

The leading role of evidence-based practices in the treatment of patients with substance use disorders: a systematic review

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Abstract

Objective: To explore the effectiveness of motivational interviewing, motivational enhancement therapy, and cognitive behaviour therapy for patients with substance use disorders, and to estimate the effect of such comparison in patient care setting.

Method: The systematic review was conducted from September 2021 to February 2022, and comprised search on MEDLINE, EMBASE, Web of Science, PsycINFO, Google Scholar, Science Direct, PubMed, Clinical Trials.gov and OvidSP databases for experimental studies and randomised controlled trials related to substance use disorders published in peer-reviewed English-language journals between 2001 and 2021. Quality of the studies was assessed using the Modified Cochrane Collaboration risk of the bias assessment criteria.

Results: Of the 314 studies initially identified, 41(13%) were subjected to full-text assessment, and, of them, 16(39%) were reviewed and analysed. There were 8(50%) studies done in the United States, 4(25%) in the United Kingdom, and 1(6.25%) each in Germany, Australia, South Korea and South Africa. All the 16(100%) studies were intervention-based, with 6(37.5%) being randomised controlled trials. There were 8(50%) studies using motivational interviewing and cognitive behaviour therapy, 5(31.25%) had significant results with a combination of motivational enhancement therapy and cognitive behaviour therapy, 3(18.75%) supported motivational enhancement therapy and cognitive behaviour therapy in combination, and 2(12.5%) studies combined motivational interviewing, motivational enhancement therapy and cognitive behaviour therapy, reporting significant results while simultaneously addressing multiple patient variables.

Conclusion: All studies were heterogeneous. Motivational interviewing produced short-term treatment outcomes and played a supportive role in

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sustaining motivation. Motivational enhancement therapy was an effective therapeutic intervention that significantly addressed inadequate causes, and enhanced motivation for treatment. Cognitive behaviour therapy had a short-term impact and remained influential in the long term as well in handling cognitive and behavioural setbacks.

Keywords: Cognitive behaviour therapy, Motivational interviewing, Motivational enhancement therapy, Substance use disorders

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Introduction

Substance use disorders (SUDs) represent a global issue that causes high mortality and morbidity¹. For instance, many adults consume alcohol, and several consume it frequently, which leads to medical and psychological problems and even death². Approximately 15.1 million people met the diagnostic criteria for alcohol use disorder (AUD) in the United States, increasing various mental health issues among individuals³. In Asian countries, the consumption of illicit drugs is growing, and drug prevalence is observed in populations ranging from 0.01% to 4.6%⁴. In Pakistan, 6.2 million people in 2006, 8.1 million in 2011, and 6.7% of individuals in 2012 used an illegal drug, and 4.3% suffered from SUDs needing treatment⁵. In Pakistan, around the 1980s, there was no heroin usage. In the 1990s, there was increasing heroin usage, with the most common drugs used being cannabis and opiate⁵.

SUD patients suffer from decreased daily life functions⁶. Those who resist treatment lead to chronicity⁷, increased drug intake⁸ and functional impairment⁹. SUD patients have significantly decreased motivation, and experience different cognitive and behavioural disturbances¹⁰. In this regard, motivational approaches and cognitive interventions are more helpful in treating individuals with SUD¹¹. Ambivalence is a central goal of motivational interviewing (MI), a counselling style for individuals with ambivalence about change. The capacity to increase

internal motivation and subsequently alter problematic behaviours is evaluated and improved through MI¹².

MI is an intervention designed to enhance the motivation level of individuals receiving treatment¹³. MI has efficacy in chronic psychological disorders, SUDs, eating disorders, personality disorder and various health issues across diverse populations^{14,15}. MI contains four basic characteristics; open questions, affirmations, reflections, and summarisations. These are spread over the four phases of MI: engaging, focussing, evoking, and planning¹⁶. MI is employed as a stand-alone approach or adjunct to additional interventions, such as assessment feedback in motivational enhancement therapy (MET), which has approximately 3-4 psychological sessions in which MI evidence helps change¹⁷. MET is a dynamic process of change that involves multiple stages, such as pre-contemplation, contemplation, preparation, action and maintenance¹⁸. MET is also known to promote the patient's intrinsic motivation and improve treatment engagement^{19,20}.

