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Group Motivational Interviewing as a Psychotherapeutic Intervention for Dual Diagnosis Patients Living with a Psychotic Disorder: Critique of the Literature

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Dual diagnosis and the need for treatment

Dual diagnosis or co-occurring disorders are terms often used to describe individuals living with a mental illness in addition to having a substance abuse disorder. While a dual diagnosis can include any mental illness, psychotic disorders will be the focus of the present paper (e.g. schizophrenia, schizoaffective disorder). Recent estimates indicate between 46% and 50% of individuals living with a psychotic disorder also meet Diagnostic and Statistical Manual IV Text Revision (DSM-IV-TR) criteria for substance abuse disorder during their lifetime (Green, Drake, Brunette, & Noordsy, 2007; Thornton, Baker, Johnson, Kay-Lambkin, & Lewin, 2011; Roncero, Barral, Grau-Lopez, Bachiller, Szerman, Casas, & Ruiz, 2011; Tsuang, Fong, & Lesser, 2006). With such high rates of substance abuse among individuals living with a psychotic disorder it is imperative clinicians become proficient at utilizing salient interventions.

The relationship between an individual's mental illness and the substance abuse disorder is complex and interferes with the treatment of both disorders. Substance abuse can interact with mental illness in many ways. For example, psychiatric medications have the potential to lose effectiveness when combined with illicit drugs and substances can enhance features of psychosis (positive or negative symptoms) (Graeber, Moyers, Griffith, Guajardo, & Tonigan 2003). Additionally, substance abusers with psychotic disorders face increased rates of acute hospitalization (Roncero et al., 2011), incarceration, homelessness (Spencer, Castle, & Michie, 2002), and suicidal ideation (Carey, Leontieva, Dimmock, Maisto, & Batki 2007; Cleary, Hunt, Matherson, & Walter, 2008). Drug use among dually diagnosed patients living with a psychotic disorder

The most abused drug for individuals living with dual diagnosis is nicotine (Kumari & Postma, 2005). When compared with other populations of mental illness nicotine abuse is especially prominent in the schizophrenia population (Kumari & Postma, 2005). Nicotine abuse among individuals living with psychotic disorders is followed by alcohol and cannabis abuse (Thornton et al., 2011). It is still uncertain why there is a strong relationship between psychotic disorders and substance abuse. However, research indicates several such explanations.

One hypothesis is that individuals self-medicate by abusing substances with the goal being a reduction of psychotic symptoms. Despite the popularity of this belief, the self-medicating hypothesis has received little support from the literature (Green et al., 2007). A second explanation known as the cumulative risk factor hypothesis, states that individuals who are diagnosed with schizophrenia are also more likely to have impaired cognitive ability and suffer from a slew of environmental hazards such as: poverty, victimization, family drug abuse, and educational setbacks. All these factors thereby increase the chance

that a person with a psychotic disorder will develop a drug abuse disorder (Green et al., 2007). Thornton et al., (2011) surveyed and interviewed individuals living with a psychotic disorder and found that nicotine was used to relieve stress, alcohol was used to facilitate social interaction, and cannabis was used to enhance pleasure. The motives for substance abuse within this population of individuals living with a psychotic disorder are not unlike the motives for substance abuse in non-dually diagnosed populations (Spencer et al., 2002).
Multicultural characteristics of dual diagnosed patients

Individuals living with a psychotic disorder have been known to suffer cognitive impairments that may make some of the traditional MI interventions techniques difficult to administer (Combs & Mueser, 2007; Handmaker et al., 2002; Martino & Moyers, 2007; American Psychiatric Association, 2000). For example, individuals diagnosed with a psychotic disorder score about one standard deviation lower than peers with no history of a psychotic disorder on most cognitive tests (Combs & Mueser, 2007). Poor social skills such as: talking too loud, inappropriate word choice, bizarre body language, and misinterpretation of social information are highly characteristic of individuals diagnosed with schizophrenia (Combs & Mueser, 2007). In regards to physical appearance, patients may present with: delayed motor skills, involuntary repetitive behavior (tardive dyskinesia), restricted gait (often a side-effect of first generation anti-psychotic medication), and poor hygiene (Combs & Mueser, 2007). Often associated with positive symptoms of schizophrenia, patients may dress in non-weather appropriate clothing (Combs & Mueser, 2007).

