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Families of Persons With Substance Use and Mental Disorders: A Literature Review and Conceptual Framework*

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Abstract: There are significant knowledge gaps concerning the experiences of families of persons with co-occurring substance and mental disorders and the impact of families on treatment of individuals with these disorders. This paper presents a conceptual framework for examining family involvement of adults in treatment for co-occurring substance and mental disorders. An overview of the characteristics, problems, and needs of these individuals and their family members is presented. The extant literature pertaining to our conceptual framework is reviewed with focus on predictors of family involvement with clients, predictors of family member involvement in clients' treatment, and consequences of family involvement for client treatment outcomes. Gaps in the research literature and implications for future research and practice are discussed.

Key Words: drug and alcohol use/abuse and families, families and mental illness, mental illness, substance use.

Although there are extensive, but largely separate, research literatures on the experiences of families of persons with either substance use or mental disorder, little is known about the families of persons with *co-occurring* substance use and mental disorders and the effect of families on the treatment of such clients (Clark, 2001; Merikangas & Stevens, 1998; Mueser & Fox, 2002; Silver, 1999). Co-occurring disorders, defined as the presence of two or more simultaneous existing conditions, in this case substance abuse and mental illness, can lead to greater negative consequences for both clients and family members than a single disorder alone (e.g., Albanese & Khantzian, 2001; Clark, 1996). Subsequently, the treatment of persons with co-occurring disorders can be more complex than treatment of individuals with substance or mental disorders alone (Mueser, Drake, & Miles, 1997). Thus, it is particularly important to understand the implications of family relationships for client recovery and wellness. For example, families play significant roles in helping their substance abusing family members seek and stay engaged in treatment (Fals-Stewart, O'Farrell, & Birchler, 2003). In order to improve treatment outcomes for clients with co-occurring substance and mental disorders, theory-based research is sorely needed that focuses on understanding the predictors of family involvement with clients and in the clients' treatment, as well as an understanding of the relationship between family involvement and client outcomes.

The purpose of this article is to advance a conceptual framework, which emphasizes (a) predictors of family involvement and (b) consequences of family involvement with individuals for co-occurring substance and mental disorders who are in treatment. This conceptual framework proposes that family involvement, hypothesized to be a function of the family member's stress and well-being, will have

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a significant influence on client outcomes. This expectation stems from theories that have emphasized connections between individual well-being and the larger family context (Biegel & Schulz, 1999; Boss, Doherty, LaRossa, Schumm, & Steinmetz, 1993), prior research on family caregiving in the context of physical and mental illness (e.g., Biegel, Johnsen, & Shafran, 1997; Biegel, Song, & Milligan, 1995; Townsend & Franks, 1995), and existing research on families of adults with substance or mental disorders.

The model distinguishes between two facets of family involvement—family involvement with the client (apart from treatment) and family involvement specific to the client's treatment—because they may have different antecedents and consequences and because families may be involved in one way, but not the other. For example, a family member may provide financial assistance to the client but not be involved in the client's treatment. Both types of involvement are operationalized in terms of the quantity, nature, and perceived quality of the involvement. For example, family member involvement with the client included the amount and types of interactions and perceived positive and negative relationship quality. Family involvement can have negative as well as positive effects on the client. For example, family members' criticism, hostility, and overinvolvement have been related to higher relapse of persons with co-occurring disorders (Pourmand, Kavanagh, & Vaughan, 2005). We use the term involvement, rather than support, to encompass aspects of family interactions with the client and with the client's treatment (e.g., frequency of family contact with treatment professionals) that are not traditionally studied under the umbrella of support. Furthermore, involvement better captures the fact that social interactions can be perceived by the respective partners as positive or negative.

We begin with an overview of the characteristics, problems, and needs of individuals with co-occurring substance and mental disorders and a review of existing knowledge about the family impact of co-occurring substance and mental disorders, introducing our focal concept of family involvement. We then review existing literature on predictors of family involvement, utilizing a stress-process framework (Pearlin, Mullan, Semple, & Skaff, 1990), followed by a review of extant literature on the consequences of family involvement for client outcomes. Our focus is on the implications of dual substance and mental disorders for (a) family involvement with clients and family involvement in clients' treatment and (b) the effects of family involvement on client treatment outcomes. Studies in the review were located through several methods. Five computerized databases (PsychInfo, Medline, Sociological Abstracts, CINAHL, and Social Work Abstracts) were searched for publications since 1990 using the key words (family involvement, caregiving, roles, well-being, coping, support, stress, burden, and therapy) and drug or alcohol abuse or dependence. The search was limited to articles in English that studied adults (excluding youth and adolescents). In addition, books on this topic published since 1995 were searched through a statewide library database. Finally, key informants were contacted to identify recently published literature that could not yet be identified through computer databases. We conclude with a discussion of gaps in the research literature and implications for future research and practice.

