# Common factor mechanisms in clinical practice and their relationship with outcome

Carolina Gaitan-Sierra[1] and Michael E. Hyland[1]*

[1] School of Psychology, Plymouth University, Plymouth PL4 8AA, UK.

*Correspondence to Michael Hyland, School of Psychology, Plymouth University, Plymouth PL4 8AA, UK. Telephone: +44 (0)1752584834, fax: +44 (0) 1752233362, email: mhyland@plymouth.ac.uk

Short title: Common factors

Keywords: common factors, motivation, affective expectation model, mood change, psychotherapy.

Abstract

This study investigates three common factor mechanisms that could affect outcome in clinical practice: response expectancy, the affective expectation model and motivational concordance. Clients attending a Gestalt therapy clinic (30 clients), a Sophrology (therapeutic technique) clinic (33 clients) and a Homeopathy clinic (31 clients) completed measures of expectancy and PANAS before their first therapeutic session. After one month they completed PANAS and measures of intrinsic motivation, perceived effort and empowerment. Expectancy was not associated with better outcome and was no different between therapeutic treatments. Although some of the 54 clients who endorsed highest expectations showed substantial improvement, others did not: 19 had no change or deteriorated in positive affect and 18 had the same result for negative affect. Intrinsic motivation independently predicted changes in negative affect ($\beta$ = -.23). Intrinsic motivation ($\beta$ = .24), effort ($\beta$ = .23) and empowerment ($\beta$ = .20) independently predicted positive affect change. Expectancy ($\beta$ = -.17) negatively affected changes in positive affect. Clients found Gestalt therapy and Sophrology training to be more intrinsically motivating, empowering and effortful compared to Homeopathy. Greater improvement in mood was found for Sophrology clients than for Gestalt and Homeopathy clients. These findings are inconsistent with response expectancy as a common factor mechanism in clinical practice. The results support motivational concordance (outcome influenced by the intrinsic enjoyment of the therapy) and the affective expectation model (high expectations can lead for some clients to disappointment and worse outcome). When expectancy correlates with outcome in some other studies, this may be due to confound between expectancy and intrinsic enjoyment.

**Key practitioner message**

- Common factors play an important role in outcome.
- Intrinsic enjoyment of a therapeutic treatment is associated with better outcome.

- Active engagement with a therapeutic treatment improves outcome.
- Unrealistic expectations about a therapeutic treatment can have a negative impact on outcome.

## Common factor mechanisms in clinical practice and their relationship with outcome

Outcome in any therapeutic procedure can result from a combination of (a) factors specific to a therapy and (b) factors common to all therapies. While the relative contribution of these two sorts of factors is controversial, both within the field of psychotherapy (Wampold, 2001) and complementary medicine (Hyland, 2005), there is general agreement that some therapeutic factors are common to all therapies . Frequently cited common factors include the therapeutic bond, response expectancy, and empowerment. The contribution of these common factors to therapeutic outcome can vary. For example, some therapists may achieve a better bond, or some therapies may be more empowering.

Three variables might influence the degree to which these common factors contribute to outcome: the therapy, the therapist and the patient. In clinical trials, patients are randomised to treatment so outcome is unlikely to be influenced by patient differences. However, in clinical practice patients often choose their therapy, even when the patient does not have to pay for it. Evidence suggests that therapy preference varies with dispositional characteristics of the patient (Whalley & Hyland, 2009). If there are differences in common factors between different therapies, then these differences will interact with patient preference. Similarly, therapists are not randomly allocated to therapies. Therapists may choose therapies that are consistent with their dispositions. In sum, the strength of each of the common factors

on clinical outcomes will result from a complex interaction between therapy, therapist and patient.

**Common factor mechanisms**

Patients enter therapy with an expectation of outcome. The contribution of patients' expectancies to treatment outcome has long been acknowledged in therapy research (see Greenberg, Constantino & Bruce, 2006 for a review). A well-established expectancy model of therapeutic change is response expectancy theory (Kirsch, 1985, 1999). Response expectancy theory claims that psychological and physiological variables follow cognitive expectations, such that patients´ expectations prior to therapy determine their therapeutic benefit. While there is substantial evidence supporting response expectancy in laboratory analogue studies (where expectancy consistently predicts outcome), the data in regard to clinical outcome is less consistent. Not only do some studies fail to show an association between expectancy (or equivalent measures) and outcome (Walach *et al*., 1997; Lewith, Hyland & Shaw, 2002), but a review of several types of placebo study suggests that motivational mechanisms are more important in clinical practice where patients are motivated to improve their health (Hyland, 2011). Two different theories provide a rationale for why expectancy sometimes but does not invariably predict outcome: the affective expectation model and motivational concordance.

The affective expectation model (Wilson & Klaaren, 1992) is based on the premise that patients enter therapy with expectations of outcome and where affect is one such outcome. Experience of a therapy will either coincide or differ from the expectations and associated affect. If expectancies coincide with outcome, then there is assimilation, such that outcome becomes more closely aligned with expectation. By contrast, if expectancies differ substantially from outcome and these are noticed, then there is contrast such that outcome shifts away from the direction of expectation. The latter case might occur if a patient has very

high expectations of benefit that are not met, in which case the effect of positive expectations would be to reduce benefit yet further. Correlations between expectancy and outcome occur when therapy outcomes tend more often to be consistent with expectations. Support for the affective expectation model has been found in several studies, but all studies have used student populations rather than real clinical populations (Geers & Lassiter, 2002, 2003, 2005; Guendolla, Brinkmann & Scheder, 2008; Hodges, Kristen &Wheatley, 2000; Patrick, Macinnis & Park, 2007; Wilson, Lisle, Kraft & Wetzel, 1989).

