfortably,²³ in the medical research model of specific treatment for specific diseases. The other view is that psychotherapy provides a context that promotes self-healing rather than treats disease, and should coexist with

Box 2. The context of psychotherapy: two classic, influential textbooks.

Carl Rogers. *Client-centered therapy* (1951)¹⁶

Rogers was the originator of 'client-centered therapy', which has had a major impact on counselling. His approach focuses on the attitudinal orientation of the counsellor and not the technique:

No student can or should be trained as a client-centered therapist...It is far more important that he be true to his own experience than that should coincide with any known therapeutic technique.

I am convinced that the counsellor's complete acceptance, his expression of the attitude of wanting to help the client, and his warmth of spirit as expressed by his wholehearted giving of himself to the client in complete cooperation with everything the client does or says are basic in this type of therapy.

Jerome D Frank and Julia B Frank. *Persuasion and healing* (1991)¹⁸

The authors identify the following contextual factors as being common to all psychotherapy:

- 1 An emotionally charged, confiding relationship with a helping person.
- 2 A healing setting.
- 3 A rationale, conceptual scheme, or myth that provides a plausible explanation for the patient's symptoms and prescribes a ritual or procedure for resolving them.
- 4 A ritual or procedure that requires the active participation of both patient and therapist and that is believed by both to be the means of restoring the patient's health.

conventional medicine as a parallel but different kind of treatment that has a different research agenda.⁷ On the whole, the data support the contextual hypothesis; many in the profession support the specific or eclectic view.

The CAM research story

CAM, like psychotherapy, involves specific and incidental factors; the specific factors are varied, often scientifically controversial, but are assumed not to be psychological in nature. For the same professional reasons CAM research, like psychotherapy, is dominated by the aim of demonstrating the efficacy of specific factors over the incidental factors, here referred to as placebo. While the placebo response may be a useful tool in conventional medicine,²⁴⁻²⁶ it is professionally inexpedient to justify the practice of CAM simply as a useful placebo. If CAM therapists are simply cheering up patients, then a response might be 'why not just give them a cup of tea or send them on holiday?' Medicine is about something more than cups of tea and holidays – even though these may have some therapeutic benefit.

The following review of CAM efficacy is limited to those CAMs where there are meta-analyses of efficacy studies. Meta-analyses sometimes produce different results due to different inclusion criteria,²⁷ and not everyone believes that randomised controlled trials (RCTs) produce useful results.^{28,29} However, a general rule of CAM efficacy studies seems to be that the greater the contextual difference between the active treatment and the control treatment in the RCT, the more likely that meta-analyses will show the CAM to be efficacious.

Firstly, there are those CAMs where the control treatment is either contextually identical or very similar to the active treatment, either because they can be double-blinded or because in single-blinded studies the patient's experience of the control treatment is indistinguishable or very similar to the experience of the active treatment. Homeopathic remedies can be double-blinded: one early meta-analysis suggested a weak effect of homeopathy,³⁰ a later one suggests no effect.³¹ Comparisons of real versus sham chiropractic show no difference.³²⁻³⁴ Comparisons of real versus sham of acupuncture show a small or no difference.³⁵⁻³⁷ Real versus sham spiritual healing show either a small effect³⁸ or that the data are uncertain.³⁹ These meta-analyses suggest that specific effects, if any, are considerably weaker than contextual effects, and this is confirmed in those studies where a significant specific effect is compared with contextual effects.⁴⁰ The only exception within this first category of CAMs is that of herbal medicine, which, like homeopathy, can be double-blinded and where many products are found to be efficacious.⁴¹ Even so, contextual effects for one of the most popular herbal treatments, St John's Wort, are at least four times as great as specific effects.⁴² Thus, in those CAMs where the control treatment is contextually similar to the active treatment, the specific factors contribute at most one-quarter of the effect of the contextual factors and at least zero.

Secondly, there are those CAMs whose efficacy is evaluated by comparison with control treatments that are contextually dif-

ferent from the active treatment. Many of these CAMs do not provide a diagnosis, but simply provide a therapeutic context (ie category 2 in Box 1). Comparisons are made between the active treatment and either a waiting list or natural history control or some other therapy. For example, relaxation versus waiting list control is contextually different for the patient, as is massage with a control comparison of relaxation or waiting list. Similarly, meditation is contextually different from relaxation, counselling or waiting list control, as is Alexander technique. Meta-analyses consistently support efficacy in these CAMs⁴³⁻⁴⁶ when comparisons are made with waiting list or natural history controls; smaller effects (possibly due to allegiance) are obtained when comparisons are made with other treatments.