Background and Significance

Co-Occurring Substance and Mental Disorders

A clinical awareness of the problem of co-occurring disorders began in the early 1980s (Caton, 1981; Pepper, Krishner, & Ryglewicz, 1981). The terms "co-occurring disorders," "dual disorders," and "dual diagnosis" used interchangeably here indicate the presence of simultaneous substance disorder and severe mental illness. Data in the past two decades have established the fact that dual disorders are common. The Epidemiological Catchment Area study showed that approximately half of persons with severe mental illnesses also experienced a co-occurring substance disorder (Regier et al., 1990). Findings from the more recent National Comorbidity Study (NCS), which were based on a nationally representative sample, also documented a high prevalence of co-occurring mental and addictive disorders. In the NCS, 41% – 65% of participants with a lifetime occurrence of addictive disorder also reported a lifetime occurrence of at least one mental disorder, and 51% of those with a lifetime occurrence of mental disorder reported a lifetime occurrence of at least one addictive disorder as well (Kessler et al., 1996). Studies have suggested that 25% – 35% of persons with a severe mental illness

also have an active or recent (within the last 6 months) substance disorder (Mueser, Bennett, & Kushner, 1995). Additionally, numerous studies reported high rates of substance abuse among clients in treatment for severe psychiatric disorders (Mueser et al., 1990, 2000).

Co-occurring substance and mental disorders have been associated with a variety of more negative outcomes than found for persons with only one diagnosis. These included higher rates of relapse (Swofford, Kasckow, Scheller-Gilkey, & Inderbitzin, 1996), hospitalization (Haywood et al., 1995), violence (Cuffel, Shumway, Chouljian, & Macdonald, 1994; Steadman et al., 1998), incarceration (Abram & Teplin, 1991; De Leon, Sacks, & Wexler, 2002), homelessness (Caton et al., 1994), and serious infections such as HIV and hepatitis (Compton, Cottler, Ben-Abdallah, Cunningham-Williams, & Spitznagel, 2000; Rosenberg et al., 2001). The higher incarceration rate of persons with co-occurring substance and mental disorders was especially troublesome, given that the majority of both state and federal inmates reported not receiving treatment for their substance abuse problems while incarcerated (Sims, 2005). Women are the fastest growing prison population, with African American women representing almost half (48%) of the female state prison population (Johnson & Young, 2002). In summary, data indicate high rates of substance abuse and mental illness among incarcerated women (Johnson & Young; Staton, Leukefeld, & Webster, 2003).

Drug abusers with comorbid mental disorders were more likely to engage in risky behaviors, such as unprotected sex and needle sharing that jeopardize their health (Leshner, 1999). Dually diagnosed bipolar patients experienced more mixed episodes and rapid cycling, longer recovery times, greater resistance to lithium, and earlier and more frequent hospitalizations (Albanese & Khantzian, 2001).

Co-occurring disorders also pose special challenges for treatment. Strong evidence exists that substance abuse weakens the abilities of persons with a severe mental illness to develop and adhere to effective treatment plans and can shatter already fragile social networks (Dickey & Azeni, 1996). Similarly, substance abuse treatment seeking and adherence can be negatively affected by symptoms and other effects of mental illness (Grant, 1997; Mueser et al., 1997). Persons with dual disorders may find it difficult to access and navigate the parallel but separate substance abuse and mental health treatment systems so common in the United States (Ridgely, Goldman, & Willenbring, 1990; Substance Abuse and Mental Health Services Administration, 2002). In addition, conflicting approaches to treatment can complicate or thwart recovery efforts. For example, professionals in each treatment system often insisted that symptoms of the "other" disorder abate before treatment could be considered (Biegel, Kola, & Ronis, 2006). To address such barriers, programs providing integrated dual diagnosis services have been steadily developed, refined, and evaluated (Drake & Wallach, 2000; Sacks, 2000), although integrated services are not the treatment norm.

The Family Impact of Co-Occurring Substance and Mental Disorders

As with research on many public health conditions, our review of the literature indicated that research on persons with dual diagnoses tended to focus more on the individual with the disorder and less on the social network surrounding that individual. Yet, theories of family ecology, family systems, and family stress offer cogent arguments for attention to the family contexts within which many individuals are embedded (Biegel, Sales, & Schulz, 1991; Boss et al., 1993). Families constitute crucial support networks for individuals experiencing a wide range of physical, mental, and substance-related impairments (Biegel & Schulz, 1999; Biegel & Wieder, 2003; Fals-Stewart et al., 2003). Family ties may be important but also vulnerable to stress and disruption for individuals with dual disorders (Clark, 1996).