Motivational concordance theory (Hyland, Geraghty, Joy, & Turner, 2006; Hyland, Whalley, & Geraghty, 2007) is based on the premise that therapeutic treatments have benefit to the extent that the context of the treatment is consistent with and satisfies the client's significant intrinsic goals. Therapeutic treatments that are perceived as intrinsically satisfying tend to be rated as being more likely to be effective, so there is a confound between the expectancy of success and the intrinsic value of the treatment. Several studies have shown that motivational variables, namely, dispositional optimism (Geers *et al*., 2010), gratitude (Geragthy, Wood & Hyland, 2010) and the intrinsic satisfaction of the therapy and effort, are important contributors to outcome and that the effect of expectancy is mediated through these motivational variables (Gaitan-Sierra & Hyland, 2011; 2013). Previous studies demonstrating motivational concordance have not used clinical populations. Motivational concordance theory can be considered an application of self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) and self-concordance theory (Sheldon & Elliot, 1999) to clinical practice, both theories suggest that intrinsic goal satisfaction improves health, including the goals of relatedness (relevant to the therapeutic bond) and the goals of autonomy and control (relevant to empowerment).

One way to assess the effectiveness of a therapy is through its effects on the client's regulation of emotions and affect (Rottenberg & Gross, 2007) and which can be assessed by

scales measuring mood. In line with this approach, previous studies have examined the impact of motivated behaviour on mood change by employing the Positive Affect and Negative Affect Schedule (PANAS) to measure global mood following therapeutic engagement (Gaitan-Sierra & Hyland, 2011; 2013). In the present research, we examine the effectiveness of therapeutic treatment using the PANAS, a scale that provides separate measures of positive and negative affect.

The study reported here investigates the affective expectation model and motivational concordance in a clinical sample. There were two aims of this study. The first was to record clients' expectations in clinical practice and to examine whether high expectations have adverse effects, as predicted by the affective expectation model. If that were the case, some (but not all) clients with high expectations of good outcome should be disappointed and therefore show low or no improvement. A second aim was to evaluate motivational concordance in contrast to response expectancy in a clinical population, and to examine the relationship between motivational variables on outcome. We studied three therapeutic modalities, Gestalt therapy (a form of humanistic psychotherapy), Sophrology (a therapeutic technique that includes relaxation) and Homeopathy (a pharmacologically inert substance prescribed on the basis of an extensive interview). We compared whether there were differences in common factors and outcome between these three therapeutic treatments in clinical practice.

## Method

### Participants and recruitment

Clients, aged 18 years or more, who were attending clinics in Mexico for the first time were invited to take part in an evaluation study of the outcome of their therapy. A total of 140 clients volunteered to take part, 45 from a Gestalt clinic, 42 from a Sophrology clinic, and 53 from a Homeopathy clinic. Thirty clients from the Gestalt, 33 from the Sophrology and 31

clients from the Homeopathy clinic completed the follow-up assessments. Demographic characteristics of clients are provided in Table 1.

**Therapeutic treatments**

We selected three therapeutic treatments that vary widely in the levels of effort and engagement they require from the client. Gestalt therapy is a talking-based therapy that demands active engagement from the client. Sophrology instead emphasises the importance of leaning physical and mental techniques, and demands more physical activity than Gestalt therapy. Homeopathy on the other hand, demands very little engagement of any kind from the client, beyond that of taking a 'remedy' (drops or pills) on a daily basis. Gestalt, Homeopathy, and Sophrology are representative of three distinct types of therapeutic modalities, where Gestalt therapy represents a psychotherapy, Homeopathy represents a therapeutic treatment, and Sophrology represents a therapeutic technique.

We chose a range of therapeutic treatments (a) because this should enable us to generalise our findings with regard to the relationship between common factors and outcome to a variety of therapeutic treatments, and (b) because this enables us to test for differences between therapeutic treatments that naturally differ in the effort and engagement they require of the client. The therapeutic treatments are described in more detail below.

*Gestalt therapy*

Gestalt therapy is a humanistic psychotherapy that focuses on insight and awareness of the present experience. Specific techniques involve relaxation through guided imagery, which is used to promote self-awareness, and the 'empty chair' technique (Ginger, 2007) where clients imagine holding a conversation with a significant other. Clients may be given exercises to carry out at home. Gestalt therapy is an effective therapy (Greenberg *et al*, 1994; Bretz, Heekerens & Smith, 1994; Strümpfel, 2004), and in this clinic therapy was provided by six qualified therapists (training course of 36 months). Clients attended weekly sessions (four

between baseline and follow-up), with the first session lasting approximately 70 minutes and subsequent weekly sessions between 45 to 60 minutes. The cost for the client varies from 21-43 US dollars per session depending on the client's ability to pay.