After motivation for initial change is built through MI, it is necessary to help practice change behaviour with cognitive-behavioural therapy (CBT) because of its cost-benefit analysis. CBT is a technique that is also utilised in motivational approaches. It is a directive and dominant paradigm²¹ that aims at changing maladaptive attitudes, beliefs and cognition as elements of behaviour that are considered psychological intrusions²². It is more effective in sustaining and improving behavioural changes tailored to the client's situation when providing cognitive-behavioural strategies, such as cognitive restructuring, problem-solving skills, and self-monitoring²³. The client's autonomy is achieved through MI with CBT intervention, and increased competence promotes intrinsic motivation¹⁶. Combining MI, MET and CBT is more effective for readiness for changes and cognitive functions rather than providing motivational interventions alone²³. Motivational approaches play an effective role at the preparation stage for treatment and CBT positively works in the rehabilitation stage²⁴.

The current systematic review was planned to investigate the effectiveness of motivational approaches along with the use of CBT with patients suffering from SUDs.

Materials and Methods

The systematic review was conducted from September 2021 to February 2022, and comprised search on MEDLINE, EMBASE, Web of Science, PsycINFO, Google Scholar, Science Direct, PubMed, Clinical Trials.gov and OvidSP databases for empirical work from 2001 to 2021.

The key words or search terms included "Motivational interviewing" OR "MI" OR "Evidence-based practices" OR "Motivational approaches." AND "Motivation enhancement therapy" OR "MET" OR "Motivational approaches" OR "Evidence-based practices". AND "Substance use disorders" OR "SUDs" OR "Chemical addiction", OR "Substance use and abuse".

The review included experimental studies and randomised controlled trials (RCTs) related to SUDs in adolescents and adults published in peer-reviewed English-language journals. The studies, either qualitative and quantitative, tested MI, MET and CBT interventions and provided data relating to individuals suffering from SUDs as per the criteria set out in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders²⁵.

The studies were excluded if access to full text was not available, if the participants had been involved in illegal activities or had human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS) along with SUD, or included minors, non-humans, gays, or lesbians.

TEXT search was the first step in the selection process, after which EndNote and Excel were used to import the references. Titles and abstracts were eliminated, and eligibility of whole papers was assessed, and were subjected to the inclusion and exclusion criteria.

Five reviewers accessed and screened the studies' titles and abstracts, and then full-text articles were reviewed to determine eligibility and acceptability. Differences among the reviewers were settled through roundtable discussions.

The modified Cochrane Collaboration risk of bias tool was used to gauge the manuscript's quality²⁶. All studies were coded, and certain data was removed, where available, from each study, including gender, sample size/description, age of participants, country of study, assessment of patients, study type/design, motivational approaches, and the level of SUD problem, like mild, moderate and high.

Evidence-based CBT, MET and MI treatments were coded. Motivational techniques included MI and MET, while CBT represented cognitive and behavioural strategy. Final analysis focussed solely on the efficacy of evidence-based motivational and cognitive-behavioural techniques in the treatment of SUD patients.

With respect to quality assessment, using an internal checklist (made by us) of the published studies, methodological assessment of the studies was done. The checklist comprised of specific criteria, including

descriptive issues, study population, data collection, generalisability, completion of the study, data analysis, results from the interpretation, treatment conditions, and outcomes, were employed during this evaluation.

Information analysis was done only for MI, MET and SUDs based on clinical samples. The outcomes of each trial were then examined separately. The studies were organised in chronological order based on the publication dates of each study's references, and the researchers looked for evidence of the efficacy of motivational techniques for SUD patients.

Results

Of the 314 studies initially identified, 41(13%) were subjected to full-text assessment, and, of them, 16(39%) were reviewed and analysed (Figure).

