Appendix

Summary of Studies (listed in chronological order)

Study	Country	Research Design	Type of Treatment(s)	Sample	Outcome Variables	Findings
Daley, D. C., Salloum, I. M., Zuckoff, A., Kirisci, L., & Thase, M. E. (1998). Increasing treatment adherence among outpatients with depression and cocaine dependence: Results of a pilot study.	USA	Quasi-experimental	Motivational therapy plus treatment as usual (TAU) vs TAU only (pharmacotherapy and supportive therapy)	**n=23** patients with depression and cocaine dependence Mean age: 33.6 years Race/ethnicity: 74% African American Sex: 61% male	Outpatient treatment retention and completion: 30-day treatment completion rates, mean no. of sessions attended, 90-day completion rates Psychiatric hospitalization within 1 year Depressive symptoms: Beck Depression Inventory (Beck et al., 1961)	Motivational therapy patients had higher completion rates at 30 days and 90 days of treatment. They had significantly lower rates of re-hospitalization.
Stotts, Angela L.; Schmitz, Joy M.; Rhoades, Howard M.; Grabowski, John. (2001). Motivational interviewing with cocaine-dependent patients: A pilot study.	USA	Experimental	Brief motivational interviewing (MI) plus detox program vs detox program only	**n=105** cocaine dependent adults Age range: 18-50 Sex: 80% male, 20% female	Drug use: Drug History Interview. Motivation for change: University of Rhode Island Change Assessment Scale (URICA; McConnaughy et al., 1983, modified for drug use) Processes of Change: Processes of Change Scale (DiClemente & Prochaska, 1982)	52 of the 105 participants successfully completed the detox program. No differences were found between the groups. 88% of MI group submitted cocaine-negative urine at first relapse prevention session (which followed the detox program completion), compared with 62% of the detox-only group. Over 20 relapse prevention sessions, MI group had 18% positive urines compared to 36% positive with the detox-only group.

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Bernstein, J., Bernstein, E., Tassiopoulos, K., Heeren, T., Levenson, S., & Hingson, R. (2005). Brief motivational intervention at a clinic visit reduces cocaine and heroin use.	USA	Experimental	Brief motivational intervention plus written advice/referral list vs control group (received written advice/referral list)	**n= 1175** adults with heroin and/or cocaine use in the last 30 days Mean age: 38 Sex: 29% female Race: 62% Black, 14% non-Hispanic White, 23% Hispanic	Drug use: self-report of cocaine and/or heroin use in addition to hair analysis. Drug abuse severity test to assess the level of abuse. Readiness for change ruler Addiction severity index (ASI; McLellan et al., 1992)	Both groups had lower drug use at follow-up compared with baseline. Cocaine use had greater improvement in intervention group, but not statistically significant.
Martino, S., Carroll, K. M., Nich, C.; Rounsaville, B. J. (2006). A randomized controlled pilot study of motivational interviewing for patients with psychotic and drug use disorders.	USA	Experimental	2-session Motivational Interview adapted for dually diagnosed psychotic and drug-related disordered patients (DDMI) vs 2-session standard psychiatric interview	**n=44** participants with psychotic disorders, prescribed psychotropic medication, reported at least 1 day of drug use in the past 8 weeks	Drug use: days of substance use. Urine drug screens were used to assess self-report accuracy. Days of medication adherence: measured through contact with a collateral as well as using substance use calendar. Treatment adherence: measured with attendance. Psychiatric symptoms: Positive and Negative Syndrome Scale Functioning: Beck Depression	For those who are primary cocaine users and received MI, the frequency of their cocaine use reduced more than the comparison group. Both groups showed a reduction in use. Primary cocaine users in both groups improved medication adherence. No difference between groups for treatment adherence.