*Sophrology*

Sophrology is a therapeutic technique based on mind-body exercises that promote self-awareness and relaxation (Caycedo, 1964), and are taught by a Sophrology trainer. Techniques include yoga, and various types of guided imagery and meditation, including focused breathing. None of the techniques are unique to Sophrology. Clients are encouraged to practice Sophrology techniques at home and include them in their daily activities. Evaluations of Sophrology are limited, but the technique is shown to produce therapeutic benefit (Pandey, 2009). In the Sophrology clinic, the therapeutic technique was provided by five qualified sophrologists (length of training 24 months). Clients attended weekly sessions (four between baseline and follow-up), with each session lasting 45-60 minutes. The cost for the patient is $17 US dollars per session.

*Homeopathy*

Homeopathic prescriptions consist of 'remedies' in which the original biological substance has been diluted such that no molecules of the substance remain. Drops of the 'ultra-diluted' remedy are then added to sucrose globules to be consumed by the patient (Hahneman, 1999). Evidence suggests that the homeopathic globules have no pharmacological effect and therefore act as a placebo (Ernst, 2002; Shang et al., 2005). Homeopaths select and prescribe remedies (over 2000 are available) on the basis of a homeopathic interview that requires the patient to engage in self-reflection. The self-reflection component of treatment is not designed to treat a client's psychological condition, but simply to encourage the patient to discuss their health condition, general wellbeing, emotional state and lifestyle preferences.

In the Homeopathy clinic, therapeutic treatment was provided by six qualified homeopaths (training course of 24 months). Clients attended an initial session that lasted approximately 60-90 minutes, collected the remedy globules from the clinic the following day, and returned for a second 45 minute session with the homeopath one month later (2 sessions between baseline and follow-up). Cost to the client is $19 US dollars per appointment, which includes globules.

**Measures**

*Expectancy* was measured using a single 7-point scale item: "At this point in time, do you expect the [Gestalt/Sophrology/Homeopathic] [therapy/technique/treatment] to help you?" Expectancy ratings range from -3 *(unlikely it will help)* to 3 *(definitely it will help).*

*Intrinsic motivation* was measured using 3 items based on content suggested by existing theory in intrinsic motivation (e.g., Csikszentmilhalyi, 1990; Deci & Ryan, 1985; Waterman et al., 2003). The items followed (1) 'I am enjoying the [Gestalt/Sophrology/Homeopathic] [therapy/technique/treatment]', (2) 'I think the [Gestalt/Sophrology/Homeopathic] [therapy/technique/treatment] is interesting', and (3) 'I have been learning new things about myself throughout the [Gestalt/Sophrology/Homeopathic] [therapy/technique/treatment]'. Responses were made on a 7-point scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree).* An index of intrinsic motivation was created by summing participants' ratings for the three items, where high scores indicate greater intrinsic motivation. The internal consistency reliability of the intrinsic motivation scale was acceptable (Cronbach's $\alpha$=.88)

A measure of *perceived effort* was based on previous research (Hutchinson & Tenembaum, 2006) and was derived from the aggregate of three items, (1) 'How well have you persisted with the effort required by the intervention?', (2) 'How much effort have you put into the intervention?', and (3) 'How effortful would you describe the intervention as a whole?'. Participants rated each question on a scale ranging from 0 (*none/not at all*) to 5

(*very much/very well*). An index of effort was created by summing participants' ratings for the three items, where high scores indicating greater effort. The internal consistency reliability of the scale was acceptable (Cronbach's α=.90).

*Empowerment.* Empowerment was measured indirectly. One single item was used to assess participants' perceptions of their ability to take part in new activities. The item followed: When you left the therapist, to what extent you feel you would be successful if you engage in new activities. Clients responded on a scale ranging from 0 (*no difference from before*) to 3 (*I have felt very encouraged*). This question was designed to measure a consequence of empowerment, namely a feeling of self-efficacy: the belief that future activity is successful (Bandura, 1977). We reasoned that therapists who empowered their clients would enable clients to feel more efficacious in their lives.

*Mood* was assessed using the Spanish translation of the Positive and Negative Affect Schedule (PANAS). The Spanish translation of the scale has been validated in a range of Hispanic countries, including Mexico (Robles & Paez, 2003) and exhibits high levels of internal consistency reliability of scale items (positive affect scale, Cronbach's α range = 0.85-0.90; negative affect scale, Cronbach's α range = 0.81-0.85), and test-retest reliability, showing similar psychometric properties to its English counterpart (Watson, Clark & Tellegen,1988). This scale provides independent measures of positive and negative affect, and comprises 10 adjectives to describe positive and negative feelings and emotions respectively. Each item is rated on a 5-point scale ranging from 1(*very slightly or not at all*) to 5 (*extremely*), high scores indicating high positive or negative affect.

**Procedure**

Ethical approval for the study was obtained from the Plymouth University ethics committee and with agreement from the supervisors of the three clinics. Upon arrival for their first scheduled session, clients were approached by a receptionist in each one of the clinics, and

provided signed informed consent for a study evaluating their experience of therapeutic treatment. Clients were reminded of the confidentiality of their data contribution. Clients completed the expectancy question and PANAS before their first session and returned the completed questionnaires to the receptionist in a numbered (not named) sealed envelope. One month after their first session, receptionists of the clinics approached the clients after they had finished their sessions and asked them to complete the PANAS scale and intrinsic motivation, perceived effort and empowerment items. Questionnaires were again returned to the receptionists in sealed and numbered envelopes. All common factor mechanisms being investigated have been shown to have had an effect in less than one month.