More so than other psychiatric populations, patients diagnosed with schizophrenia often suffer from multiple medical issues, such as rheumatoid arthritis and cardiovascular disease (Jeste, Gladsjo, Lindamer, & Lacro, 1996). Patients may experience adverse side-effects caused by the combination of multiple psychiatric and medical prescribed medications (Jeste et al., 1996; Combs & Mueser, 2007). Characteristic of individuals diagnosed with schizophrenia is lack of insight into their own mental illness which often leads to poor medication adherence (Combs & Mueser, 2007). In addition to the unique cognitive and medical issues, a disproportionate number of individuals diagnosed with a psychotic disorder qualify as having low socio-economic status (Hudson, 2005).

Unfortunately, trauma is very commonly seen in this patient population, individuals with schizophrenia are often the victims of violence and sexual abuse (Combs & Mueser, 2007). The high rate of substance abuse among individuals living with a psychotic disorder increases the likely hood of these individuals committing crimes associated with being under the influence of a substance,

obtaining illegal substance, or possessing illegal substances (Green et al., 2007; Thornton et al., 2011; Tsuang et al., 2006).

Motivational Interviewing

Motivational Interviewing (MI) is a person centered approach to therapy that encourages behavior change by increasing the client's internal motivation through the resolution of ambivalence (Miller & Rollnick, 2002; Prochaska & Norcross, 2010). MI consists not only of specific therapeutic techniques but also a "spirit" (Prochaska & Norcross, 2010; Carey et al., 2007). The clinician providing MI carries with her or him an attitude that change is possible for the client, the client is responsible for devising methods for change, and a recognition of the client's autonomy (Spencer et al., 2002). The MI therapist is non-confrontational, reflective, and generally accepting of the client (Van Horn & Bux, 2000; Carey et al., 2007; Miller & Rollnick, 2002).

Miller and Rollnick (2002) identified four general principles of MI that the clinician should utilize when working with a client: Express empathy, develop discrepancy, roll with the resistance, and support self-efficacy. The therapist expresses empathy in the therapeutic relationship by acceptance of the client, reflective listening, and recognizing that client ambivalence is expected (Miller & Rollnick, 2002). Discrepancy results in the client showing a divide between her or his current behaviors (e.g., benefits of using) and future behaviors (e.g., benefits of not using) (Miller & Rollnick, 2002). Rolling with the resistance is the idea the clinician should respond in a new manner when the client inevitable shows hesitation regarding change (Miller & Rollnick, 2002). Self-efficacy is supported by the client taking responsibility for her or his own change behavior (Miller & Rollnick, 2002).

Rationale for MI as a psychotherapeutic intervention

In studies of MI's effectiveness as a treatment for non-dually diagnosed patients, it has been shown to reduce client drinking behavior by 50% (Prochaska & Norcross, 2010). MI is worth examining as a psychotherapeutic intervention for dually diagnosed patients living with a psychotic disorder because of the amount of empirical support it has received in the literature (Cleary et al., 2008; Roncero et al., 2011; Green et al., 2004; Haddock, Barrowclough, Tarrier, Moring, O'Brien, Schofield, Quinn, Palmer, Davies, Lowens, McGoven, & Lewis, 2003; Tsuang et al., 2006).

In a review of 26 articles spanning from 1994 to 2003 Drake, Mueser, Brunette, and McHugo (2004) showed that MI interventions resulted in more days of abstinence and reduced substance use. Likewise, in an extensive up-to-date review of the relevant literature, Roncero et al., (2011) found that MI was affiliated with satisfactory outcomes such as reduced substance use and

improvement in patient day to day functionality. Additionally, MI has been useful at different stages in the patient's treatment and has been shown to be helpful for resolving ambivalence and engaging the patient in change talk about other target behaviors such as taking medication (Tsuang et al., 2006; Martino & Moyers, 2007; Handmaker, Packard, & Conforti 2002).