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					Inventory, Addiction Severity Index, and Global Assessment Scale used to assess functioning.	
Marsden, J., Stillwell, G., Barlow, H., Boys, A., Taylor, C., Hunt, N., Farrell, M. (2006). An evaluation of a brief motivational intervention among young ecstasy and cocaine users: No effect on substance and alcohol use outcomes.	England	Experimental	Stimulant- and alcohol-focused brief motivational intervention (MI; one session) vs information alone	**n=342** participants who reported use of ecstasy, cocaine or crack during a typical month in the previous year Age range: 16-22 Sex: 66.5% Male Race: 76% White, 11% Black, 8.5% Asian	Drug use: 45-minute self-completion questionnaire recorded substance use and Maudsley Addiction Profile (Marsden et al., 1998) was used to record prevalence and frequency over past 90 days Severity of dependence: Severity of Dependence Scale (Gossop et al., 1992) was used to assess the extent of problematic stimulant use Toxicology testing was done on random selection of 30% of participants to verify self-reporting	No significant change in use was found between intervention and control groups. However, 59% of the MI group and 41% of the control group reported that they had tried to stop or reduce use. 78% of the MI group attributed their motivation for change to the intervention. 13% of the control group attributed it to the information they received.

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Sorsdahl K., Stein D.J., Pasche S., Jacobs Y., Kader R., Odlaug B., Richter S., Myers B., Grant J. E. (2021). A novel brief treatment for methamphetamine use disorders in South Africa: A randomized feasibility trial.	South Africa	Experimental	Six-session imaginal desensitization plus motivational interviewing (IMDI) vs usual care (referral to a treatment center)	**n=60** methamphetamine users. Mean age:31 years Race: 88% Colored, 8% Black, 3% White	Methamphetamine use: timeline follow-back method (TLFB; Sobell et al., 1979) was used to record self-report of MA use frequency over the past 2 weeks Craving: Penn Alcohol Craving Scale modified for methamphetamine dependence Mental Health Symptom severity: Clinical Global Impression Scale (Guy, 1976), Hamilton Rating Scale for Depression (Hamilton, 1960), Hamilton Rating Scale for Anxiety (Hamilton, 1959) Impairment: Sheehan Disability Scale (Sheehan & Sheehan 2008)	Frequency of methamphetamine use was lower in treatment group than in control group at 6 week follow up and 3 month follow up. Implementation of this brief intervention is feasible and safe.
Mitcheson L., McCambridge J., Byrne S. (2007). Pilot cluster-randomised trial of adjunctive motivational interviewing to reduce crack cocaine use in	England	Experimental	Single session of MI engaging client in a discussion about their crack use vs control condition (crack awareness initiative including posters and leaflets).	**n=29** patients in methadone maintenance program who were using crack cocaine	Cocaine use: 5-10 minute interview gathering information about cocaine use in the previous month. Interview repeated 3 months after intervention for both groups.	1 individual in control group and 3 in intervention group reported discontinuing crack use at follow-up. No significant differences between groups. Only significant difference was in heroin use.

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clients on methadone maintenance.					Severity of dependence: Maudsley Addiction Profile drug use matrix used to assess drug use Satisfaction with treatment	
Stotts, Angela L., Potts, Geoffrey F.. Ingersoll, Gina, George, Mary Reeni. Martin, Laura E. (2007). Preliminary feasibility and efficacy of a brief motivational intervention with psychophysiological feedback for cocaine abuse.	USA	Experimental	MI with EEG-based psychophysiological feedback vs control condition	**n=31** cocaine users Sex: 100% male Age range: 18-50	Cocaine use: urine toxicology screening and self-report forms Functioning: Addiction Severity Index Motivation to change: Rhode Island Change Assessment Scale, Processes of Change Questionnaire Perception of cocaine use: Decisional Balance Scale to measure perceived pros and cons of cocaine use Perception of treatment: End of Treatment Survey to measure patient's perception of treatment	MI group had fewer cocaine-positive urine samples.