In summary, the meta-analyses suggest that context is an important aspect of therapeutic outcome in CAM. Evidently, the contextual features of CAM are different from those in psychotherapy, which are limited to talk. However, the authors of a recent meta-analysis of massage therapy concluded that the effectiveness of massage on psychological outcomes such as pain and depression is unlikely to be caused by the physical effect of manipulation but is due to factors common with psychotherapy.⁴⁴ Their conclusion is based on data showing that therapeutic change is as slow as it is in psychotherapy, effect sizes are similar to psychotherapy, and there is no evidence that training in massage improves outcome. A related view is that all forms of CAM, not just the non-diagnostic ones, are effective due to factors common with psychotherapy. For example, Frank and Frank¹⁷ suggest that religious healing can be interpreted in terms of conventional, contextual psychotherapeutic processes (Box 2).

The argument that CAM is simply a form of psychotherapy would be compelling were it not for one problem: that despite considerable research, there is one important gap in our understanding of psychotherapy.

Therapist effects

Wampold⁷ concludes his review of psychotherapy research by saying:

It is indeed curious that one of the most apparent sources of variability, the therapist, is so little understood ... very little is known about the qualities and actions of therapists who are eminently successful.

One reason for this lack of understanding is that 'therapist effects are notoriously difficult to study rigorously',¹⁹ but also the data are difficult to interpret. A consistent finding is that there is considerable variation in outcome between psychotherapists, with meta-analysis showing higher levels of variation in normal clinical settings than in clinical trials.⁴⁹ The worst therapists produce mean symptom changes of zero or slight worsening in their clients, whereas the best ones lead to improvement in about 80% of clients.^{13,14} Luborsky *et al*¹³ found in a study of 22 therapists and seven patients that patients could identify good therapists early on in treatment, as could peer therapists. However, the techniques used by good therapists were not uniform: the authors report on the 'striking difference in the treatment techniques of

the two outstanding therapists: one used mostly supportive techniques, while the other used mostly expressive techniques'. A larger study¹⁴ involving 56 therapists and 1,779 clients over a two and a half year period confirmed previous findings that neither type of training (counselling, psychology, clinical psychology, social work), nor the years of training (pre-internship, internship, post-internship), nor theoretical orientation (cognitive behavioural, humanistic, psychodynamic), nor gender predicted outcome.

One possible explanation for the failure to clearly identify good therapists is that types of therapist are effective only for types of patient. However, research has failed to find client-therapist interactions that predict outcome,²³ nor has there been any success in finding a placebo-responding personality that might predict good responders to contextual effects.⁵⁰ In sum, the therapist is an important component of the therapeutic context, but the mechanisms underlying therapist effects are poorly understood. Based on existing data, the best advice for a patient seeking psychotherapy is: find a good therapist, that is, one who has a caseload history of positive outcomes.⁷ We do not know whether that is also the best advice to give to a patient seeking CAM, but, by inference, it may be: don't worry about the type of CAM, find a good therapist.

Combining the two tales

The evidence leads to the conclusion that the personality of the therapist has a therapeutic effect on the patient. This human effect seems to be the most important aspect of both psychotherapy and CAM, and is certainly greater than the specific effects that therapists believe they are delivering. It is not the skill of technical delivery, but the person that matters. This view is at variance with the philosophy of medical treatment,²⁰ but is consistent with medical observation.^{51,52}

There are two interpretations of how this human effect is mediated. The *standard interpretation* is that causal mechanisms are psychological and mediated through verbal and non-verbal communication. There is research linking each of the components of the therapeutic alliance to outcome (expectancy,⁵³ the therapeutic bond,⁵⁴ and goals and aims⁵⁵), but precise psychoneuroimmunological mechanisms have yet to be elucidated. The standard contextual interpretation is plausible, is consistent with conventional scientific theory and beliefs, but the exact details of the mechanisms are unknown. There is, however, only a modest fit between the standard interpretation and data. There is no clear link between therapist behaviour and alliance and the degree of association between alliance and outcome is low.