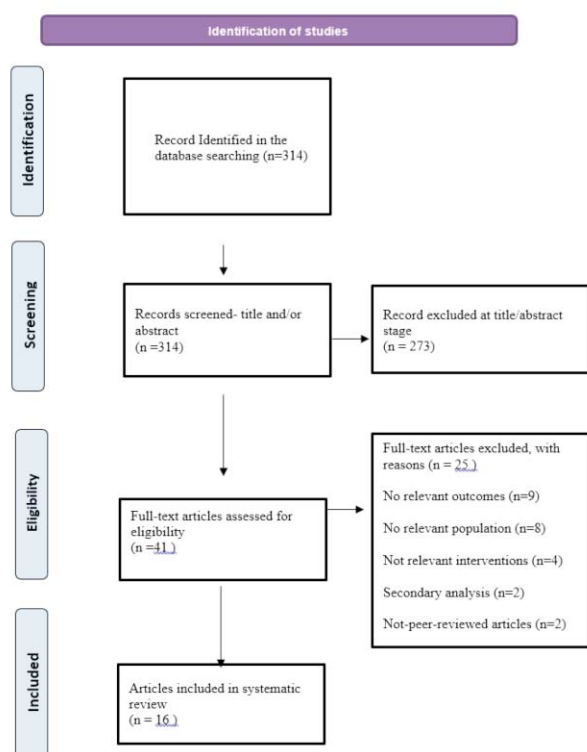


Figure: Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flowchart.

There were 8(50%) studies done in the United States, 4(25%) in the United Kingdom, including England, and 1(6.25%) each in Germany, Australia, South Korea and South Africa. All the 16(100%) studies were intervention-based, with 6(37.5%) being RCTs. There were 8(50%) studies using MI and CBT, 5(31.25%) had significant results with a combination of MET and CBT, 3(18.75%) supported MET and CBT in combination, and 2(12.5%)

studies combined MI, MET and CBT, reporting significant results simultaneously while addressing multiple patient variables (Tables 1-2).

Of the studies analysed, 2(12.5%) looked at the worth of MI combined with CBT along with 'change talk' and 'maintain talk' in their reactions among heavy drinkers' on behavioural changes^{27,28}. After then, data was related to drinking consequences at 3 months. The MI+CBT intervention was shown to be straightforward to implement, and worthwhile for public health drinking prevention measures. After a 3-month follow-up, the described high-risk circumstances were interrelated with the low level of alcohol consumption ($p=0.02$). According to the results, the impacts of frequency change discourse and described approaches to dealing with high-risk circumstances were unpredictable. Further, 1(6.25%) study²⁹ found that CBT for depression and motivational interviewing (CBT-D+MI) were associated with the symptom of remission among college students with co-occurring heavy episodic drinking and depression. The combination of CBT-D and MI influenced symptoms of selective improvement in drinking to manage motives and the depressive symptom 'lack of interest', compared to CBT-D alone. Investigations using CBT+MI³⁰⁻³² revealed that the effectiveness of MI (MI) was higher than of brief CBT (bCBT) in reducing alcohol use. Furthermore, CBT and MI efficiently lowered mild to severe alcohol and other drug (AOD) use among adolescents. Students learned to practise both evidence-based techniques with modest effectiveness adequately.

Findings revealed that MET and CBT worked effectively as combination to enhance patients' motivation and their cognitive function which enhanced the recovery process. A study³³ compared the costs of nurse-administered behavioural intervention for prenatal substance consumers receiving MET+CBT as brief advice (BA) given by an obstetrician. Both therapies were given at the same time as prenatal care. According to the results, the total cost of the MET+CBT intervention (including respondents' time cost) was \$120,483, or \$1,469 per participant, from a social perspective. On the other hand, the BA treatment cost \$27,199, or \$316 per participant. Most of the MET+CBT intervention expenditure was personnel cost for providing intervention sessions and managing the programme. Another study compared the effectiveness of MET combined with CBT versus BA for treating substance usage during pregnancy. Researchers found no significant differences between groups of self-reported substance consumption before and after three months of delivery. Biological tests yielded comparable outcomes. There was a trend ($p=0.08$) for individuals who got

Table-1: Studies describing the relationship of CBT and MI.