Study	Country	Research Design	Type of Treatment(s)	Sample	Outcome Variables	Findings
Mausbach, B. T., Semple, S. J., Strathdee, S. A., Zians, J., & Patterson, T. L. (2007). Efficacy of a behavioral intervention for increasing safer sex behaviors in HIV-negative, heterosexual methamphetamine users.	USA	Experimental	Fast-Lane - Integration of MI with theory-based principles of behavior change (4 sessions) vs Fast-Lane plus booster sessions (4 additional) vs control condition (received diet and exercise counseling sessions)	**n=451** methamphetamine users	Sex practices (ACASI structured interview) Methamphetamine use (self-report) Self-efficacy for negotiating safer sex (Self-efficacy questionnaire)	Fast-Lane participants significantly reduced high-risk sex behavior when compared with control group. Increases in self-efficacy for negotiating safer sex were moderately associated with safer sex behaviors. Fast-Lane plus booster group did not show significant difference.
Stein, M. D., Herman, D. S.; Anderson, B. J. (2009). A motivational intervention trial to reduce cocaine use.	USA	Experimental	4-session MI vs control condition (received a handout of treatment resources)	**n=198** cocaine users Mean age: 38 Sex: 62% male Race: 40% White	Frequency of cocaine use: 45-minute interview capturing substance use and related behaviors. Addiction Severity Index 10-item Alcohol Use Disorders Identification Test SF-12 quality of life measure Entrance into drug detox programs or attendance in recovery meetings (NA, CA, etc).	No significant change in use for those using less than 15 days per month at baseline. Heavier users at baseline showed significant decrease in use from MI intervention, when compared to control group.

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Suvanchot, K. S., Somrongthong, R., Phukhao, D. (2012). Efficacy of group motivational interviewing plus brief cognitive behavior therapy for relapse in amphetamine users with co-occurring psychological problems at Southern Psychiatric Hospital in Thailand.	Thailand	Quasi-experimental	4 sessions of group MI plus brief cognitive behavioral therapy vs usual care	**n=200** outpatient patients of psychiatric hospitals in Thailand with co-occurring amphetamine use Mean age: 25 Age range: 16-40	Amphetamine use: Urine analysis and Time Line Follow Back (TLFB) Psychological problems: Mini International Neuropsychiatric Interview (M.I.N.I.) Anxiety and depressive symptoms: Thai version of Hospital Anxiety and Depression Scales Motivation for change ladder and self-efficacy ruler	There was a reduction in amphetamine use for both groups. The MI group had longer duration of time between positive urine tests. Depressive symptoms were reduced for both groups. Motivation for change and self-efficacy scores were higher for the MI group. MI group had more awareness of risk prevention and harm reduction than the control group.
Pulliam, P. (2012). Integrating motivational interviewing, motivational incentives, and harm reduction as a group therapy intervention with African American crack cocaine users living with HIV.	USA	Nonexperimental	Group therapy over 6 months using motivational interviewing, motivational incentives and harm reduction	n=9 engaged in HIV/SUD services at a hospital	Relapse prevention, risk of homelessness, decision-making skills for clients initiating recovery.	Over 6 month period, all 9 group members paid their rent and avoided homelessness. 1/3 relapsed and continued to pay rent. 2/3 remained sober and experienced health improvements. 5 members became peer counselors and reported that experience was very helpful to them in early recovery.
Polcin, D. L., Bond, J., Korcha, R., Nayak, M. B., Galloway, G. P., Evans, K. (2014) Randomized Trial	USA	Experimental	Intensive MI vs one MI session plus nutrition education	**n=217** individuals with methamphetamine dependence Mean age: 38	Methamphetamine use: Timeline follow-back was used to record self-reported use of methamphetamines.	Primary outcome indicated no significant difference in methamphetamine use between the groups. Psychiatric severity symptoms were lower and less frequent with the intensive MI group.

