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Motivational concordance: An important mechanism in self-help therapeutic rituals involving inert (placebo) substances

Michael E. Hyland*, Ben Whalley

School of Psychology, University of Plymouth, Plymouth, UK

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Abstract

We tested the contribution of two mechanisms, response expectancy and motivational concordance, to reported psychological benefit from a popular, biologically inactive, self-help, complementary therapy (a placebo). Flower essences were taken by 251 people for self-selected symptoms and were randomized to receive three different kinds of information. When the flower essence was presented as a spiritual therapy, then baseline spirituality (β=.35, *P*=.01) and expectancy (β=.25, *P*=.03) independently predicted outcome. When flower essences were presented as an affirmation (i.e., nonspiritual) therapy, then spirituality negatively (β=−.27, *P*=.03) and expectancy (β=.33, *P*=.01) predicted outcome. For both groups, expectancy predicted outcome after controlling for spirituality and compliance, but did not after controlling for ease of task completion. Expectancy failed to predict outcome in the nonenhanced ritual group. The results suggest that motivational concordance is an important therapeutic mechanism for real-life placebos.

Keywords: Placebo; Placebo responder; Motivation; Therapeutic ritual; Psychotherapy; Contextual model; Flower essence

Placebo or nonspecific responses play a role in most therapeutic encounters, on occasions accounting for the majority of variance in outcome for both conventional medicines [1,2] and complementary medicines [3–5]. Nevertheless, the underlying mechanisms remain uncertain. There is considerable consensus that conditioning and expectancy can both play a role [6], but there is also evidence for the existence of additional mechanisms [7–11].

All therapies involve some kind of ritual—a therapeutic ritual. By therapeutic ritual, we denote the totality of meaning which is attached to the therapeutic encounter, as perceived by the person, client, or patient [12]. Self-help rituals are simpler than many others in that they do not involve a therapist and, so, minimize therapist-mediated effects.

In this article, we show that when an inert substance is taken in a self-help therapeutic ritual the mechanisms that affect outcome, and hence, the correlations between baseline and outcome variables can be manipulated by altering characteristics of the therapeutic ritual. We focus on two mechanisms: expectancy and motivational concordance. Expectancy is a conventionally accepted placebo mechanism for which there is considerable evidence. Motivational concordance is a recently proposed mechanism [11], which may prove important when explaining long-term therapeutic change.

Expectancy and the placebo responder

Therapeutic contexts have meanings related to both beliefs (i.e., cognitive meanings) and feelings (i.e., affective meanings). Expectancies are an important component of cognitive meaning. Response expectancy theory suggests that expectancies have a direct effect on physiological responses, unmediated by any other psychological variable; that is, symptoms and physiological responses tend to become consistent with the expectation, without mediation [13,14].

The long history of research into "the placebo responding personality" has been framed primarily within an expectancy (i.e., cognitive) heuristic. There are two views: one is that

* Corresponding author. School of Psychology, University of Plymouth, Plymouth PL4 8AA, UK.

E-mail address: mhyland@plymouth.ac.uk (M.E. Hyland).

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dispositions such as suggestibility and acquiescence are predictors of placebo responding because they amount to a generic tendency to respond to suggestion [15]. More recently, the trait of optimism has also been found to predict placebo outcome [16,17]; optimism correlates with expectancy, with optimists expressing more positive expectations. The second and more popular view is that there is no such thing as a placebo responding personality [18,19]. Adherents of this second viewpoint to the considerable inconsistency in the placebo-responder personality literature and also make a theoretical point: expectancies are determined by an evaluation of the specific aspects of the situation—in the context of the person×situation debate, they are the consequence of the situation and the person and not just the person. For this reason, one would not predict a generic placebo responding personality—only context-specific correlations between expectancies and outcomes.

Motivational concordance and the placebo responder

The theory of motivational concordance is based on the assumption that the placebo response is a reaction to the *behavior* of the therapeutic ritual. Two well-established theories explain why the behavior of a therapeutic ritual might affect outcome. First, several motivation theories (self determination theory, control theory, self-actualization and personal growth theory) share a common assumption that goal fulfillment is a positive experience [20–25]. There is a general consensus that the attainment of self-actualizing, self-defining, or self-relevant goals leads to positive affect. Additionally, there is a well-established link between affect and immune function [26,27], and so, positive goal attainment can also create therapeutic physiological changes [28]. Second, self-perception theory suggests that behavior is a source of information about the self [29,30], and the behavior of the ritual can therefore provide information that affects perception of symptoms. What is common to both these theories is the idea that the therapy is effective to the extent that a person engages in the ritual.

There are two reasons why a person may engage with a therapeutic ritual. One is the desire to get better and the expectation that the therapy will be effective—i.e., the extrinsic value of the ritual which, when coupled with expectancy, leads to motivated behavior. A second reason is that the ritual satisfies important, self-actualising goals (i.e., the intrinsic value of the ritual), which, when coupled with the expectancy of achieving those self-actualising goals, leads to motivation to engage in the ritual. Here, we focus on the second of these motivations to engage with a ritual, namely, the intrinsic motivation of the ritual. Note that people may be more optimistic about self-actualising rituals because the extrinsic expectation of success can be associated with the intrinsic value of the ritual.

People have different self-actualising goals, so a ritual that is self-actualising for one person may not be so for another. For any ritual, a person whose motivations are concordant with the ritual should be more engaged and, so, have better outcomes (due to either of the two mechanisms of behaviorally mediated therapeutic benefit). Intrinsic motivation for the ritual depends on the fit between the person's motives and the ritual. So, according to motivational concordance theory, there should be no such thing as a generic placebo responder, but there should be context-specific placebo responders, where the placebo responder characteristics depend on the therapy. The implication is that correlations between predictors and outcome should change if the motivational context of the therapy is changed.

Fig. 1 provides a schematic representation of response expectancy theory and the behaviorally mediated motivational concordance theory. Classical motivation theory shows that motivation (i.e., the tendency to engage in goal-oriented behavior) is the product of value and expectancy—i.e., expectancy×value theory [31]. If response expectancy is the only mechanism (i.e., motivational concordance does not occur), then expectancy of positive outcome should correlate with outcome, and neither the intrinsic motivation for the therapy nor behavior should add additional variance. If motivational concordance is the only mechanism (i.e., response expectancy does not occur), then expectancy of positive outcome should not add additional variance compared to intrinsic motivation for the therapy. If response expectancy and motivational concordance are both true, then expectancy of positive outcome on the one hand, and intrinsic values and behavior on the other should both contribute variance to outcome.

Flower essences as placebos

Flower essences are a form of complementary and alternative medicine that can be purchased over the counter in pharmacies and health shops, or via the internet, as a remedy for psychological symptoms. They are widely used in Western countries: a major pharmacy in the United Kingdom reports 650,000 bottles sold annually for a cost of £3.4 million in 2006 (personal communication). Each of the 38 Bach flower essences purports to treat a different psychological symptom (including anxiety, depression, and fatigue, as well as more unusual symptoms such as impatience or over concern with others). Users select the particular flower essence using a chart that is placed near the essences in the retail outlet or on the internet and which helps users decide on the particular essence or essences they need. Like other complementary medicines, flower essences are a spiritually contextualized therapy [32], and the spiritual nature of flower essences was part of the rationale presented by their inventor, Edward Bach [33]. From a biochemical perspective, all 38 essences are identical (brandy 60% and water 40%), and no difference has been detected between verum and placebo [34,35]. Flower essences can be considered a self-help placebo, which is used regularly for clinical purposes.