Title	Study Reference	Country	Study Type /Design	Sample Characteristics	Conclusion
The Efficacy of Motivational Interviewing with Cognitive Behavioural Treatment on Behaviour Changes in Heavy Drinkers	Kang & Kim, 2021 ²⁷	South Korea	Mixed method	Alcohol drinkers N= 47 Experimental Group (MI+CBT) n=24 M _{age} = 41.9, SD= 6.2 Control Group n= 23 M _{age} = 45.8, SD= 7.4	MI+CBT Promoted awareness of problem-drinking behaviours, self-efficacy, and positive behavioural changes, in the public health system, it's also beneficial for dealing issue of drinking preventative measures.
Engagement With Motivational Interviewing and Cognitive Behavioural Therapy Components of a Web-Based Alcohol Intervention, Elicitation of Change Talk and Sustain Talk, and Impact on Drinking Outcomes: Secondary Data Analysis	Mujic et al., 2020 ²⁸	UK	Correlational and Experimental (exploratory)	Adults (18-73) N= 410 Female= 308 (18-73) MI+CBT arm n=410 M= 40, SD= 11.24	MI+ CBT At the 3-month follow-up, the frequency of reported high-risk instances was linked to very little alcohol usage. Unsupervised web-based alcohol management programmes have the ability to induce and retain change discourse.
Change processes in cognitive behavioural therapy and motivational interviewing for depression and heavy alcohol use: A network approach	Curtiss et al., 2021 ²⁹	USA	Experimental	College students with depression+ HED N= 94 CBT-D+MI arm n = 46 M _{age} = 19.7, SD= 2.17 CBT-D arm n = 48 M _{age} = 20.1, SD= 2.04	MI+CBT showed different results as compared to CBT-D alone, which could lead to therapeutic benefits. Transformation processes associated to drinking intentions may be influenced by CBT-D combined with MI.
A randomized controlled trial for aggression and substance use involvement among Veterans: Impact of combining Motivational Interviewing, Cognitive Behavioural Treatment and telephone-based Continuing Care	Chermack et al., 2019 ³⁷	USA	Experimental	Veterans N = 180 165= Males, 15= females MI-CBT arm n=60 MI-CBT + CC arm n=60 E-TAU arm n=60	MI+CBT Over time, there are considerable reductions in aggressiveness and drug use and a potentially major impact of on decreasing aggression.
Brief group-delivered motivational interviewing is equally effective as brief group-delivered cognitive-behavioural therapy at reducing alcohol use in risky college drinkers	Martin-Perez et al., 2019 ³²	South Africa	Experimental	College students N= 89 Females= 69 b-CBT arm n= 47 b-MI arm n= 42 M _{age} = 21.01, SD= 2.85	MI + CBT Both are effective and have a better likelihood of taking medications. MI and CBT give clinicians the freedom to choose treatments based on their abilities or choices without sacrificing effectiveness.
Counselor Training in Two Evidence-Based Practices: Motivational Interviewing and Cognitive Behaviour Therapy	Iarussi et al., 2016 ³⁰	Alabama, USA	Preliminary study	Counselor trainees N=16 Each trainer practiced CBT and MI,	MI+CBT In training master student's programs, MI and CBT greatly impact. One semester after teaching CBT