Critique of the literature

A review of seven studies, which are summarized in Table 1, conducted between the years of 2000 through 2010, have found promising outcomes for this patient population (Barrowclough, Haddock, TARRIER, & Lewis, 2001; Barrowclough, Haddock, Wykes, Beardmore, Conrod, Craig, & TARRIER, 2010; Graber et al., 2003; Haddock et al., 2003; Kavanagh, Young, White, Saunders, Wallis, Shockley, Jenner, & Clair, 2004; Santa Ana, Wulfert, & Nietert, 2007; Van Horn & Bux, 2001). All of the present studies examining MI as a psychotherapeutic intervention were incremental in design: MI was added to a previously existing treatment program. Often the experimental group received the MI treatment condition while the comparison group received another comparable treatment condition (e.g. Cognitive Behavioral Therapy). Six out of the seven studies indicated that MI had a positive effect on reducing substance use and improving overall patient functioning or global assessment of functioning (GAF).

Barrowclough et al. (2010), found no improvement with regard to overall GAF and no decrease in the rate of patient hospitalizations. Interestingly, there was an increased motivation to change substance use (Barrowclough et al., 2010). This study provided the longest length of treatment compared to the other six studies. Over 12 months of integrated MI & CBT compared to a mean of 9 months for the other studies. This extended length of treatment may help account for MI not having an effect on overall GAF and no evidence of decreased substance use. MI administered over lengthy periods of time may lose its effectiveness with this population. This is an area for further clinical investigation.

Three pilot studies included in the sample of studies, indicated that MI had a positive effect on treatment outcomes such as reducing substance use and improving patient GAF (Kavanagh et al., 2004; Van Horn & Bux, 2001; Graber et al., 2003). Kavanagh et al., (2004) was the only pilot to study to utilize randomized assignment (RCT), therefore further research is needed to empirically corroborate the findings put forth by these pilot studies. In an RCT design, Haddock et al., found improved patient GAF as an outcome. However, these results only generalize to dually diagnosed individuals with close family caregivers.

Table 1. *Key distinctions of studies MI as a psychotherapeutic intervention for dually diagnosed patients with psychotic disorders & their outcome*

Author(s) & date of publication	n	Design of study	Substances abused	Psychotherapeutic Intervention	Outcome
Barrowclough et al., 2001	36	Randomized controlled trial	Alcohol & other drugs	MI CBT Family Intervention	Greater percentage of days abstinent from alcohol/drugs at 12 month follow up MI/CBT group had significantly higher scores than routine care group
Barrowclough et al., 2010	327	Randomized controlled trial	Alcohol & other drugs	Integrated MI & CBT	No improvement in rate of hospitalization or global functioning Significant change in motivation to decrease use
Graber et al., 2003	30	Pilot study	Alcohol & other drugs Intervenous drug users were excluded	MI Educational Interviewing (EI)	Significant reduction in drinking for MI group compared to EI group
Haddock et al., 2003	36	Randomized controlled trial	Alcohol & other drugs	MI CBT	Improved functioning
Kavanagh et al., 2004	25	Pilot study Randomized controlled trial	Alcohol & other drugs Opiate drug users were excluded	Brief MI	Less substance use compared to non-MI group at 6 month follow up
Santa Ana, Wulfert, & Nietert, 2007	101	Controlled trial	Alcohol & other drugs	Group motivational Interviewing (GMI)	Increased after care treatment sessions Consumed less alcohol Engaged in less binge drinking than non-GMI group
Van Horn & Bux, 2001	Not reported	Pilot study	Alcohol & other drugs	Structured MI group	Greater treatment adherence Unknown impact on substance

Despite the problems associated with MI interventions in a group format (Walters, Ogle, & Martin, 2002) two of the present studies examined showed MI groups to be successful on a number of out-come variables (Van Horn & Bux, 2001; Santa Ana et al., 2007). However, in Santa et al., (2007) the client sample underrepresented the Hispanic and Asian populations. Additionally, this study was not randomized and included the same group facilitator for both MI and non-MI treatment groups (Santa Ana et al., 2007). As previously mentioned, all the clients in the examined studies varied with regard to the types of substances abused.

The methodological differences between studies make establishing general conclusions about the findings problematic. Some of the differences between studies include: varying sample sizes, different substances being abused, brief or long term treatment, inpatient versus outpatient treatment programs, high patient attrition rates, abstinence versus reduction of substance use, and varying levels of severity of mental illness

Approach to treatment is another factor to consider when examining results from the studies examined. Three different treatment models to consider include: sequential (serial), parallel, and integrated (Roncero et al., 2011; Tsuang et al., 2006). Historically, there has been an emphasis on the sequential approach to treatment of dually diagnosed individuals (Roncero et al., 2011). From a sequential approach, patients are first psychiatrically stabilized (usually in a hospital) and then referred to another provider to be treated for substance abuse. The parallel approach emphasizes simultaneously treating mental illness separately from the substance abuse disorder and often from different theoretical perspectives. The integrated approach to treatment emphasizes communication between interdisciplinary treatment providers working collaboratively on a patient's case (Roncero et al., 2011). Lastly, differences between study design (e.g., non-randomized versus randomized controlled trials) should be noted when interpreting results from multiple studies.