## Results

### *The Relationship between Common Factors and Outcome*

Fifty four (59%) of patients checked the highest rating for expectancy (i.e., +3). Despite paying for the treatment, 15 people (16%) were unsure (rated zero) and a small minority believed that the treatment would not help them (3 patients rated less than zero). Expectancy was not significantly different between therapeutic treatments, $F$ (2, 91) $p$ = 0.32. Table 2 provides the means and standard deviations for all variables (expectancy, intrinsic motivation, perceived effort, positive and negative affect, empowerment) for each of the three therapeutic treatments before intervention and 1-month following intervention. Table 3 provides the number of participants who improved, "improvers," (defined by improvement in at least one point on the scale, i.e., minimal improvement or more) or did not improve, "non-improvers," (either no change or deterioration) in positive and negative affect post-intervention as a function of level of expectancy. There were significantly greater proportions of improvers than non-improvers at zero and higher levels of expectancy for positive affect, but only among the highest level of expectancy for negative affect, see Table 3. A chi square test comparing the frequency of those improving versus not improving as a function of high

expectations (expectancy = +3) versus modest expectations (expectancy = +1 and +2) revealed a marginally significant effect for positive affect, $\chi^2$ (1, 76) = 3.53, $p$ = .060, but a non-significant effect for negative affect, $\chi^2$ (1, 76) = 0.70, $p$ = .403. These results reveal that a substantial proportion of clients with high expectations did not improve in positive affect, negative affect, or neither, and that there was a marginal tendency for those with high expectations to have a greater frequency of non-improvement than those with moderate expectations, though these data should be treated with caution because of the smaller number of clients with moderate expectations.

However, having a high expectation does not prevent a good outcome. Of the 13 clients who showed the greatest improvement in positive affect (a change of +19 points or more), four provided a maximum expectancy score of +3 (3 from Gestalt therapy and 1 from Sophrology). Of the 14 clients who had the greatest improvement in negative affect (a change of -19 points or more), seven rated expectancy with a maximum score of +3 (3 from Gestalt therapy, 3 from Sophrology and 1 from Homeopathy).

Table 4 provides the correlations between the common factors and change in positive and negative affect. Expectancy did not correlate significantly with any of the other common factors, nor did it correlate with mood change. However, intrinsic motivation, empowerment and effort were all inter-correlated. We conducted two multiple regressions to examine the independent contribution of expectancy, intrinsic motivation, effort and empowerment to change in positive and negative affect. Intrinsic motivation was the only significant predictor of change in negative affect. All four predictor variables independently predicted positive affect change, see Table 5. Note that the negative β for expectancy indicates that, when controlling for other factors, clients with higher expectancy improved less for positive affect.

*Differences between the Therapeutic Treatments*

There were significant differences between therapeutic treatments for effort $F(2, 91) = 7.56$, $p < .001$, $\eta^2 = .143$, intrinsic motivation $F(2, 91) = 3.53$, $p = .033$, $\eta^2 = .072$, and empowerment $F(2, 91) = 8.92$, $p < .001$, $\eta^2 = .164$. Pairwise comparisons revealed that Homeopathy was significantly lower ($p < .05$) for all three of these variables compared to Gestalt therapy and Sophrology, but there was no difference between Gestalt therapy and Sophrology.

To test for differences between therapeutic treatments for change in affect, we conducted a two-way mixed analysis of variance (ANOVA) separately on clients' positive and negative affect scores. Therapeutic treatment (Gestalt, Sophrology and Homeopathy) was included as the between subject factor, and session (baseline affect scores and post-intervention affect scores) was entered as the repeated measure. For positive affect, the analysis revealed a significant effect of session, indicating that across therapeutic treatments clients' positive affect scores were higher at follow-up compared to baseline, $F(1, 91) = 57.91$, $p < .001$ $\eta^2 = .389$.

Positive affects scores were highest overall for the Sophrology clients ($M = 33.18$), followed by Homeopathy clients ($M = 30.87$), and Gestalt clients ($M = 27.95$), indicated by a significant effect of therapeutic treatment, $F(2, 91) = 4.08$, $p = .020$ $\eta^2 = .082$. Post hoc LSD comparisons confirmed that positive affect scores at baseline where significantly higher for the Homeopathy clients ($M = 29.22$) than Gestalt clients ($M = 23.77$; $p = .018$) and marginally significantly higher than for Sophrology clients ($M = 28.18$; $p = .051$). There was no significant difference between the Homeopathy and Sophrology clients ($p = .638$).

Type of therapeutic treatment interacted with session, $F(2, 91) = 4.58$, $p = .013$ $\eta^2 = .091$. Follow-up paired comparisons indicated that largest benefits of treatment were for Sophrology clients (baseline = 28.18, post intervention = 38.18; $t(32) = 6.48$, $p < .001$), followed by Gestalt clients (baseline = 23.77, post intervention = 32.13; $t(29) = 4.41$, $p < .001$),

and were smallest for Homeopathy clients (baseline = 29.22, post intervention = 32.51; $t(30) = 2.22$, $p = .034$).