Despite the large numbers of adults with dual diagnoses, very little research has examined the roles and needs of their family members and the effects of the co-occurring disorders on family members' own well-being (Brown, Melchior, & Huba, 1999). Of eight empirical studies of families of persons with a dual diagnosis (Clark & Drake, 1994; Dixon, McNary, & Lehman, 1995; Kashner et al., 1991; Mowbray, Ribisl, Solomon, Luke, & Kewson, 1997; Ribisl, 1995; Salyers & Mueser, 2001; Sciacca & Hatfield, 1995; Silver, 1999), only two studies (Salyers & Mueser; Silver) examined the burden levels of family members of persons with co-occurring substance and mental disorders. What little is known was scattered across disparate literatures on substance abuse and mental illness.

Over the past decade, these largely separate literatures have identified a number of problems

experienced by families who provided care for an adult family member with a substance disorder, mental disorder, or both. Problems most often cited were isolation, client behavioral problems, relationship problems between family members, family violence, not having enough help in providing care for their relative, and insufficient help from treatment professionals. Documented effects of these stresses included worry, anger, guilt, and shame; financial and emotional strain; diminishment of the quality of life and hopefulness of family members; negative effects on the normal growth and development of other children; and physical effects of the stress of living with a substance user, such as migraines, colitis, and ulcers (Biegel, 1998; Cavaiola, 2000; Fals-Stewart, O'Farrell, Birchler, Cordova, & Kelley, 2005). Individuals with co-occurring substance and mental disorders have difficulties managing tasks of daily living and have higher rates of unemployment than persons with mental illness alone, resulting in significant demands on families for support and assistance (Clark, 1996; Drake & Wallach, 2000). Attention to the stresses on families is important because such stresses may have a negative effect on the involvement of family members with the client or on family members' involvement with the client's treatment.

Predictors of Family Involvement

Predictors of Family Involvement With Clients

A number of studies on substance abuse, mental illness, and dual disorders have examined relationships between family member stressors and family involvement with their ill clients (Biegel et al., 1997; Fals-Stewart et al., 2005). Two stressors for family members stand out: client behavior problems and client treatment motivation. Client behavior problems have been found to disrupt family structure, functioning, and interactions, leading to emotional isolation in families (Biegel et al.; Cavaiola, 2000; Fals-Stewart et al.; Velleman, 1996). Some studies (Caton et al., 1994, 1995) indicated that clients' substance abuse problems led to the blaming of the client and withdrawal of family support. However, Clark (1996) indicated that many families continued providing emotional and financial support to their ill family members despite great demands and stress. Reasons why some families might or might not withdraw support over time needs further examination.

Clients' lack of treatment motivation is another stressor on families. For example, clients' refusal to fully participate in treatment, by being unwilling to take their prescribed psychotropic medication, was found to be a significant stressor on families and, therefore, may be a factor affecting family involvement with clients over time (Biegel et al., 1991). In the substance abuse field, motivation for treatment has been recognized as an important factor in the rehabilitation of persons with substance abuse problems (Joe, Broome, Rowan-Szal, & Simpson, 2002), though no empirical studies were identified that measured the influence of client treatment motivation on family member involvement with the client.

In addition to their direct effects on family involvement with clients, stressors experienced by family members may also have indirect effects on involvement, through their influence on family member well-being. A large number of substance abuse, mental illness, and dual disorders studies provide evidence that family member stressors can negatively influence family member well-being (Heath & Stanton, 1998; Song, Biegel, & Milligan, 1997). As with other chronic illnesses, the strongest predictor of family member burden was client behavioral problems. Family members experienced moderately high levels of burden and depressive symptomatology and poor self-reported physical health (Biegel, Milligan, Putnam, & Song, 1994; Fisher, Benson, & Tessler, 1990; Heath & Stanton).

Evidence of relationships between family member well-being and involvement with clients comes primarily from studies of families of persons with mental illness (Pickett, Cook, Cohler, & Solomon, 1997; Stueve, Vine, & Struening, 1997). Associations have been found between higher levels of family member burden and higher levels of family member assistance, greater assistance with personal care activities, and more negative appraisals of family members' relationship with their relatives (Jutras & Veilleux, 1991; Pickett et al., 1997; Reinhard & Horwitz, 1995; Stueve et al., 1997).

