The Importance of Psychological Treatment and Behavioral Support

Michael W. Otto, PhD
Department of Psychological and Brain Science
Boston University
Conflicts and Acknowledgements

- No industry funding
- NIMH and NIDA funding, Royalties from books on CBT

Acknowledgements
- Some slides from Lisa Onken, PhD, NIDA
- Some slides from R. Katherine McHugh, PhD, McLean
Effectiveness of Treatment

- Goal of treatment is to return to productive functioning
- Treatment reduced drug use by 40-60%
- Treatment reduces crime by 40-60%
- Treatment increases employment prospects by 40%
- Drug treatment is as successful as treatment of diabetes, asthma, and hypertension
HIV/AIDS, Hepatitis and Other Infectious Diseases

- Drug treatment is disease prevention
- Drug treatment reduces likelihood of HIV infection by 6 fold in injecting drug users
- Drug treatment presents opportunities for screening, counseling, and referral
Cost-Effectiveness of Drug Treatment

- Treatment is less expensive than not treating or incarceration (1 yr methadone maintenance = $4,700 vs. $18,400 for imprisonment)
- Every $1 invested in treatment yields up to $7 in reduced crime-related costs
- Savings can exceed costs by 12:1 when health care costs are included
- Reduced interpersonal conflicts
- Improved workplace productivity
- Fewer drug-related accidents
Let’s start with the good news about psychosocial interventions

✧ Meta-Analyses offer the big picture, with a view of the efficacy when all studies are considered together
Psychosocial Treatment for Substance Dependence

Meta-Analysis (39 comparisons)

Dutra et al., 2008, Am J Psychiatry
And we specifically assessed a question from a reviewer:

- Does the presence of agonist therapy change the efficacy of CBT?
  - Need it to make CBT work
  - Or don’t need CBT when agonist therapy is on board

Our meta-analysis said “no,” CBT works regardless of the backdrop of medication management
Psychosocial Treatment for Substance Dependence
Meta-Analysis (39 comparisons)

Dutra et al., 2008, Am J Psychiatry
And we see translation of findings like these to clinical guidelines.

American Society on Addiction Medicine (2015)

*Recommendation that medication-assisted treatment include a psychosocial intervention*
And to define my terms:

CBT for OUD

Modalities

- Individual and group drug counseling
- Cognitive behavioral therapy
- Contingency management/motivational incentives

Majority of studies have been conducted with heroin users
Cognitive-Behavior Therapy

- Functional analysis of cues for use and consequences of use
- Review or Rehearsal to be ready for cues for use
- Development of alternatives and skills
  - Cognitive coping skills
  - Problem solving skills
  - Assertiveness skills
  - Activity assignments
  - Non-drug environments/social contacts
Cognitive Restructuring

- I am an addict and I will always be an “addict.”
- I can’t stand the way I feel (mood states or symptoms of withdrawal or craving are intolerable).
- Everything is horrible, I deserve to use.
- I deserve to feel good, therefore I am going to use.
Contingency Management (CM)

- Based on principles of operant conditioning
- Offer incentives or rewards to encourage specific behavioral goals
- In drug abuse treatment, rewards are typically contingent on negative toxicology screens
- Rewards have included prize vouchers, money, pleasant marital interactions
- Fishbowl techniques allow prize $ to go further
And now for some bad news about the efficacy of counseling for opioid dependence

Amato et al., 2011. Psychosocial + agonist maintenance vs. agonist maintenance alone

• Meta Analysis of 35 studies

• 13 different psychosocial interventions

• Conclusion: adding psychosocial treatment did not add benefits for retention or drug use outcomes.

• However…..

✦ 1. methodology of studies tested always included some psychosocial support in medication group

✦ 2. substantial heterogeneity of studies
What happened?

