Addictive Behaviors 34 (2009) 867–877

Contents lists available at ScienceDirect

Addictive Behaviors

Family intervention for co-occurring substance use and severe psychiatric disorders: Participant characteristics and correlates of initial engagement and more extended exposure in a randomized controlled trial

Kim T. Mueser [a,b,c,*], Shirley M. Glynn [d,e], Corinne Cather [f,g], Roberto Zarate [e,h], Lindy Fox [a,c], James Feldman [g,i], Rosemarie Wolfe [a,c], Robin E. Clark [j]

[a] Department of Psychiatry, Dartmouth Medical School, Hanover, NH, United States
[b] Department of Community and Family Medicine, Dartmouth Medical School, United States
[c] Dartmouth Psychiatric Research Center, Concord, NH, United States
[d] VA Greater Los Angeles Healthcare System at West Los Angeles, CA, United States
[e] Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles, CA, United States
[f] Schizophrenia Program of the Massachusetts General Hospital, Boston, MA, United States
[g] Harvard Medical School, Boston, MA, United States
[h] Pacific Clinics, Los Angeles, CA, United States
[i] Massachusetts Mental Health Center, Boston, MA, United States
[j] Center for Health Policy and Research, University of Massachusetts Medical School, United States

ARTICLE INFO

Keywords:
Comorbidity
Co-occurring disorders
Dual disorders
Family therapy
Family psychoeducation
Severe mental illness
Schizophrenia

ABSTRACT

Clients with severe mental illness and substance use disorder (i.e., dual disorders) frequently have contact with family members, who may provide valuable emotional and material support, but have limited skills and knowledge to promote recovery. Furthermore, high levels of family conflict and stress are related to higher rates of relapse. The present study was a two-site randomized controlled trial comparing a comprehensive, behaviorally-based family intervention for dual disorders program (FIDD) to a shorter-term family psychoeducational program (FPE). The modal family was a single male son in his early 30s diagnosed with both alcohol and drug problems and a schizophrenia-spectrum disorder participating with his middle-aged mother, with whom he lived. Initial engagement rates following consent to participate in the study and the family intervention programs were moderately high for both programs (88% and 84%, respectively), but rates of longer term retention and exposure to the core elements of each treatment model were lower (61% and 55%, respectively). Characteristics of the *relatives* were the strongest predictors of successful initial engagement in the family programs with the most important predictor being relatives who reported *higher* levels of benefit related to the relationship with the client. Subsequent successful exposure to the family treatment models was more strongly associated with *client* factors, including less severity of drug abuse and male client gender. The results suggest that attention to issues of motivating relatives to participate in family intervention, and more focused efforts to address the disruptive effects of drug abuse on the family could improve rates of engagement and retention in family programs for dual disorders.

People with severe mental illnesses (SMI) such as schizophrenia and bipolar disorder have a high prevalence of co-occurring substance use disorders or dual disorders (Mueser et al., 2000; Regier et al., 1990). Clients with dual disorders have a worse course of psychiatric illness than persons with SMI alone, including more frequent relapses and rehospitalizations, homelessness, poor health, legal problems, and increased depression, hopelessness, and suicide (Drake, O'Neal, & Wallach, 2008; Kavanagh et al., 2004). While progress has been made on development and validation of integrated treatment models for co-occurring disorders in this population (Drake et al., 2008; Kavanagh & Mueser, 2007), the results from different controlled studies are inconsistent and improvements are often modest at best (Cleary, Hunt, Matheson, Siegfried, & Walter, 2008). There is a need to improve the effectiveness of treatments for dual disorders.

One potentially fruitful area of intervention may be with the family. People with dual disorders often have contact with their relatives (Clark, 1996), who provide significant amounts of psychological and material support (Clark, 2001). However, dual disorders can have deleterious effects on relatives by increasing their burden of care and leading to interpersonal conflict (Dixon, McNary, & Lehman, 1995; Kashner et al., 1991; Salyers & Mueser, 2001; Sciacca & Hatfield,

* Corresponding author. Dartmouth Psychiatric Research Center, Main Building, 105 Pleasant St., Concord, NH 03301, United States. Tel.: +1 603 271 5747; fax: +1 603 271 5265.
E-mail address: kim.t.Mueser@dartmouth.edu (K.T. Mueser).

0306-4603/$ – see front matter © 2009 Elsevier Ltd. All rights reserved.
doi:10.1016/j.addbeh.2009.03.025

1995). Family members are more likely to hold a relative with a dual disorder responsible for his or her psychiatric symptoms than relatives with only SMI (Niv, Lopez, Glynn, & Mueser, 2007), while tense and stressful family relationships may contribute to more frequent relapses (Pourmand, Kavanagh, & Vaughan, 2005). The net result of this strain on the family can be the loss of family support, leading to housing instability, homeless (Caton et al., 1995; Caton, Shrout, Eagle, Opler, & Felix, 1994), and a more severe course of both disorders.