Study	Country	Research Design	Type of Treatment(s)	Sample	Outcome Variables	Findings
of Intensive Motivational Interviewing for Methamphetamine Dependence.				Sex: 110 men, 107 women Race: 67% White	Urine screens were used to assess concordance with self-reported use. Problem severity: Addiction Severity Index-Lite assesses problem severity in 7 areas-medical, employment, drug, alcohol, legal, family/social, psychiatric. Number of days experiencing anxiety, number of days experiencing depression, number of days experiencing any psychiatric issues.	
Korcha R. A, Polcin D. L., Evans K., Bond J. C., Galloway G. P. (2014). Intensive motivational interviewing for women with concurrent alcohol problems and methamphetamine dependence.	USA	Experimental	Intensive MI plus outpatient group sessions consisting of cognitive behavioral interventions vs one session of MI plus weekly education classes on nutrition plus outpatient group sessions consisting of cognitive behavioral interventions.	**n=163** participants with methamphetamine and alcohol dependence Mean age: 38 Sex: 76 men, 87 women Race: 67% White	Methamphetamine use: Addiction Severity Index and Timeline Follow Back Attendance to treatment Relationship between therapist and client: Helping Alliance Questionnaire	Intensive MI reduced methamphetamine use and alcohol use for women but not for men. Women reported stronger therapeutic alliance from intensive MI. Both men and women in intensive MI group attended more sessions than in the comparison group.

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Gonçalves, P. D., Ometto, M., Bechara, A., Malbergier, A., Amaral, R., Nicastri, S., ... & Cunha, P. J. (2014). Motivational interviewing combined with chess accelerates improvement in executive functions in cocaine dependent patients: A one-month prospective study.	Brazil	Quasi-experimental	Chess plus MI vs active control with recreational activities plus MI	**n=46** cocaine dependent individuals Mean age: 32 Sex: 84% male Race: 78% Caucasian	Cocaine abstinence: urine toxicology screening. Cognitive domains: trail making test Part B, Stroop Color-Word test, Wechsler Memory Scale, Digit Span Backward task, Wisconsin Card Sorting Test, Iowa Gambling Task, Barratt Impulsiveness scale.	Both groups showed improvements in overall neuropsychological performance. MI chess group had greater improvement in working memory section specifically.
Danaee-Far, M., Maarefvand, M., & Rafiey, H. (2016). Effectiveness of a brief home-based social work motivational intervention for male methamphetamine users in Tehran: A randomized clinical trial.	Iran	Experimental	Brief home-based social work motivational intervention (HSWMI) plus usual consulting services vs consulting services only	**n=56** male methamphetamine users Mean age: 32.5	Participation in treatment program: 1 week after intervention and 3 months after intervention. Measured by confirmation by treatment center and interviews with participant and family.	Participation in treatment program after intervention was significantly higher in the MI group than in the control group.
Parsons, J. T., John, S. A., Millar, B. M., & Starks, T. J. (2018). Testing the Efficacy of Combined Motivational Interviewing and Cognitive	USA	Experimental	MI plus CBT tailored for HIV-positive gay and bisexual men vs control condition (received 1-hour educational sessions about HIV and	**n=216** male methamphetamine users Mean age: 41 Race: A third were White, a third were Black/African-	HIV medication adherence, Methamphetamine use condomless anal sex were measured with self-report using Timeline Follow-Back using 30 day recall window for	Significant reductions in days of methamphetamine use at 3-month follow-up were observed in both groups. The two conditions were not significantly different in their magnitude of reduction. Both groups showed improvements in medication adherence and higher CD4 and lower viral loads and had fewer number of condomless anal sex.