Predictors of Family Member Involvement With Client's Treatment

Although the substance abuse literature strongly encourages family involvement as part of clients'

treatment (Fals-Stewart et al., 2003; Hartel & Glantz, 1999), an important gap in this literature has been examination of the facilitators and barriers to such family involvement. This is also an understudied area in the mental illness literature. Treatment models in the mental health system have not typically involved families as part of the clients' treatment despite strong evidence demonstrating that family intervention is effective in the treatment of severe mental illness (e.g., Dixon et al., 2001). In fact, family members have reported considerable dissatisfaction with their relationship with mental health professionals and lack of involvement in their relative's treatment (Biegel et al., 1995). We are not aware of empirical studies concerning the impact of family member stressors (i.e., client behavior problems and client treatment motivation) on family member involvement in treatment. We would anticipate, however, that family members who experience high levels of stress might be less disposed to becoming involved with the client's treatment because of feelings of being overwhelmed or immobilized (Biegel et al.; Lefley, 1996).

Empirical studies of the relationship between family member well-being and family member involvement in treatment come from the mental illness literature. Studies indicate that higher family member burden was correlated with more negative interaction with treatment professionals and that lower levels of family member depressive symptomatology were associated with higher levels of perceived collaboration between staff and family in the client's treatment (Greenberg, Greenley, & Brown, 1997; Jutras & Veilleux, 1991).

Consequences of Family Involvement for Client Outcomes

Studies have examined the relationship between family involvement with the client and substance abuse outcomes for both dually diagnosed and substance abuse–only populations (Clark, 2001; Fals-Stewart et al., 2005). Studies of persons with dual disorders have also examined the relationship between family involvement and client outcomes such as psychiatric symptoms, treatment retention, and hospitalization (Schofield, Quinn, Haddock, & Barrowclough, 2001). Findings showed that higher family financial expenditures and more hours of care or support were associated with clients' substance abuse reduction but not with change in clients' psychiatric symptoms (Clark). Clients with co-occurring substance and mental disorders who had regular contact with family members were found to have fewer hospital days at last admission than clients without such regular contact (Schofield et al., 2001). Family involvement can also have a negative impact on client outcomes. Stressful family interactions have been related to increased client substance use and treatment relapse (Fichter, Glynn, Weyerer, Liberman, & Frick, 1997), and certain family behaviors, such as criticalness, hostility, and overprotectiveness during or after episodes of drug taking, can reinforce continued substance using behavior and lead to increased relapse rates (Fals-Stewart & Birchler, 1994; Fals-Stewart et al.; O'Farrell, Hooley, Fals-Stewart, & Cutter, 1998).

However, a number of studies in both the substance abuse and the mental illness literatures have shown that family involvement in treatment can have positive effects on client outcomes. Families can be of assistance to professionals in engaging unmotivated ill relatives with substance disorders and with co-occurring substance and mental disorders to seek and become more rapidly engaged in treatment (e.g., Fals-Stewart et al., 2003; Mercer-McFadden & Drake, 1995; Miller, Meyers, & Tonigan, 1999; Sayre et al., 2002). Family involvement in treatment has been shown to have a positive effect on client treatment outcomes such as abstinence, reduced relapse, general functioning, and psychiatric symptomatology (e.g., Barrowclough et al., 2001; Fals-Stewart & O'Farrell, 2003; Fals-Stewart et al., 2005; Mueser, Noordsy, Drake, & Fox, 2003). However, several studies found that perceived support from family members was not associated with clients' *retention* in treatment (Primm et al., 2000; Simon, 1991). In addition, without family involvement in treatment, family members of clients may engage in efforts to sabotage clients' treatment (Stanton, 1979).

Important predictors of client outcomes in addition to family member involvement have been examined in the substance abuse literature. Findings showed that client treatment motivation was associated with greater treatment attendance and involvement (Pitre, Dansereau, Newbern, & Simpson, 1998; Simpson, Joe, Greener, & Rowan-Szal, 2000; Simpson, Joe, Rowan-Szal, & Greener, 1995). The relationship between family member well-being and client outcomes has been examined in a number of substance abuse studies, which have found that

family member substance abuse is a predictor of client's use of substances (Mayes, 1995; Merikangas et al., 1998). In addition, psychological problems of the spouse and increased level of stress in the family system can exacerbate the client's substance use (Moos, Finney, & Cronkite, 1990). Research with persons with co-occurring substance and mental disorders indicated that clients whose families were judged to have more severely disturbed affect had more inpatient psychiatric days than those from better functioning families (Kashner et al., 1991).

