DRUG & ALCOHOL FINDINGS *Review analysis*

This entry is our analysis of a review or synthesis of research findings added to the Effectiveness Bank. The original review was not published by Findings; click Title to order a copy. Free reprints may be available from the authors – click prepared e-mail. Links to other documents. Hover over for notes. Click to highlight passage referred to. Unfold extra text The Summary conveys the findings and views expressed in the review. Below is a commentary from Drug and Alcohol Findings.

▶ A meta-analysis of the association between patients' early treatment outcome expectation and their posttreatment outcomes.

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A review commissioned by the American Psychological Association found that patients who enter psychotherapy with positive expectations about outcomes tend to actually have better outcomes, suggesting therapists should regularly assess expectations and if indicated take steps to enhance them.

SUMMARY [Though not specific to clients with drug and alcohol problems, studies included in the analyses described below included such clients, and the principles are likely to be applicable to these disorders, partly because severe substance use problems generally form part of a complex of broader psychosocial problems. This review updates an earlier version also in the Effectiveness Bank.]

The featured review is one of several in a special issue of the journal *Psychotherapy* devoted to features of the therapist-client relationship related to effectiveness, based on the work of a task force established by the American Psychological Association. This particular review's aim was to evaluate the influence of 'outcome expectations' – the client's expectations about the consequences (good or bad) of participating in treatment.

Key points
From summary and commentary

Commissioned by a task force of the American Psychological Association, this review evaluated the influence of clients' expectations about the degree to which treatment will help them on how much they actually do improve.

Across all 81 samples of patients among whom studies have investigated this link, it was small but statistically significant.

However, this association is not necessarily a causal one; it has not yet been established that deliberately boosting expectations will similarly boost outcomes.

Patients' expectations have long been considered a contributory factor to successful psychotherapy. In his classic, *Persuasion and Healing*, Jerome Frank argued that patients enter therapy because they are demoralised, and that for any therapy to be effective, there must be within the patient a mobilisation of belief in the ability to improve. For Frank this positive outcome expectation precipitates a sense of 'remoralisation', seen as a change mechanism common to different types of therapy.

Patients may have expectations about a number of different aspects of therapy. The featured review focused on expectations about outcomes (how far their symptoms will improve due to treatment) as distinct, for example, from expectations about what treatment will consist of. These expectations can be thought of as the patient's personal prognosis about how they will respond to treatment.

Traditionally, expectations were seen as 'nuisance' variables to be eliminated from the analysis in clinical trials; few early studies aimed to test their therapeutic impacts. However, over the past few decades there has been increased interest, especially in outcome expectancies as a

determinant of improvement across therapies with different theoretical foundations.

The review incorporated a meta-analysis amalgamating results from relevant studies to estimate the overall strength of the link between the patient's expectations of how much they will improve and actual improvements, and to be able to probe for influences on the strength of that link. The assumption was made that there is no single, true strength of the link between expectations and outcomes which appears to vary only because of methodological differences, but that instead strength really did vary across the studies included in the analysis.

Measuring outcome expectations

The Credibility/Expectancy Questionnaire is the most widely used measure of outcome expectations. It can be adapted for different problems by replacing the xxx placeholders in its three questions:
• "By the end of the therapy period, how much improvement in your xxx symptoms do you think will occur?"
• "At this point, how much do you really feel that therapy will help you to reduce your xxx symptoms?"
• "By the end of the therapy period, how much improvement in your xxx symptoms do you feel will occur?"

Studies were included in the analysis if their results had been published in English, included post-treatment mental health outcomes, related these outcomes to the patients' outcome expectations assessed before treatment or at the first treatment session, and involved samples of patients in treatment receiving psychotherapy intended to last at least three sessions. Searches found studies of 81 samples cumulating to 12,722 patients. The strength of the link between expectations and outcomes was calculated in the form of a correlation coefficient, an expression of the degree to which outcomes co-varied with expectations. The chosen metric ranges from -1 (perfect negative co-variation meaning that as one side of the link gets larger the other diminishes) to +1 (perfect positive co-variation meaning that as one side of the link gets larger so does the other). These coefficients were also converted to effect sizes. Effectively these metrics indicate how influential expectations had been if they were causally linked to outcomes.