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Title	Study Reference	Country	Study Type /Design	Sample Characteristics	Conclusion
Does the addition of integrated cognitive behaviour therapy and motivational interviewing improve the outcomes of standard care for young people with comorbid depression and substance misuse?	Hides et al., 2011 ³⁸	Australia	Experimental	Youngsters with depression + substance abusers N=88 SC+CBT/MI arm n= 60 SC arm n= 28	and two semesters after acquiring MI, students' performance of MI and CBT was generally retained. CBT+MI Over time, there have been significant gains in performance and standard of living metrics. In the brief term, with no changes in AOD usage, CBT/MI in addition to SC may generate rapid treatment results.
Evidence for Optimism: Behaviour Therapies and Motivational Interviewing in Adolescent Substance Abuse Treatment	Macgowan & Engle, 2010 ³¹	Miami, USA	experimental design (Peer-reviewed study)	Adolescents N=36 n = 12 in BTs approach (CT, CBT, MET) n=12 in the MI approach n=12 in combined BST+PS (CBT, MET, MI) approaches	CBT+MI Both are potential therapeutic strategies because CBT-based therapies lessened AOD consumption over time, MI + CBT interventions may only be classified as a "promising" intervention.
Integrated motivational interviewing and cognitive behavioural therapy for people with psychosis and comorbid substance misuse: randomized controlled trial	Barrowclough et al., 2010 ⁴⁰	UK	Experimental (blind randomized controlled trial)	Substance abusers with psychosis N= 327 MI+CBT with SC arm n=164 M _{age} = 37.4, SD= 9.4 Control group with SC n= 163 M _{age} = 38.3, SD= 10.0	MI+CBT Integrated MI and CBT do not enhance hospitalization, symptom results, or functional results, but they minimize the level of substance consumed for a minimum of one year.
Cognitive behavioural therapy and motivational Cognitive behavioural therapy and motivational intervention for schizophrenia and substance misuse	Haddock et al., 2003 ⁴⁸	England, UK	Experimental (randomized controlled trial)	Schizophrenic patients with substances misuse (18-65 years) N= 36 CBT +MI arm n= 18, Control group n= 18, M _{age} = 51, SD= 12.12	CBT+MI Over 18 months, there were significant gains in client's behaviour as compared to conventional therapy. The treatment Programme surpassed routine care in terms of sickness and service utilization.
Randomized Controlled Trial of Motivational Interviewing, Cognitive Behaviour Therapy, and Family Intervention for Patients With Comorbid Schizophrenia and Substance Use Disorders	Barrowclough et al., 2001 ⁴⁰	UK	Experimental (single-blind)	Patients With Comorbid Schizophrenia and SUDs (18-65 years) N= 36 Each participant received each intervention MI, Individual CBT and FI	MI+CBT For individuals with coexisting schizophrenia and substance abusers, a routine care program combined with MI, CBT, and family engagement is more beneficial than regular psychiatric treatment alone.

CBT: Cognitive behaviour therapy, HED: Heavy episodic drinking, CBT-D: Cognitive behavioural therapy for depression, bCBT: Brief Cognitive behavioural therapy, MI: Motivational interviewing, MET: Motivational enhancement therapy, BA: Brief advice, BTs: Behavioural therapies, BST: Behavioural-psychosocial therapies, CT: Cognitive therapy, AOD: Alcohol and other drug, SUD: Substance use disorder, MI-CBT: Motivational interviewing-cognitive behavioural treatment intervention, CC: Continuing care, E-TAU: Enhanced treatment as usual, AT: Active treatment, DTC: Delayed treatment control, CUD: Cannabis use disorders, SC: Standard care, FI: Family intervention, AOD: Alcohol and other drugs, Mage: Mean age, SD: Standard deviation, MD: Median.

Table-2: Studies describing relationship of MET and CBT.