Modified MI techniques for dual diagnosed patients

It is evident that dually diagnosed individuals living with a psychotic disorder present with unique multicultural characteristics (e.g., cognitive impairments and medical issues) that have the potential to drastically influence how MI treatment is received. As previously indicated, alcohol and drug abuse can further magnify existing cognitive impairments. Adapting various MI techniques to be impactful and understandable to the patient population is an ethical obligation that must be taken into account.

Martino and Moyers, (2007) indicated that by using a large and colorful thermometer shaped scale where the patient shows where she or he is in terms

of readiness to change has been helpful with this client population. A decisional balance, often arranged as a 2x2 matrix, is a visual MI technique used to show patients the costs and benefits to stopping substance use, however due to cognitive impairments patients may have difficulty with this technique. To better meet the cognitive needs of patients, it has been suggested to modify the matrix to focus exclusively only the positive and negative aspects of not using. It has been suggested to have two separate colored blocks (one color for the pros of not using and one color for the cons of not using, each block representing one reason) which can then be separated into two piles to illustrate the discrepancy in terms of amount pros versus cons of using to the patient (Martino & Moyers, 2007). Due to cognitive impairments, patients may have difficulty with memory (both short term and long term) and self-reflection, therefore it is important to use simple and clear reflective statements often (Martino & Moyers, 2007).

Some individuals may present with positive or negative symptoms of schizophrenia, these symptoms directly hinder the effectiveness of MI techniques. For example, positive symptoms (e.g., delusions and bizarre behavior) make it difficult for the patient to interpret information (especially emotionally laden) reflected by the therapist, this can lengthen the time the patient is ambivalent about changing target behavior. Martino and Moyers (2007) indicate that the use of metaphor to explain bizarre behavior or statements (often associated with positive symptoms) has proven beneficial for interpreting what the patient is communicating. The patient may appear unmotivated and uninterested if she or he is experiencing negative symptoms (e.g., flat affect and disengagement). Therefore, MI techniques aimed at increasing motivation are greatly diminished, however Martino and Moyers (2007) indicate that, in addition to frequent use of concise summarizing, allowing patients additional time to answer questions has been helpful.

The idea of adapting MI techniques to better serve the client population has been seen in other studies as well (Carey et al., 2007; Van Horn & Bux, 2000). Van Horn & Bux (2000) found similar success by recognizing the multicultural characteristics of this unique population and rolling with the resistance throughout the treatment interval. During weekly therapy sessions Carey et al. (2007) devoted extra time to explain concepts (e.g., the meaning of the Alcoholics Anonymous symbol) that the patient may not understand or provide extra prompts to engage in group discussion to patients who were experiencing negative symptoms. The use of clear open-ended questions, frequent use of paraphrasing, and the ability for the clinician to be flexible during the therapy session prove to be helpful to engage the patient in MI treatment.

Conclusion

With the rate of substance abuse estimated to be as high as 50% for individuals living with a psychotic disorder (Green et al., 2007; Thornton et al., 2011; Roncero et al., 2011; Tsuang et al., 2006) clinicians have an ethical obligation to implement empirically based psychotherapeutic interventions. The amount of empirical support for MI makes it a very applicable intervention. Clinicians need to be cognizant of the multicultural characteristic of the patient population and adapt psychotherapeutic interventions to better fit the cognitive and emotional needs of the patient population.

There is little research into how MI is delivered in a group format while treating dually diagnosed individuals (Martino & Moyers, 2007; Santa Ana et al., 2007; Walters, Ogle, & Martin, 2002). Group therapy is a therapeutically effective means for providers to treat a large number of patients (Gladding, 2011). MI group therapy would address the multicultural characteristics unique to the population of patients diagnosed with both a substance use disorder and a psychotic disorder. Working effectively with this population often requires a mastery of clinical skills, this is a difficult task due to the unique multicultural needs of the population (Martino & Moyers, 2007).

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