Also searched for were studies of similar samples of patients in which the researchers deliberately tried to change outcome expectations to test if this improved outcomes. No such studies were found, [leaving the findings dependent on studies which could establish an *association* between expectations and outcomes, but not that this was due to the former actually *causing* changes in the latter].

Main findings

The overall correlation was a statistically significant 0.18 corresponding to an effect size of 0.36, indicating a modest link between early positive expectations of outcomes and actual outcomes. In other words, as expectations became more positive, outcomes tended to do the same, but the relationship was a loose one.

The strength of the link between early expectations and outcomes varied significantly across studies. Among the factors associated with this variation were:
• Studies which sampled older patients tended to record a weaker link.
• The link was stronger in studies where the practitioner used a treatment manual to either wholly or partly guide treatment compared to studies where no manual was used.

The strength of the link did not significantly vary depending on the patients' diagnoses, the type of treatment (orientation and modality), when the study was published, sex of the patients, or how well the researchers had measured outcome expectations.

These findings from the analysis which aggregated results from relevant studies were complimented by a review of studies shedding light on how a link between expectations and outcomes might arise. Garnering most evidence was that patients who before or early in treatment expect to do well form more positive therapeutic relationships with their therapists, which in turn lead to better outcomes. This 'mechanism' is consistent with the theory that people are prepared to devote more resources to achieving a goal they believe might be within their grasp – in this case, more strongly engaging in a collaborative working relationship with their therapists.

This is, however, unlikely to be the sole mechanism, and at least two studies have found evidence for a reverse linkage – that not only do early positive outcome expectations help promote initial engagement in an effective therapeutic relationship, but also that the

experience of that relationship can influence later outcome expectations.

Also reviewed were studies indicating what types of patients enter therapy with low versus high expectations, results taken account in the "Practice implications" section below.

Notably lacking from the evidence base were studies of how the therapist influences outcome expectations, and studies designed to test strategies to enhance expectations in order to improve outcomes. Studies which allocate patients at random to treatment with versus without such strategies (and/or to treatment with varying strategies) are needed to further legitimise the scientific standing of outcome expectations as a causal factor in outcomes, and to guide clinicians in how to capitalise more fully on this relationship.

However, several studies among non-clinical samples such as students have suggested ways therapists can cultivate positive outcome expectations – for example, by providing a clear, compelling, and moderate-length treatment rationale, describing the treatment as prestigious and broad in its focus, using technical jargon, and citing successful cases.

Practice implications

Drawing on the best available research evidence, the reviewers offered practice suggestions to help therapists cultivate and respond to their patients' outcome expectations:

• Explicitly assess patients' outcome expectations early in treatment so therapists can verify and validate their patients' beliefs.

• Use this assessment to attend closely to the quality of the therapeutic relationship for patients whose low expectations place them at greater risk of poor outcomes, eg, by being especially affiliative and supportive, and by preparing them for tensions in the relationship which if unaddressed could further diminish expectations. However, do not try to convey more optimism than a patient is ready to accept.

• To augment outcome expectations, use persuasion tactics regarding the likely efficacy of psychotherapy, especially when delivering a treatment rationale. For example: mention that the treatment is prestigious, supported by research, and deals broadly with feelings, cognitions, and behaviours; intersperse vignettes of successful cases; and use some technical jargon. However, temper your hope-inspiring statements so they neither too quickly threaten a patient's beliefs or sense of self, nor promise unrealistic change.

• Personalise expectations-enhancing statements based on the patient's experiences or strengths. For example, point out that despite any doubts about whether they can change, already they have conquered two major hurdles in admitting to a problem and seeking help, indicating motivation and a desire to change.

