MATCHING CLIENTS TO PSYCHOSOCIAL TREATMENTS: AT THE CUSP OF HOPE AND EVIDENCE?

The UK Alcohol Treatment Trial (UKATT) [1] is one of three relatively recent, large-scale, well-executed efficacy or effectiveness studies [2,3] that have produced little or no evidence that overall substance use disorder treatment effectiveness can be enhanced by matching clients to specific psychosocial treatments. The psychosocial treatments evaluated in the UKATT and the other studies include some of the stalwarts in the empirically supported psychosocial treatment armamentarium for alcohol and other drug use disorders: e.g. cognitive–behavioral and motivational enhancement treatment.

With another set of largely negative results, it is challenging to say anything that has not been said either by the UKATT Research Team in their lucid and thorough discussion of their findings, in the more than 30 pages of commentaries on Project MATCH’s findings in volume 94 of Addiction (e.g. [4]), in an essay by Buhringer [5] or in comments on that essay (e.g. [6]). However, a lingering core issue is what Buhringer [5] referred to as the ‘discrepancy between hope and evidence’. The lack of supportive evidence for client–psychosocial treatment-matching was described above; the hope stems from what the UKATT Research Team [1] characterized as the ‘inherent plausibility’ of the matching hypothesis ‘in a heterogeneous treatment-seeking population and the routine application of matching principles in other branches of health care’ (p. 233). Some who have lost hope in matching clients to specific psychosocial treatments nevertheless retain optimism regarding matching clients to pharmacological treatments (e.g. [7,8]) or to settings of care, such as residential or outpatient treatment (e.g. [9]). For others, ongoing methodological developments and a recently published study might provide some continued hope that useful client–psychosocial treatment matches can be uncovered involving the specific psychosocial treatments.

The methodological developments are (i) analyses for examining non-linear and discontinuous courses of post-treatment functioning (e.g. [10]) and (ii) adaptive treatment strategies and analyses [11–13]. Latent growth mixture modeling (LGMM) allows different, including non-linear trajectories of functioning over time to be examined for different subgroups. Catastrophe models are used to study dramatic, discontinuous changes, such as that from abstinence to relapse.

The idea here is that the probability of relapse may not be proportional to linear increases in associated risk factors. Rather, a relapse, may be best conceptualized as a sudden shift, or catastrophe, whereby small changes in a risk factor can result in a sudden change from abstinence to relapse ([10], p. 692).

With latent growth analysis (assuming only one population growth curve), the Project MATCH Research Group [2] did not find support for a hypothesized interaction effect that people lower in baseline self-efficacy would benefit more from cognitive–behavioral treatment (CBT) than from motivational enhancement therapy (MET), whereas patients with high initial self-efficacy would fare well, regardless of treatment condition. Witkiewitz and colleagues [14] re-examined data from the out-patients in Project MATCH. With a cusp model analysis, pretreatment self-efficacy was predictive of percentage of days abstinent at 6- and 12-month follow-up among CBT, but not MET patients. The LGMM analyses identified three classes of drinking trajectories: frequent drinking, infrequent drinking and inconsistent drinking. The interaction of self-efficacy and treatment condition was associated with an increased likelihood of being in the frequent drinking class relative to the infrequent drinking class. Also, within the frequent drinker class, those with lower self-efficacy before treatment had fewer drinking days at follow-up in CBT than in MET, whereas those who had higher self-efficacy pretreatment had better outcomes in MET. The relationship of self-efficacy to outcome was not moderated by treatment condition among infrequent drinkers.

A second potential basis of hope is adaptive treatment strategies [11,12] that attempt to match treatments to clients, but the ‘matching’ (treatment adaptation) is based on clients’ responses to treatment over time, both in terms of symptoms/functioning and/or treatment adherence, not on their characteristics at treatment initiation. To achieve methodological rigor, adaptive research designs employ randomization at potential treatment change points [12,13]. More complex patterns of initial response could be revealed with LGMM analysis and ‘matched’ sequences of treatments for those different patterns could be evaluated [10]. In any event, the hypothesis would be that ‘sequential tailoring’ yields better results overall for psychosocial treatments than static, baseline-based matching. If so, psychosocial treatments that were not differentially effective for different types of clients as sole treatments would be differentially

beneficial in sequential combination with other treatments (either as initial or follow-up interventions) for different types of treatment non-responders.

Given the preponderance of the current evidence, the UKATT Research Team suggests reasonably that it ‘seems warranted to consider the possibility that there were no substantial matching contingencies waiting to be discovered’ ([1], p. 234), at least with respect to psychosocial treatments (see also [4]). Do alternative approaches for analyzing post-treatment substance use behavior and adaptive treatment strategies provide the basis for continued hope in client–psychosocial treatment matching? Will either approach yield client–treatment interaction effects that are sufficiently strong to justify the additional costs for treatment programs/providers (e.g. for assessment and offering multiple treatments)? Although these questions will continue to be addressed empirically, the more complex methods of modeling post-treatment substance use seem unlikely to yield very strong interaction effects. They involve presumably weaker higher-order interactions—e.g. the effects found in Witkiewitz et al.’s [14] LGMM analyses were relative ones within classes of clients already defined by broader post-treatment drinking trajectories. Adaptive treatment approaches hold more promise, but probably not because of matching patients to treatments. Rather, if one treatment is not working, employing a different approach may be more likely to keep a client in treatment and maintain his or her belief that an ultimately successful outcome is possible. Overall, I am not optimistic regarding client–psychosocial treatment-matching.

Keywords Alcohol treatment, catastrophe model, client–treatment interaction effects, client–treatment-matching, linear growth mixture model.

JOHN W. FINNEY
Center for Health Care Evaluation, VA Palo Alto HCS (152MPD), 795 Willow Road, Menlo Park, CA 94025, USA. E-mail: john.finney@va.gov

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