- Is it the changing type of opioid use?
- Is it due to use of general counseling instead of CBT?
- Is it due to stage of treatment?
- Is it due to the use of inadequate doses (which may include the failure to engage)?
- Do we need to use new strategies that better target habit over intention?
A Changing Population

Opioid Admissions, Age 12-17 years

Heroin

Rx opioids

Substance Abuse and Mental Health Services Administration, 2014
Buprenorphine-Naloxone Treatment for Prescription Opioid Dependence
SMM vs. SMM+ODC
(Weiss et al., 2011, Arch Gen Psychiatry)

- SMM with recommendation to self help
  - 4.5 visits Phase 1 (12 wk)
  - 14 visit Phase 2 (24 wk)
- ODC uses manualized treatment
  - 6.6 visits Phase 1
  - 11.6 visits Phase 2
- No difference based on counseling sessions
Yet...
Methadone Treatment with limited, standard, or enhanced counseling (Schwartz, 2012, Addiction)

Limited counseling crossed over to standard after 4 months

No differences in groups in 12 month drug use outcomes

The authors point out:

- Emergency counseling was used
- Differences were found by McLellan et al., (1993, JAMA) with a veteran population.
- “newly-admitted heroin users may not be ready to benefit from counseling or that methadone itself has such a powerful impact on the use of illicit heroin, that additional improvements with low levels of counseling could not be shown.”
- CBT may have had a different effect
Is CBT needed?
Primary Care Buprenorphine +/- CBT (Fiellin et al., 2013, Am J Med)

141 Opioid dependent outpatients

12 Week CBT

No alcohol, cocaine, or BZ dependence

CBT: Functional analysis of behavior, promoting behavioral activation, identifying and coping with drug cravings, enhancing drug refusal skills, enhancing decision making around high-risk situations, improving problem solving skills
Control Treatment: review of drug use, provide advice on how to achieve or maintain abstinence, assess social, work, and legal functioning, review attendance at self-help groups.

- Nurses see patients 3 X week during initial 2 wk phase
- Attendance was approximately 6 of 8 sessions for physician visits
- Attendance was approximately 7 of 12 CBT visits
CBT-IC for Treatment Refractory Substance Dependence

- Patients in methadone maintenance and counseling were referred for treatment after chronically failing to control illicit drug use despite the above.

- We randomized 78 individuals to 15 sessions CBT-IC or ODC (the active treatment by Weiss et al.).

Otto et al., 2014, J Psychoactive Drugs
CBT: IC

- An exposure-based focus on distress tolerance rather than distress amelioration
- Core of Treatment: 5-step drug use protocol
  - identification of external and internal cues for use
  - discussion of alternatives to drug use in response to these cues;
  - in session induction of the relevant (primarily emotional) cue for use
  - practice of emotional labeling and acceptance of emotional states, and rehearsal of one or more non-drug response to the cues
  - home practice of exposure and alternative responses
- And we found modest gains for both groups, with no between-treatment group differences
Stage of Treatment, Enough Treatment??

- Note the consistency of low rates of delivery of psychosocial treatment (despite effort)
Does CBT earn its weight in $

- Suggestion of yes, even with limited efficacy
- UK CBT vs. MM alone project
- Smaller Study
- CBT advantages were non-significant, but reflected a small to medium effect size (d=.28)
- CBT utilization was limited (mean 4.2 sessions)
- Costs were justified by resource savings

Drummond et al., 2005
Other treatment targets...

2016 Meta-Analysis Dugosh et al. – Psychosocial treatment helps for something... but not necessarily opioid use
New Strategies

Recent evidence of insensitivity to outcomes

- Inability to learn contingency in fear conditioning paradigm (Basden et al., 2016)

- Failure to adapt to changing outcomes (Ersche et al., 2016, Science)

- Is there need for more habit based rehearsal interventions?
Psychosocial treatments for substance abuse have a long history of success.

Recent challenges have been faced in opioid treatment.

Psychosocial elements are always on board, but there is evidence that independent psychosocial treatment offers less than previous findings.

At this point, an explanation for this is not clear.

Low dose of psychosocial treatment is a characteristic across studies.

Phase of treatment issues may also be important.