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Behavioral Skills Training to Reduce Methamphetamine Use and Improve HIV Medication Adherence Among HIV-Positive Gay and Bisexual Men.			methamphetamine use)	American, and a quarter were Latino	sex and methamphetamine use, and 14 day recall for HIV medication adherence. Immune functioning: measured with blood draw looking at viral load and CD4 count.	
Salimi S., Effatpanah M., & Mahjoub A. (2018). Motivational Interviewing Can Facilitate Entry to Matrix Treatment for Methamphetamine Dependence.	Iran	Quasi-experimental	5 sessions of MI vs wait-listed control condition	**n=276** participants in methadone treatment and dependent on methamphetamine. Mean age: 34.5 years Sex: 100 women, 175 men.	Addiction severity: measured with Addiction Severity Index. General Health Questionnaire (GHQ-28). Social functioning Psychological well being	5 sessions of MI were significant in increasing attendance in Matrix model in treatment group. MI group also had improved psychological well-being and social functioning.
Galloway, G. P., Polcin, D., Kielstein, A., Brown, M., & Mendelson, J. (2007). A nine session manual of motivational enhancement therapy for methamphetamine dependence: Adherence and efficacy.	USA	Nonexperimental	9 weekly sessions of Motivational enhancement therapy (MET)	**n=30** participants with methamphetamine dependence	Methamphetamine use: Timeline follow-back was used to record self-report of methamphetamine use from 60 days before screening through the end of study. Urine screens were used as well.	Participants used methamphetamine on a smaller proportion of days during 8 week treatment period compared to 60 days prior, according to self-report and urine screen results.

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Huang, Y. S., Tang, T. C., Lin, C. H., & Yen, C. F. (2011). Effects of motivational enhancement therapy on readiness to change MDMA and methamphetamine use behaviors in Taiwanese adolescents.	Taiwan	Experimental	3 session MET vs educational materials only	**n=105** adolescents who used MDMA or methamphetamine and were in prison	Readiness to change: measured with Rhode Island Change Assessment self-administered scale translated into Chinese.	Posttest scores of readiness to change and contemplation subscale were significantly higher in intervention group. Precontemplation, action and maintenance subscales were not significantly different between groups.
McKee, S. A., Carroll, K. M., Sinha, R., Robinson, J. E., Nich, C., Cavallo, D., & O'Malley, S. (2007). Enhancing brief cognitive-behavioral therapy with motivational enhancement techniques in cocaine users.	USA	Experimental	3 session MET plus cognitive behavioral treatment (CBT) vs CBT only	**n=74** adults who met criteria for cocaine abuse or dependence Mean age: 35 years Sex: 73% male, 27% female Race: 45% White, 49% Black, 7% Hispanic	Treatment retention: Number of sessions attended Process measure: Changes in treatment motivation, treatment satisfaction Cocaine use: Time-line follow back assessment used to assess use for the 30 days prior to entering study plus treatment and follow-up phases. Urine samples were obtained at each appointment.	MET + CBT participants attended more drug treatment sessions than control group. MET group reported greater desire for abstinence and greater expectation of success, as well as greater expectation of difficulty maintaining abstinence. No difference in use between groups.
Rohsenow, D. J., Monti, P. M., Martin, R. A., Colby, S. M., Myers, M. G., Gulliver, S. B., & Abrams, D. B.	USA	Experimental	MET and Group Coping Skills Training (CST) vs control condition (Control group received meditation and relaxation	**n=165** participants with cocaine dependence Mean age: 34 years Sex: 68% male	Drug use: Timeline follow back interview, urine screens and interview of close friend or family member.	MET participants with low initial motivation had a reduction in use of alcohol and cocaine compared to MET participants with higher initial motivation. No better outcomes from MET compared with MRT. Those with higher initial motivation had more use after MET than MRT. Urges to use and self-efficacy was not better with

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(2004). Motivational enhancement and coping skills training for cocaine abusers: Effects on substance use outcomes.			trainings (MRT) plus group sessions. Group sessions were either CST or educational discussions.)	Race: 88% were Caucasian, 11% black and 1% Asian.	Addiction Severity Index Cocaine-effects questionnaire Cocaine negative consequences checklist Risk behavior assessment Treatment expectations: measured with Cocaine Change Assessment Questionnaire and Cocaine decisional balance scale Cocaine Related Assessment of Coping Skills: assessed urge to use and self-efficacy.	MET than MRT. Group CST only reduced cocaine and alcohol use for women.