Title	Study Reference	Country	Study Type/Design	Sample Characteristics	Conclusion
Costs of a Motivational Enhancement Therapy Coupled with Cognitive Behavioural Therapy versus Brief Advice for Pregnant Substance Users	Xu et al., 2014 ³³	USA	Experimental (micro-costing study)	Pregnant Female N=168, MET-CBT arm n=82 BA arm n=86	MET+CBT Associated with modest costs. A more profound comprehension of the intervention's role in enhancing abuser care can develop due to Future cost-effectiveness statistics.
CANDIS treatment program for cannabis use disorders: Findings from a randomized multi-site translational trial	Hoch et al., 2014 ³⁵	Germany	Experimental (randomized controlled trial)	Adolescents and adults (16-63 years) N= 279 AT (CBT + MET) arm n= 149 DTC arm n= 130	MET+CBT Effectively integrated to and utilized in clinical practice, with the intention to improve CUD clients' adherence to evidence-based treatment chronically.
Motivational Enhancement Therapy Coupled with Cognitive Behavioural Therapy versus Brief Advice: A Randomized Trial for Treatment of Hazardous Substance Use in Pregnancy and After Delivery	Yonkers et al., 2012 ³⁴	USA	Experimental	Pregnant women (≥ 16 years) N= 168 MET-CBT arm n=82 M=21, SD=32 BA arm n=86 M=18, SD=27	MET+CBT Combined could be appropriate depending on providers' audience, environment, and accessibility. Postpartum treatments that are maintained after delivery may reduce rebound effects.
Evaluation of Cognitive Behavioural Therapy/Motivational Enhancement Therapy (CBT/MET) in a Treatment Trial of Comorbid MDD/AUD Adolescents	Cornelius et al., 2011 ⁴¹	USA	Experimental	Adolescents and young adults (15-20 years) N=75 CBT/MET arm n= 48 M=22.9, SD=7.84 No CBT/MET arm n= 27 M=19.6, SD=9.0	MET+CBT Found to be effective in managing coexisting MDD/AUD in adolescents. To better understand the effectiveness of CBT/MET, large multi-site research are needed.
Enhancing Brief Cognitive Behavioural Therapy with Motivational Enhancement Techniques in Cocaine Users	Mckee et al., 2007 ³⁶	USA	Experimental	Cocaine Abusers and Dependent N=74 MET+CBT arm n=38 M _{age} = 35.0, SD=7.3 CBT arm n=36 M _{age} = 34.9, SD= 7.2	B-CBT+ METs The results supported the use of MET as an addition to CBT and showed that relatively brief studies could be used to examine the impact of appropriate treatment ingredients on parameters of therapy quality and outcomes.

CBT: Cognitive behaviour therapy, HED: Heavy episodic drinking, CBT-D: Cognitive behavioural therapy for depression, bCBT: Brief Cognitive behavioural therapy, MI: Motivational interviewing, MET: Motivational enhancement therapy, BA: Brief advice, BTs: Behavioural therapies, BST: Behavioural-psychosocial therapies, CT: Cognitive therapy, AOD: Alcohol and other drug, SUD: Substance use disorder, MI-CBT: Motivational interviewing-cognitive behavioural treatment intervention, CC: Continuing care, E-TAU: Enhanced treatment as usual, AT: Active treatment, DTC: Delayed treatment control, CUD: Cannabis use disorders, SC: Standard care, FI: Family intervention, AOD: Alcohol and other drugs, Mage: Mean age, SD: Standard deviation, MD: Median.

MET+CBT to have a decreased risk of preterm birth³⁴. Another study³⁵ attempted to evaluate the effectiveness of a modular cognitive-behavioural intervention for cannabis use disorders (CUD) among adolescents and adults. Researchers looked at the consequence of the

intervention after it was implemented in clinical practice. According to the findings, it could increase chronic CUD patients' access to evidence-based care. A similar study³⁶ employed a focussed intervention model to explore the impact of supplementing brief CBT with MI approaches

for the consumption of cocaine. Compared to the CBT situation, subjects who got MET+CBT treatment joined more treatment sessions after the interventions, and predicted significantly greater challenges in balancing remission. On cocaine use, there were no changes across the intervention groups.

Chermack et al.³⁷ investigated the effect of an alternative intervention for the treatment of aggression; they have provided that, during treatment of substance use and aggression, it was found that the subjects experienced a substantial reduction in substance use and aggression over time, as well as a promising significant improvement of additional embedded therapeutic interventions (MI-CBT, MI+CBT+ continuing care [CC]) on reducing aggression.

Hides et al.³⁸ intended to see if adding CBT+MI to routine AOD care improved consequences for individuals with substance abuse and depressive disorders. There were 60 young individuals (standard care [SC]+CBT+MI group) who received CBT+MI in addition to conventional SC, while 28 received only SC. At 3-month follow-up, respondents in SC+CBT+MI group exhibited substantial reductions in cannabis use and depression, and improved social contact and willingness to alter substance use compared to those in the SC group. At the 6-month follow-up, the SC group had improved on these parameters, similar to the CBT+MI group. Despite the treatment group, all young people improved significantly in daily functioning and quality of life. After a 6-month follow-up, neither group showed any changes in AOD usage.