For negative affect, there was no significant overall effect of therapeutic treatment $F(2, 91) = 1.69$, $p = .19$, but a significant interaction between therapeutic treatment and session $F(2, 91) = 8.58$, $p < .001$ $\eta^2 = .16$. Post hoc LSD tests revealed that negative affects scores were higher at baseline for Gestalt clients ($M = 28.33$) than for Homeopathy clients ($M = 22.19$; $p = .008$), and were higher for Sophrology clients ($M = 26.64$) than for Homeopathy clients ($p = .048$), but did not differ between Gestalt and Sophrology groups ($p = .449$). Follow-up comparisons comparing baseline and post-intervention scores for each therapeutic treatment revealed that negative affect scored reduced significantly for Sophrology $t(32) = -6.71$, $p < .001$ and Gestalt $t(29) = -3.85$, $p < .001$ clients, but not for Homeopathy clients $t(30) = -.87$, $p = .39$.

## Discussion

The aim of this study was to examine the contribution of three common factor mechanisms that might occur in clinical practice: response expectancy, affect expectation model and motivational concordance. We found no evidence in support of response expectancy theory. Baseline expectancy did not predict outcome, nor was it correlated with intrinsic motivation. Previous research has shown that expectancy correlates with outcome when outcome also correlates with intrinsic motivation; however, expectancy fails to correlate with outcome when the description of the therapy so limited such that expectations cannot be based on anticipated intrinsic goal satisfaction (Hyland et al., 2008). A possible interpretation of our results is that in this clinical context, clients evaluated the intrinsic value of the therapy only *after* taking part. Expectancy failed to predict outcome at baseline because, at that time, expectations were not based on knowledge about the motivational context of the therapeutic treatment.

We found evidence supporting the affective expectation model. Some of the clients who had the highest expectations of outcome went on to have excellent outcomes, both for positive and negative affect. However, others did not: Of the 54 clients who had the highest expectation of outcome 19 either had no improvement or deteriorated in positive effect, and 18 showed no improvement in negative affect.

We found evidence in support of motivational concordance. Intrinsic motivation was the only independent predictor of negative affect change. However, for positive affect, intrinsic motivation, effort, and empowerment were independent predictors of change. These findings indicate the importance of motivation as part of the common factors (Hyland, 2011). The finding that empowerment and effort predicted outcome in positive but not negative affect is consistent with the broaden and build hypothesis (Frederickson, 1998, 2001, 2004) that positive affect has a specific function in enhancing novel activities.

Greater improvement in mood was found for Sophrology clients than for Gestalt and Homeopathy clients, but our study design did not enable us to tell whether this difference was due to specific factors, differences in common factors between the therapeutic treatments or due to the clients. Sophrology uses therapeutic exercises for developing positive thinking skills (Perreaut-Pierre, 2000), which promote positive thoughts, sensations, and images, and, if there were a genuine treatment effect this may explain why improvements in positive affect were largest among Sophrology clients. This interpretation would be consistent with the significant effects that positive psychological interventions have on positive affect, well-being and health (for a review see Seligman, 2008; Sin & Lyubomirsky, 2009). Gestalt therapy also encourages positive thinking and positive emotions. However, Gestalt clients must first develop self-awareness and acceptance of personal responsibility before they can attain a positive mental state (Yontef, 1993). Thus, during the therapeutic process clients have to face their current problems, which inevitably can evoke negative emotions and thoughts.

Therefore, differences between Sophrology and Gestalt treatments in terms of positive affect may have been due to more positive experiences and emotions elicited during Sophrology than in Gestalt therapy.

Negative affect decreased for the Sophrology and Gestalt clients, but not for Homeopathy clients. Sophrology clients showed the greatest reductions in negative affect perhaps due to non-specific mechanisms and use of exercises. Research has shown that techniques such as mindful breathing (Feldman, Greeson, & Senville, 2010), relaxation, meditation (Jain et al., 2007) and guided imagery (Alves & Kolcaba, 2009), which are part of Sophrology, can improve negative emotions, and reduce symptoms of stress and anxiety. Sophrology also aims at boosting the client's confidence, although without directly tackling psychological concerns as with Gestalt therapy, and thus it may be that Sophrology client's experience treatment more positively than Gestalt clients. Research has shown that interventions that evoke positive emotions can also reduce negative emotions and symptoms (Frederickson, Cohn, Coffey, Pek, & Finkel, 2008). The style of interaction between homeopaths and their clients during consultation promotes empathy, hopefulness and patient enablement (Eyles, Leydon, Lewith, & Brien, 2011; Mercer, 2005). It is possible, however, that compared to Sophrology and Gestalt clients, Homeopathy clients reported less benefit because Homeopathy does not focus on psychological exercises of positivity. Whether or not the observed differences between therapeutic treatments is due to the treatments themselves, it is not known, but the possibilities outlined above lend themselves to further research.

*Limitations*

The current study has several limitations. First, clients were not randomly assigned to the therapeutic treatments, so differences between treatments are at best indicative. Second, we did not ask clients the reasons for them attending treatment, nor about their financial circumstances and did not collect information about their presenting symptoms. All these

factors might have affected the results independently of the type of therapeutic treatment selected. Third, we collected data from clients over a relatively short period (one month). However, dose-effect therapy research has reported significant treatment effects with few sessions, and that initial therapeutic response predicts long term outcome (Barkham, Shapiro, Hardy, & Rees, 1999; Kopta, 2003). Finally, while we identified motivational factors that appeared to explain treatment effects on mood and empowerment, it is possible that there were other non-specific effects involved in treatment, such as the health care setting.

