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► [How does cognitive behaviour therapy work with opioid-dependent clients? Results of the UKCBTMM study.](#)



Kouimtsidis C., Reynolds M., Coulton S. et al.

Drugs: Education, Prevention and Policy: 2011, early online publication.

[Request reprint](#) using your default e-mail program or write to Dr Kouimtsidis at drckouimtsidis@hotmail.com

Compromised by an inability to interest enough patients, the only randomised UK trial of cognitive-behavioural therapy for methadone patients was unable to be definitive but did find some signs of benefit and that the therapy had pulled some of the intended psychological levers.

Summary Cognitive approaches to treating substance misuse problems are still relatively new and it is important to understand how they work. Relevant treatment models emphasise the role of: self-efficacy to cope with situations associated with drug use without using; developing skills to cope with these situations as well as skills to generate broader lifestyle changes; and changing patients' expectations of the positives and negatives of using the substance. Successful treatment is theorised to result from a reduction in the extent to which patients expect positive outcomes from substance use, an increase in their negative expectations, and enhanced self-efficacy and coping skills.

The featured study was the first study to directly test this model in the context of substitution treatment for opiate dependence. The findings derive from the [UKCBTMM](#) study, which [investigated](#) the effectiveness and cost-effectiveness of cognitive-behavioural therapy for patients in opiate substitute prescribing programmes, itself the first randomised controlled trial of a psychosocial intervention in this setting in the UK.

At several UK treatment centres, the study randomly allocated substitute prescribing patients to keyworking only or keyworking plus cognitive-behavioural therapy, and assessed whether the additional therapy improved outcomes six and 12 months later. Additional therapy was offered weekly for 24 weeks but typically patients attended only four sessions. Therapists and keyworkers were recruited from existing staff and the therapists were trained and supervised in the therapy.

Perhaps because so few patients were eligible for and prepared to join the trial (just 60 did so of 369 who were eligible), though there were outcome gains from the extra therapy, none were statistically significant. Nevertheless, as measured by their **effect sizes**, the gains were as large as expected in terms of reductions in the severity of addiction and heroin use, and improved compliance with prescribed methadone use. The cost of the extra therapy was more than outweighed by savings in health, social, economic, work, and criminal justice costs. Perhaps because patients had already been in methadone treatment for on average five months, these savings were less than in some other studies, and the difference in cost savings between therapy and non-therapy groups was not statistically significant.

Main findings

However, the featured report was less concerned with *whether* extra cognitive-behavioural therapy improved the end result of methadone treatment, than with *how* it might have done so. One way was expected to be by improving how well patients coped with life's problems, a concept measured by a standard questionnaire which assessed different aspects of this ability. Relative to keyworking only, as expected, at six months the therapy was followed by a significant improvement in the degree to which patients positively reappraised problems, and a non-significant improvement in problem solving. Other domains where additional improvements were expected (logical analysis, seeking guidance and seeking alternatives) improved to roughly the same degree regardless of the extra therapy. Six months later (and 12 months after therapy had started) a similar analysis revealed that nearly all the expected mechanisms had improved after cognitive-behavioural therapy but deteriorated without it. The exception was logical analysis, where the reverse pattern was seen. Despite these trends, none of differences between patients who had or had not been offered cognitive-behavioural therapy were statistically significant, so chance variation could not be ruled out.

As expected, the degree to which patients felt confident that they could resist the urge to use drugs ('self-efficacy') increased after cognitive-behavioural therapy but decreased (at six months) or increased less (at 12 months) without this therapy. Patients were also asked about the good and bad consequences they expected from cutting down their heroin use. These measures changed in the opposite to what was expected; patients offered the therapy became relatively less positive and more negative about cutting down. Again, none of these differences between the two groups of patients were statistically significant.

Further analyses not reported here assessed changes among only patients who attended at least one session of their intended psychosocial intervention and related changes to the number of therapy sessions attended.