Family intervention has been repeatedly shown to be effective for persons with SMI (McFarlane, Dixon, Lukens, & Lucksted, 2003; Pitschel-Walz, Leucht, Bäuml, Kissling, & Engel, 2001), and it is widely accepted as an evidence-based practice for this population (Dixon et al., 2001). Similarly, ample support documents the efficacy of family-based treatment for substance use disorders (O'Farrell & Fals-Stewart, 2006; Stanton & Shadish, 1997). However, little attention has been paid to working with families of people with dual disorders.

To our knowledge, the only previously reported attempt to develop and evaluate a family intervention program for dual disorders was by Barrowclough et al. (2001). Their program combined individual-based motivational interviewing and cognitive-behavioral therapy for psychosis with family intervention. The family intervention aimed to educate the family about the nature of dual disorders and support reduction in substance use and abstinence. Substance abuse outcomes at the nine-month post-treatment assessment favored the combined intervention program over usual services (Barrowclough et al., 2001), although at the 18-month follow-up the advantage of combined treatment was no longer significant (Haddock et al., 2003). However, the sample size in this study was small ($N = 36$), thereby reducing power to detect significant treatment effects. In addition, the combination of individual treatment with family intervention in this study raises the question of what benefits could accrue from just providing family treatment without specialized individual treatment for dual disorders.

To address this question we developed and pilot tested the Family Intervention for Dual Disorders (FIDD) program (Mueser & Fox, 2002). The program was adapted from the behavioral family therapy model for SMI (Falloon, Boyd, & McGill, 1984; Mueser & Glynn, 1999) to provide psychoeducation about dual disorders, communication skills training to reduce stress within the family, and family problem solving training to resolve conflicts and enhance client motivation for substance use reduction and abstinence (Mueser, Noordsy, Drake, & Fox, 2003). This article describes the characteristics of persons who entered a recently completed randomized trial comparing the FIDD program to a briefer psychoeducational program (FPE). In addition, we explored the rates and predictors of family engagement and exposure in the two interventions after the client and key relative had provided informed consent to participate in the study and family programs. The results of this trial will be reported elsewhere. However, retention is a critical issue in substance abuse treatment (Drake, Mueser, Brunette, & McHugo, 2004). Understanding the overall acceptability and feasibility of implementing these two approaches to family intervention for dual disorders, and exploring client and family characteristics related to engagement and exposure to the interventions, is a critical aspect of determining their overall utility.

1. Method

A randomized controlled trial was conducted at three sites, two in Boston and one in the Los Angeles area. As the same clinicians and research staff treated and evaluated clients in the two Boston sites, data from them were combined into a single site for the purposes of describing baseline differences between sites and predicting engagement and exposure to the family programs. Recruitment for the study began in February, 2002 and ended in June, 2006. All of the study procedures were approved of by the appropriate university and hospital Institutional Review Boards.

1.1. Study sites

The study took place at the Pacific Clinics Community Mental Health Center in Sante Fe Springs, close to Los Angeles in California, the North Suffolk Mental Health Association in Boston, and the Massachusetts Mental Health Center in Boston. All three agencies predominantly serve persons with SMI living in urban areas and offer a comprehensive range of mental health services (see below).

1.2. Participants

Inclusion criteria for participation in the study were: a) minimum 18 years old; b) psychiatric diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder, based on the Structured Clinical Interview for DSM-IV(SCID) (First, Spitzer, Gibbon, & Williams, 1996); c) diagnosis of active substance abuse or dependence within the past 6 months, based on the SCID; d) at least 4 h per week contact with relative, close friend, or other person (e.g., member of clergy) with a caring but non-professional relationship with the client (hereafter referred to as "relatives"); e) client currently receiving services at one of the three mental health agencies participating in the study; and f) willingness of the client and a family member (or equivalent) to provide written informed consent to participate in the family program to which they are assigned and the assessments. While it was clear this was a program addressing the problem of persons with SMI and co-occurring substance abuse, participants did *not* have to indicate a desire to stop substance or alcohol use to enroll in the study.

Table 1
Demographic and diagnostic characteristics of study clients.

	Psychoeducation ($N = 56$)		FIDD ($N = 52$)	
Categorical variables	*N*	%	*N*	%
Gender				
Male	41	73	35	67
Female	15	27	17	33
Race/ethnicity				
Black	5	9	3	6
Caucasian	42	75	34	65
Native Hawaiian/Pacific Islander	1	2	–	–
Native American/Alaska Native	1	2	1	2
Asian	–	–	1	2
More than one race	7	12	13	25
Marital status				
Never married	32	57	36	69
Ever married	24	43	16	31
Education				
Completed high school	35	62	33	63
Did not complete high school	21	38	19	37
Psychiatric diagnosis				
Schizophrenia	24	43	27	52
Schizoaffective	15	27	13	25
Bipolar	17	30	12	23
Substance use diagnosis				
Alcohol use disorder	11	20	8	15
Drug use disorder	14	25	19	37
Alcohol and drug use disorder	31	55	25	48
Living situation				
Independent	21	38	19	37
With relative	35	62	33	63
Site				
LA	31	55	27	52
Boston	25	45	25	48
Continuous variables	Mean	(SD)	Mean	(SD)
Age	34.45	(11.83)	32.75	(11.01)