*Conclusions*

Whereas response expectancy has been demonstrated as a placebo mechanism in laboratory analogue studies, this study confirms the conclusion of a review (Hyland, 2011) that its contribution to real clinical situations has been overstated. In this study, we found evidence for motivational concordance and for the affective expectation model as contributors to common factors effects.

**REFERENCE LIST**

Alves, J. L., & Kolcaba, K. (2009). The effects of guided imagery on comfort, depression, anxiety, and stress of psychiatric inpatients with depressive disorders. *Archives of Psychiatric Nursing, 23,* 403-411.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Barkham, M., Shapiro, D. A., Hardy, G. E., & Rees, A. (1999). Psychotherapy in two-plus-one sessions: Outcomes of a randomized controlled trial of cognitive– behavioral and psychodynamic–interpersonal therapy. *Journal of Consulting and Clinical Psychology, 67,* 201–211.

Bretz, H. J., Heekerens, H. P., & Schmitz, B. (1994). A meta-analysis of the effectiveness of Gestalt therapy. *Zeitschrift Für Klinishe Psychologie und Psychotherapie, 42*, 241-260.

Caycedo, A. (1964). Sophrology and psychosomatic medicine. *American Journal of Clinical Hypnosis, 14*, 103-106.

Csikszentmilhalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Collins.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Ernst, E. (2002). A systematic review of systematic reviews of Homeopathy. *British Journal of Clinical Pharmacology, 54*, 577-582.

Eyles, C., Leydon, G. M., Lewith, G. T., & Brien, S. (2011). A grounded theory study of homeopathic practitioners' perceptions and experiences of the homeopathic consultation. *Evidence-based Complementary and Alternative Medicine, 2011*, 1-12.

Feldman, G., Greeson, J., & Senville, J. (2010). Differential effects of mindful breathing, progressive muscle relaxation, and loving-kindness meditation on decentering and negative reactions to repetitive thoughts. *Behaviour Research and Therapy, 48*, 1002-1011.

Frederickson, B. L. (1998). What are positive emotions? *Review of General Psychology, 2*, 300-319.

Frederickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist, 56*, 218-226.

Frederickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society B, 359*, 1367-1377.

Frederickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positve emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology, 95,* 1045-1062.

Gaitan-Sierra, C., & Hyland, M. E. (2011). Non-specific mechanisms that enhance well-being in health-promoting behaviors. *Health Psychology, 30,*793-796.

Gaitan-Sierra, C., & Hyland., M. E (2013). Mood enhancement in health-promoting non-aerobic exercise: The role of non-specific mechanisms. *Journal of Health Psychology, 12,* doi: 10.1177/1359105313482163.

Geers, A., & Lassiter, G. D. (2002). Effects of affective expectations on affective experience: The moderating role of optimism-pessimism. *Personality and Social Psychology Bulletin, 28,* 1026-1039.

Geers, A., & Lassiter, G. D. (2003). Need for cognition and expectations as determinants of affective experience. *Basic and Applied Social Psychology, 25,* 313-325.

Geers, A. L., & Lassiter, G. D. (2005).Affective assimilation and contrast: Effects of expectations and prior stimulus exposure. *Basic and Applied Social Psychology, 27,* 143-154.

Geers, A. L., Wellman, J. A., Fowler, S. L., Helfer, S.G., & France, C.R. (2010). Dispositional Optimism Predicts Placebo Analgesia. *The Journal of Pain, 11,* 1165–1171.

Geraghty, A. W. A., Wood, A. M., & Hyland, M. E. (2010). Attrition from self-directed interventions: Investigating the relationship between psychological predictors, intervention content and dropout from a body dissatisfaction intervention. *Social Science & Medicine, 71,* 30-37.

Ginger, S. (2007). *Gestalt therapy: The art of contact*. Devon: Karnac books.

Greenberg, L. S., Elliott, R., & Lietaer, G. (1994). Research on experiential psychotherapies. In Bergin, A. E., & Garfield S. L. (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 509-539). New York: Wiley.

Greenberg, R. P., Constantino, M. J., & Bruce, N. (2006). Are patient expectations still relevant for psychotherapy process and outcome? *Clinical Psychology Review,26,* 657–678.

Gendolla, G. H., Brinkmann, k., & Scheder, D. (2008). Ego involvement moderates the assimilation effect of affective expectations. *Motivation and Emotion, 32*, 213-220

Hahnemann, S. (1999). *The Organon of Medicine*. New Delhi: Jain.

Hodges, S. D., Kristen, K. J., & Wheatley, T. (2000). Talking About Safe Sex: The Role of Expectations and Experience[1]. *Journal of Applied Social Psychology, 2000,* 30, 330-349.

Hutchinson, J. C., & Tenembaum, G. (2006). Perceived effort-Can it be considered gestalt? *Psychology of Sport and Exercise, 7*, 463-476.

Hyland, M. E. (2005). A tale of two therapies: Complementary and alternative medicine (CAM) and psychotherapy and the human effect. *Clinical Medicine, 5*, 361-367.

Hyland, M. E. (2011). Motivation and placebos: Do different mechanisms occur in different contexts? *Philosophical Transactions B, 366*, 1828-1837.