The authors' conclusions

Though no definite conclusions can be taken from this study, there are indications that the therapy may be effective through at least some of the intended mechanisms, but also that methadone-maintained patients at services as configured in England in the 2000s generally reject the chance for this form of extra therapy.

The fact that few patients were prepared to join the study and that those who did

attended few therapy sessions suggest there could be major barriers to implementing cognitive-behavioural therapy in routine practice in the British drug treatment system, perhaps associated with a culture of limited psychological therapy and relatively low expectations of clients' engagement and compliance with treatment.

With such a small sample there is a heightened possibility that real differences made by the therapy will fail to meet conventional criteria for statistical significance and be mistakenly dismissed as chance variation. That this might have happened is suggested by the fact that the relative increase in days free of heroin use after six months was as great as expected. With a larger sample, it might well have also proved statistically significant. Economic analyses also found non-significant but appreciable net social cost-savings. The featured analysis supplements these outcome findings with indications that cognitive-behavioural therapy may have fostered some but not all of the crucial problem-solving skills.

The main seemingly counter-productive finding related to expectations about the pros and cons of reducing heroin use as measured by a scale yet to be validated. Also, more sessions of therapy did not further enhance the presumed psychological mechanisms through which the therapy worked. Nor were these mechanisms significantly related to substance use and other outcomes – again, perhaps due to the small sample size.

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While appreciating the limits set by sample size, the non-significant trends suggesting that the therapy worked though the intended mechanisms were generally small in size. Of 22 comparisons between the two sets of patients, in only one had a mechanism (positively reappraising life's problems) changed to a statistically significant degree in the expected direction – a result to be expected purely by chance. Together with a few counterproductive trends, these minor changes in the mechanisms thought to be specific to cognitive-behavioural therapy do not suggest it has a special role (that is, over and above other forms of psychological therapy) as a supplement to routine keyworking in the circumstances of the trial. At the same time the findings suggest that extra therapeutic contact did help stabilise patients who were prepared to accept it. Whether this needed to be cognitive-behavioural or a recognised therapy of any kind is impossible to tell from the study. Broader research offers little support for a distinctive role in addiction treatment for cognitive-behavioural approaches, results from which are generally equivalent to other approaches. It also seems that, at least in the mid 2000s, a steep hill remained to be climbed before formal psychological interventions of any kind were routinely and expertly implemented in Britain's methadone clinics. How far that has changed is unclear. Details below.

CBT in methadone treatment

Guidelines from Britain's National Institute for Health and Clinical Excellence (NICE) recommend cognitive-behavioural therapy not as a routine means of further stabilising patients, but to help with lingering anxiety and/or depression among those already stabilised in maintenance treatment. However, the analyses which led NICE to counsel against routine use did not show that cognitive-behavioural therapy was *ineffective*, just that it was not convincingly *more* effective than other well structured therapies.

Published in 2007, these guidelines did not have available to them the latest update of an authoritative **meta-analytic review** conducted for the Cochrane collaboration which

combined results from studies comparing structured psychosocial interventions against normal counselling among methadone and other opiate substitution patients. Taking in new studies available up to 2011, it found that overall such interventions had improved neither retention nor outcomes (including opiate use) to a statistically significant degree. In particular, the same was true of the family of behavioural interventions including cognitive-behavioural therapy. Contrary to expectations, this update found contingency management conferred no significant benefits, contradicting both its earlier findings and the NICE guidelines referred to above.

In the Cochrane review, verdicts in respect of cognitive-behavioural therapy rested on three studies, [one of which](#) does not appear to have reported substance use outcomes but did find greater improvements in psychological health. Relative to drug counselling alone, so too did [a study](#) of male US ex-military personnel starting methadone treatment. A year later, in this study cognitive-behavioural patients had improved more on a much wider range of psychological, social and crime measures, but not in respect of substance use. From methadone plus routine drug counselling only, so complete were the reductions in opiate use that little space was left for additional therapy to further improve outcomes. These two US studies are supplemented by a [German study](#) which found that group cognitive-behavioural therapy led to significantly greater post-therapy reductions (at the six-month follow-up) in drug use than routine methadone maintenance alone. The effect was largely due to changes in cocaine use, but there were also minor extra improvements in abstinence from opiate-type drugs and benzodiazepines. What these three studies suggest is that offering extra psychotherapy (not necessarily cognitive-behavioural therapy in particular) improves psychological and social adjustment and perhaps too helps reduce non-opiate substance use, but that methadone maintenance itself as implemented in these studies was such a powerful anti-opiate use intervention that further gains on this front were harder to engineer.