• In their attempts to affect expectations clinicians can preserve patient autonomy, eg: "I could be wrong, please tell me if I am, but you strike me as someone who can really accomplish what you put your mind to."

• Regularly check the patient's outcome expectations and respond accordingly.

• Be especially attentive to outcome expectations when working with younger patients, for who it seems particularly important to believe at the outset that a treatment can work for them.

• Also be especially attentive when delivering a manualised treatment; it seems particularly important for patients to expect that a 'packaged' treatment will work for them.

FINDINGS COMMENTARY Effectively the reviewers accepted that the evidence is solid enough for therapists to act on the assumption that the degree to which patients think treatment will help them, influences the degree to which it actually does, partly because they are prepared to invest more in establishing a working alliance with therapists when they believe the treatment will help. Evidence in favour includes the statistical significance of the association between outcome expectations and outcomes (meaning that more than chance is at work), the fact that the presumed causal agent – outcome expectations – were in the amalgamated

studies assessed *before* outcomes, so could have affected them, and the consistency of the finding of some degree of positive link; in only 11 of the 81 patient samples was this link either zero or in the 'wrong' direction.

Plausible as this account is, the association on which it is based varied significantly across studies – it cannot be relied on to be substantially present – and across all the studies it accounted for just 3.24% of the difference in outcomes, leaving another nearly 97% to be explained in other ways. As the reviewers admit, until the presumption that expectations cause fluctuations in outcomes is tested in studies which deliberately vary expectations, a causal link remains just one explanation for the observed association. Perhaps, for example, patients who are more optimistic at the start of treatment are also more optimistic later when they are asked how well they have done; more objective measures of therapeutic progress might reveal a different picture. Another possibility is that patients who are optimistic about what treatment will do for them tend to have good reasons to be so. For example, even before treatment they may have managed to reduce their symptoms, they may be particularly motivated, or can draw on recovery-supporting resources outside the therapy setting. In this scenario, the patient's expectations may be a better-than-random predictor of how much they will achieve desired change, but not because they are an active ingredient in that change, rather because they signify the patient's realistic appreciation of their chances of recovery.

How much therapists should invest in boosting expectations on the basis of this evidence must be open to question, especially given the warnings from the reviewers about 'over-egging' the patient's chances of success. With relapse the norm in substance use treatment, these warnings are especially relevant; instilling optimism is almost certainly on average and on balance positive, but perhaps not if it leads to greater disillusion and distrust when treatment fails.

Substance use studies

Investigating all the studies included in the review is beyond our remit, but we can look closer at the three studies involving four samples of patients where substance use was an outcome and a treatment target. In short, these do not cumulate to reliable evidence that boosting outcome expectations would boost the outcomes themselves. Details below.

In respect of one study which the review says recorded an expectations–outcomes correlation of 0.14, this figure was reached by amalgamating not just drink-related measures but also the patient's satisfaction with treatment – not an 'outcome' if these are defined as relief of a targeted symptom. The link between expectations and the three drink-related measures ranged in strength from 0.04 to 0.12, combining to much less than 0.14. Individually, none of the three drink-related measures were significantly related to expectations.

Another substance use study found a significant and fairly strong link (correlation 0.33) between expectations and outcomes among a US sample of Spanish speakers, but not when the same treatment was trialled among English speakers. Among the latter outcomes were virtually identical whether or not the patient was sure about the gains they would make from treatment – results which show that in substance use treatment, the expectations–outcomes link can depend on the patients in the study or their circumstances.

The final study concerned outcomes after residential treatment for dependent drinking. It assessed outcome expectations, but not specifically *treatment* outcome expectations – how much the patient expected *treatment* to help. Instead patients were asked only whether and how much they expected to be drinking after they left treatment. This is one strand in outcome expectancy questionnaires, but these also include questions pinning down expectations to the forthcoming treatment.

As they are added to the Effectiveness Bank, listed below will be analyses of

the remaining reviews commissioned by the American Psychological Association task force .

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