Hyland, M., Geraghty, A., Joy, O., & Turner, S. (2006). Spirituality predicts outcome independently of expectancy following flower essence self-treatment. *Journal of Psychosomatic Research, 60*, 53-58.

Hyland, M., Whalley, B., & Geraghty, A. (2007). Dispositional predictors of placebo responding: a motivational interpretation of flower essence and gratitude therapy. *Journal of Psychosomatic Research, 62*, 331-340.

Hyland, M., & Whalley, B. (2008). Motivational concordance: An important mechanism in self-help therapeutic rituals involving inert (placebo) substances. *Journal of Psychosomatic Research, 65*, 405-413.

Jain, S., Shapiro, S. L., Swanick, S., Roesch, S. C., Mills, P. J., Bell, I., et al. (2007). A randomized controlled trial of mindfulness meditation versus relaxation training: Effects on distress, positive states of mind, rumination, and distraction. *Annals of Behavioral Medicine, 33*, 11-21.

Kirsch, I. (1985). Response expectancy as a determinant of experience and behavior. *American Psychologist, 40*, 1189-1202.

Kirsch, I. (1999). *How expectancies shape experience*. Washington, DC: American Psychological Association.

Kopta, S. M. (2003). The dose– effect relationship in psychotherapy: A defining achievement for Dr. Kenneth Howard. *Journal of Clinical Psychology, 59*, 727–733.

Lewith, G.T., Hyland, M.E.,& Shaw, S. (2002). Do attitudes and beliefs about complementary medicine affect treatment outcome? *American Journal of Public Health, 92*, 8-10.

Mercer, S. W. (2005). Practitioner empathy, patient enablement and health outcomes of patients attending the Glasgow homeopathic hospital: A retrospective and prospective comparison. *Wiener medizinische Wochenschrift, 155*, 498-501.

Pandey, R. (2009). Four decades of sophrology and its scientific status. *Indian Journal of Social Science Research, 6*, 1-3.

Patrick, V. M., Macinnis, D. J., & Park, C. W. (2007). Not as happy as I thought I'd be? Affective misforecasting and product evaluations. *Journal of Consumer Research, 33*, 479-490.

Perreaut-Pierre, E. (2000). *Sofrología y éxito deportivo*. Barcelona: Editorial Paidotribo

Rottenberg, J., & Gross, J. J. (2007). Emotion and emotion regulation: A map for psychotherapy researchers. *Clinical Psychology: Science and Practice, 14*, 323-328.

Ryan, R. M., & Deci, E. L. (2000).Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Seligman, M. E. P. (2008). Positive Health. *Applied Psychology: An International Review 57*, 3-18.

Shang, A., Huwiler-Muntener, K., Nartey, L., Juni, P., Doring, S., Sterne, J., et al. (2005). Are the clinical effects of homeopathy placebo effects? Comparative study of placebo-controlled trials of homeopathy and allopathy. *Lancet, 366*, 726-732.

Sheldon, K., & Elliot, A., J. (1999). Goal striving, need satisfaction, and longitudinal well-being: the self-concordance model. *Journal of Personality and Social Psychology, 76*, 482-497.

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology: In Session, 65*, 467-487.

Strümpfel, U. (2004). Research on Gestalt therapy. *International Gestalt Journal*, 27, 9-54.

Walach, H., Gaus, W., Haeusler, W., Lowes, T., Mussbach, D & Schamell, U. (1997). Classical homoeopathic treatment of chronic headaches: a double-blind, randomized, placebo-controlled study. *Cephalalgia, 17*, 119–126.

Whalley, B., & Hyland, M., E. (2009). One size does not fit all: Motivational predictors of contextual benefits of therapy. *Psychology and Psychotherapy: Theory, Research and Practice, 82*, 291-303.

Wampold, B. (2001). *The great psychotherapy debate: Models, methods, and findings*. Mahwah, NJ: Lawrence Erlbaum.

Waterman, A. S., Schwartz, S. J., Goldbacher, E., Green, H., Miller, C., & Philip, S. (2003). Predicting the subjective experience of intrinsic motivation: The roles of self-determination, the balance of challenges and skills, and self-realization values *Personality and Social Psychology Bulletin, 29*, 1447-1458.

Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Wilson, T. D., Lisle, D. J., Kraft, D., & Wetzel, C. G. (1989). Preferences as expectation driven inferences: Effects of affective expectations on affective experience. *Journal of Personality and Social Psychology, 56*, 519-530.

Wilson, T. D., & Klaaren, K. J. (1992). *''Expectation whirls me around''. The role of affective expectations in affective experience.*In M. S. Clark (Ed.), Review of personality and social psychology (Vol. 14, pp. 1–31). Newsbury Park, CA: Sage.

Yontef, G. (1993). *Awareness, dialogue & process: Essays on gestalt therapy*. Gouldsboro: The Gestalt Journal Press.