CBT in substance use treatment generally

If in terms of core substance use outcomes, cognitive-behavioural therapy in methadone maintenance does little to improve on routine counselling, this will simply be in line with findings in respect of the therapy's role in treating drug and alcohol problems in general. A [review](#) combining results from relevant studies suggested that it remains to be shown that cognitive-behavioural therapies are more effective than other similarly extensive and coherent approaches. Studies which directly tested this proposition often found little or no difference, even when the competing therapy amounted simply to well structured medical care.

The implication is that choice of therapy can be made on the basis of what makes most sense to patient and therapist, availability, cost, and the therapist's training. In respect of cost and availability, cognitive-behavioural therapy may (more evidence is needed) prove to have two important advantages. The first is that effects may persist and even amplify without having to continue in therapy. The second is that it lends itself to manualisation to the point where it [can be packaged](#) as an interactive computer program and made available in services lacking trained therapists – potentially a crucial advantage for widespread implementation.

Will CBT help methadone patients leave treatment?

Beyond core substance use outcomes is what in Britain is now a priority issue – whether more intensive therapy, even if it seems to add little to the powerful opiate use reduction effect of methadone treatment, might help people gain sufficient psychological and social stability to *leave* this treatment, and leave it sooner. In respect of [psychotherapy in general](#) and cognitive-behavioural therapy in particular, this remains a live possibility with some support from studies of during and post-treatment changes, though none have directly tested whether these enable patients to more safely leave the shelter of substitute prescribing programmes.

However, from the starting point revealed by the featured study, there seems a long way to go before structured psychosocial interventions of any kind are routine in Britain's methadone services. An [earlier report](#) from the study commented that services were overstretched and understaffed and suffered from high staff turnover. Very few staff had been trained in psychological interventions and sometimes even basic individual client keyworking was extremely limited. Difficulties in engaging clients in the study were attributed partly to a low level of psychological interventions in services, which in turn led to low expectations of clients engaging with these interventions. Perhaps too, the authors speculated, some clients were reluctant to become involved in more intensive treatment or to address psychological issues not previously identified in usual clinical care. Most tellingly, the researchers observed "a nihilistic view of psychological intervention and clients' capacity for change among some staff".

In this climate, and with the added burden of research procedures, the small proportion of patients prepared to accept therapy and attend more than a few sessions is likely to be an underestimate of the possible caseload if cognitive-behavioural therapy were well promoted as a part of usual care, especially if elements of the approach were incorporated in keyworking rather than offered as an optional add-on.

In a different set of services probably sampled in the mid-2000s, perfunctory brief encounters focused on dose, prescribing and dispensing arrangements, attendance records, and regulatory and disciplinary issues [characterised](#) the keyworking service offered by some British criminal justice teams to offenders on opiate substitute prescribing programmes. However, 'relapse prevention' was the most common therapeutic activity in the sessions, featuring in 44% of the last sessions recalled by the staff, a term often taken to imply cognitive-behavioural approaches. What staff included under this heading was unclear, and the time given to it averaged just seven minutes, but it does suggest that there is a platform which could be built on. Unfortunately the need to do this building to foster recovery and treatment exit has coincided with resource constraints which make widespread training in and implementation of fully fledged therapy programmes seem unlikely.

Thanks for their comments on this entry in draft to Christos Kouimtsidis of the Herts Partnership NHS Foundation Trust in England. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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