Barrowclough et al.³⁹ found that treatment had no significant consequence on substance usage recurrence, but had a significant statistical outcome on the substance-using amount per day ($p=0.016$); and all drugs ($p=0.017$). At 12 months, the results demonstrated a significant effect on readiness to change usage ($p=0.004$), but this effect did not persist at 24 months ($p=0.320$).

It was noted that treatment did not influence clinical results. For example, psychotic symptoms, functioning, relapse, or self-harm. Haddock et al. conducted a research into symptoms, substances consumption, and health consequences for individuals with schizophrenia after a CBT programme. They determined significant gains in patient performance compared to regular care over 18 months. There were no substantial differences in caregiving or cost outcomes across the treatment groups. Barrowclough et al.⁴⁰ conducted another study to examine the relationship between comorbidity of drug abuse disorders and schizophrenia, showing a higher risk

of significant illness consequences, and a poorer result. The researchers compared regular care to a programme that included MI, CBT, and family intervention (FIs) in a single-blind RCT. There was a higher probability of major sickness complications and a lower prognosis.

Cornelius et al.⁴¹ evaluated 2-year efficiency of manualised CBT and MET in young adolescents suffering from alcohol use disorder and depressive symptoms. Throughout the 2 years of the research, the difference between baseline and outcomes was assessed using analysis of variance (ANOVA). Those gaining CBT+MET illustrated exceptional results compared to those who did not. There was no substantial difference between those who received placebo and fluoxetine at any time point ($p>0.05$).

Discussion

The systematic review assessed the effectiveness of evidence-based practices CBT, MI and MET. There were 16 studies that were reviewed for the purpose.

MI was found to be an efficient treatment for individuals with SUDs. These results are supported by other researchers as well, including Santa Ana⁴². Another study concluded that adolescents who received MI reported decreased substance use⁴³.

Studies showing MET as an effective technique for treating SUDs included one by Kumar et al⁴⁴. Furthermore, MET can be a useful method for reducing the risk of addiction and increasing the desire to stop using drugs⁴⁵. MET's effectiveness is well identified because of its concise and comprehensive quality. The intervention can be utilised in various situations because it is based on MI skills and approaches⁴⁶.

The current review found CBT to be associated with positive behavioural changes and adaptation skills in SUDs and drinking disorders. This is in line with literature⁴³⁻⁴⁵.

Studies have reported that CBT, a more recent adaption model, may be particularly useful in preventing substance misuse in young adolescents or treating concomitant psychiatric disorders in adult substance-abusing clients²¹.

The current systematic review concluded that CBT and MI combined have more effective therapeutic results than CBT alone^{29,37,40}. Moreover, CBT+MI integration may be a promising approach²⁹. Other studied also concluded that integrated MET and CBT is a more effective evidence-based technique in reducing symptoms of SUDs³⁶.

The current systematic review has some limitations. Not

many studies have been conducted in this specific area, and those that have been conducted are related to only a few countries. Also, most studies lacked follow-up information. Most studies analysed were conducted in advanced countries where people have orientation and opportunities. As such, how exactly these approaches can produce positive results in countries where the community is not well aware and practitioners are working with limited resources is not known. Secondly, data was on a broader level without dealing with specific disorders. Finally, the review was registered ex-post-facto on the protocols.io platform not PROSPERO which is another limitation of the current study.

Despite the limitations, however, the review provides information regarding psychological treatment for SUDs that may help clinicians and practitioners develop treatment models and technologies for their patients.

Conclusion

Evidence-based practices effectively treat and reduce symptoms of SUDs, promoting more positive behavioural changes concerning drug addiction. Although MI, MET and CBT are evidence-based practices and have a good prognosis in treating SUDs, integrated approaches of MI+CBT or MET+CBT were more effective than MET, MI or CBT alone.

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