The *non-standard interpretation* is that in addition to the standard interpretation there is some other form of influence between therapist and patient, or between therapist, patient and physical aspect of treatment, that is mediated independently of the patient's perceptions. The crucial difference between the standard and non-standard interpretations is how the contextual information is transmitted. The non-standard interpretation involves something interpretable as psychic communication. Meta-analyses of extrasensory perception research suggest

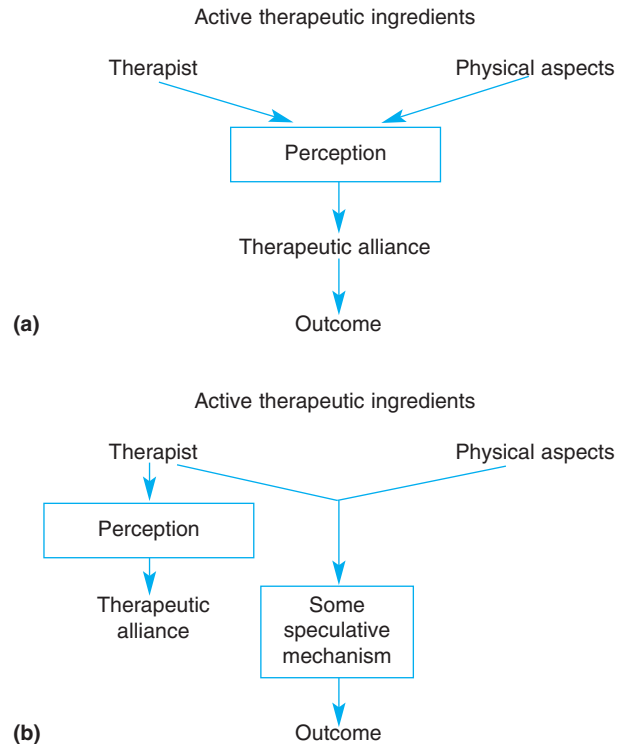


Fig 1. Two mechanisms for therapist and other contextual effects: (a) standard explanation; (b) non-standard explanation. Note: (1) In the non-standard interpretation, the therapeutic alliance is an epiphenomenon, not a cause of outcome. (2) The models differ not in the nature of the active ingredients, but the mechanism by which the active ingredients affect outcome.

either a small positive effect^{56,57} or none at all.^{58,59} There are two specific CAM mechanisms that involve non-standard communication, electromagnetic fields⁶⁰ and entanglement.^{61,62} The non-standard explanation is inconsistent with (current) conventional scientific theory, and the exact details of the mechanism are unknown. Data are limited and sometimes inconsistent. These two types of explanation are shown in Fig 1. It would be easier to reject the non-standard explanation on plausibility grounds if (a) there were better understanding of therapist effects, and (b) CAM data consistently supported the standard interpretation, which they do not. For example, a highly powered, GP-administered homeopathy versus placebo RCT⁶³ found a large placebo effect which was unrelated to attitude towards CAM – according to the standard interpretation there should be at least a weak (expectancy mediated) correlation.

The future

One motivation for carrying out research in CAM and psychotherapy is to establish the credibility of these therapies as an alternative form of medical treatment. Hope springs eternal, and some believe that 'proof' is round the corner – for example, that there will be consistent and incontrovertible evidence that

homeopathic remedies are efficacious. Another motivation for carrying out research is to help patients. If that is the motivation, then it makes sense to focus on the primary source of variation in outcome in these therapies – that is – the context and in particular the therapist.

It is commonly accepted that therapists make a difference, but this acceptance obscures the fact that we do not understand the underlying mechanism. There are two areas where knowledge is lacking. First, we do not know what makes a good therapist, other than using a tautological label, such as charisma. We do not know, for example, whether someone who is good at one therapy (eg psychotherapy) tends to be good at another (eg massage). The evidence suggests that training and experience are unimportant: we do not know to what extent the therapeutic ability or charisma is genetically or environmentally determined. We do not know whether charisma can be enhanced. We do not know whether highly charismatic people are attracted to particular health professions – which would bias any comparison between therapies.

Secondly, we do not understand how charismatic therapists have a therapeutic effect. The contextual model of psychotherapy suggests that the patient is naturally self-healing and therapy provides a context that promotes this self healing. Perhaps CAM enhances the body's self-regulatory status, ie enhances health status, and so cures disease to the extent that improved self-regulation affects disease. But if so, how does this work? Although it is plausible that charismatic therapists enhance health (as do exercise and good nutrition) we do not know exactly what this amounts to.

Thirdly, one commonly stated reason for efficacy testing of CAM is to protect the public from ineffective therapies, consistent with conventional medical practice. However, if CAM is effective for contextual reasons like those of psychotherapy, then there is no need to demonstrate the efficacy of specific factors. To protect the public it is necessary to evaluate therapists, as it is therapists rather than therapies that have been shown to be important contributors to variance of outcome.

Although this paper has focused on psychotherapy and CAM therapists, it is evident that the argument applies to all therapists, including physicians. The fact that physicians achieve genuine specific effects in their therapy may obscure the very real therapeutic effects that are mediated via the therapist.

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