## Tables

**Table 1.** Demographic characteristics of clients in each therapeutic treatment

| | Homeopathy | Sophrology | Gestalt |
|---|---|---|---|
| | N=31 | N=33 | N=30 |

| | | | |
|---|---|---|---|
| Gender (%) | | | |
| Females | 23 (74.2) | 22 (66.7) | 23 (76.7) |
| Males | 8 (25.8) | 11 (33.3) | 7 (23.3) |
| Age | | | |
| Mean (SD) | 46.87 (16.88) | 40.00 (12.21) | 32.10 (8.87) |
| Range | 18-68 | 18-65 | 18-50 |
| Occupation (%) | | | |
| Student | 4 (12.9) | 3 (9.1) | 5 (16.7) |
| Employee | 12 (38.7) | 23 (69.7) | 19 (63.3) |
| Unemployed | 0 | 1 (3.0) | 2 (6.7) |
| Housewife | 14 (45.2) | 5 (15.2) | 4 (13.3) |
| Retired | 1 (3.2) | 1 (3.0) | 0 |

**Table 2**. Means and standard deviations for all variables between therapies

| | Before intervention | | After 1-month of intervention | |
|---|---|---|---|---|
| Condition and variable | Mean | *SD* | Mean | *SD* |

| | | | | |
|---|---|---|---|---|
| Expectancy | | | | |
| Homeopathy | 1.97 | *1.28* | - | - |
| Sophrology | 1.97 | *1.47* | - | - |
| Gestalt | 2.20 | *1.16* | - | - |
| Intrinsic motivation | | | | |
| Homeopathy | - | - | 18.03 | *3.67* |
| Sophrology | - | - | 19.90 | *2.91* |
| Gestalt | - | - | 19.50 | *1.98* |
| Perceived effort | | | | |
| Homeopathy | - | - | 11.00 | *1.67* |
| Sophrology | - | - | 12.84 | *1.58* |
| Gestalt | - | - | 12.07 | *2.40* |
| Positive affect | | | | |
| Homeopathy | 29.22 | *8.27* | 32.51 | *8.96* |
| Sophrology | 28.18 | *9.77* | 38.18 | *7.79* |
| Gestalt | 23.77 | *8.30* | 32.13 | *8.26* |
| Negative affect | | | | |
| Homeopathy | 22.19 | *6.92* | 21.13 | *8.73* |
| Sophrology | 26.64 | *9.32* | 16.63 | *5.91* |
| Gestalt | 28.33 | *9.99* | 20.63 | *8.08* |
| Empowerment | | | | |
| Homeopathy | - | - | 1.54 | *.89* |
| Sophrology | - | - | 2.39 | *.79* |
| Gestalt | - | - | 2.17 | *.80* |

**Table 3.** Change in positive and negative affect post-intervention as a function of level of expectancy (N = 94)

| Level of expectancy (No. of clients) | No. clients with no change or decreases in positive affect (No. clients with increases in positive affect) | Mean positive affect change from baseline (*SD*) | No. clients with no change or increases in negative affect (No. clients with decreases in negative affect) | Mean negative affect change from baseline (*SD*) |
|---|---|---|---|---|
| -3(0) | 0(0) | - | 0(0) | - |
| -2(1) | 0(1) | 29 | 0(1) | -19 |
| -1(2) | 0(2) | 8.50 (*7.78*) | 0(2) | -18 (*5.65*) |
| 0(15) | 3(12)* | 7.13 (*8.75*) | 4(11) | -6.5 (*9.55*) |
| 1(10) | 1(9)* | 9.30 (*10.65*) | 4(6) | -4.10 (*7.46*) |
| 2(12) | 2(10)* | 8.66 (*11.43*) | 6(6) | -6.9 (*11.55*) |
| 3(54) | 19(35)* | 4.98 (*9.12*) | 18(36)* | -5.80 (*9.35*) |

Note. *indicates a significant chi-square test at $p \leq .05$

**Table 4.**Correlations between predictor and outcome variables

| Measure | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Expectancy | - | | | | | | |
| 2. Intrinsic motivation | .16 | - | | | | | |
| 3. Perceived effort | -.13 | .37** | - | | | | |
| 4. Empowerment | .05 | .43** | .41** | - | | | |
| 5. Positive affect $^{baseline}$ | .11 | .15 | -.03 | .15 | - | | |
| 6. Positive affect $^{change}$ | -.20 | .27** | .42** | .36** | .54** | - | |
| 7. Negativeaffect $^{baseline}$ | -.06 | .07 | .09 | .08 | -.31** | .31** | - |
| 8.Negative affect $^{change}$ | .11 | -.30** | -.31** | -.29** | -.24* | -.45** | -.65** |

*p < .05, **p < .01

**Table 5.** Multiple regressions with expectancy, intrinsic motivation, effort and empowerment as predictors variables and negative affect and positive affect at follow-up as dependent variables

| Dependent variables | Predictor variables | B | β |
|---|---|---|---|
| Negative affect $^{follow-up}$ | | | |
| | Negative affect $^{baseline}$ | .35 | .41*** |
| | Expectancy | .57 | .10 |
| | Intrinsic motivation | -.60 | -.23* |
| | Perceived effort | -.67 | -.17 |
| | Empowerment | -.71 | -.08 |
| $R^2$= .29, (5,93), $p$<.001 | | | |
| Positive affect $^{follow-up}$ | | | |
| | Positive affect $^{baseline}$ | .37 | .38*** |
| | Expectancy | -1.15 | -.17* |
| | Intrinsic motivation | .69 | .24** |
| | Perceived effort | 1.01 | .23** |
| | Empowerment | 2.00 | .20* |
| $R^2$= .48, (5,93), $p$< .001 | | | |

*$p$ <.05, **$p$ < .01, ***$p$ < .001