Social-Contextual Factors

The influence of social-contextual factors on family involvement for individuals with dual disorders has received little attention. However, the broader literature in caregiving and treatment for substance abuse, mental illness, and physical illness suggests two relevant categories: (a) individual and family characteristics and (b) treatment system characteristics.

Individual and family characteristics. Research suggests that it is important to examine the background characteristics of both the dually diagnosed client and his or her family members. For example, the age, gender, and marital status of the client can affect the availability and composition of his or her social support network; and the age, gender, and marital status of the caregiver may be important predictors of involvement with the client and his or her treatment. Studies have found racial differences in terms of caregivers' patterns of providing care, perceptions of their competence in dealing with their relative's mental illness, help-seeking behavior, and utilization of different treatment services (e.g., Guarnaccia & Parra, 1996; Jerrell & Wilson, 1996; Johnson, 1997).

Some demographic and background characteristics may affect family involvement indirectly through their effects on other key constructs in the model. For example, clients' age and gender have been associated with the type and severity of dual disorders (e.g., Lehmann, Hubbard, & Martin, 2001). Client characteristics can differentially affect diagnoses and treatment protocols. For example, women with co-occurring disorders were more likely to be diagnosed with posttraumatic stress disorders, major depression, and generalized anxiety as compared to men (Brady & Randall, 1999; Chander & McCaul, 2003). Age and health status of family caregivers were generally strong predictors of family caregiver well-being (e.g., Greenberg et al., 1997). African American caregivers reported lower levels of depressive symptomatology, compared to Whites and Hispanics (e.g., Song et al., 1997; Stueve et al., 1997), suggesting that race and ethnicity could affect family involvement through an effect on caregiver depression.

Other potentially relevant background variables include kinship tie between client and family member, length of time providing care, and the availability of others to help with caregiving (Biegel et al., 1991). Socioeconomic factors, such as level of education and income, have been shown to be related to help seeking in general (Pescosolido, 1992); thus, they may be predictors of family member involvement in the dually diagnosed client's treatment. Income and education may also affect family member well-being and client outcomes by increasing awareness of, and access to, resources and services generally.

Treatment system characteristics. Characteristics of substance abuse and mental health treatment systems have been shown to influence family involvement in treatment, as well as other key constructs in the proposed model. Most integrated treatment models have stressed the importance of involving families in the treatment process (Mueser et al., 1997). However, family involvement was more variable within separate substance abuse and mental health treatment programs. Within a given system, clinician attitudes toward family involvement can affect the degree of family involvement in the client's treatment (Biegel et al., 1995; Mueser & Glynn, 1999). Whether treatment is mandatory and the setting(s) in which treatment is provided can have pronounced effects on family member involvement with the client and with the client's treatment; however, little research has been done on these factors. Walsh and Bricout (1996) found that some jails and prisons encourage family contact for incarcerated individuals with identified mental health needs; such contact was positively associated with linkages to mental health services upon release. Treatment offered within institutional settings might also influence family member involvement by affecting client motivation for treatment—although the level of internal motivation for treatment in corrections-based programs has been shown to be varied (Rosen, Hiller, Webster, Staton, & Leukefeld, 2004).

Conceptual Framework

We offer a conceptual framework to guide future research aimed at understanding family support of dually diagnosed individuals and the relationship between family support and client outcomes. Figure 1 summarizes the hypothesized relationships among the constructs of interest and is based on stress-process theory and our coverage of the extant literature on family stressors, well-being, and involvement. Stress-process theory (Pearlin et al., 1990), developed to explicate the process whereby caring for an impaired older adult affects the well-being of family caregivers, outlines the pathways through which older persons' impairment can create stress and impact family caregivers' physical and mental health. In this theory, stressors (defined as "conditions, experiences, and activities that are problematic for people," Pearlin et al., 1990, p. 586) were disaggregated from their effects on the caregiver. Behavior problems of the care recipient were a key stressor. Stressors can negatively affect the well-being of caregivers, with depression, anxiety, and physical health problems being key caregiver outcomes identified by the theory.

Drawing on caregiver stress-process theory, we posit that family stressors, such as client behaviors, can lead to negative physical or mental health outcomes for the family member as seen in the two left most boxes in Figure 1. However, stress-process theory is focused only on outcomes for caregivers, not care recipients. Our proposed model integrates concepts and variables influencing family and client outcomes, studied heretofore separately in the substance abuse and mental health literatures, into one unified theoretical framework. For example, the substance abuse literature on family involvement has placed more emphasis on client outcomes, whereas the mental health literature has placed more emphasis on the impact of the client's illness on the family. The proposed framework allows us to more comprehensively examine a range of both client and family

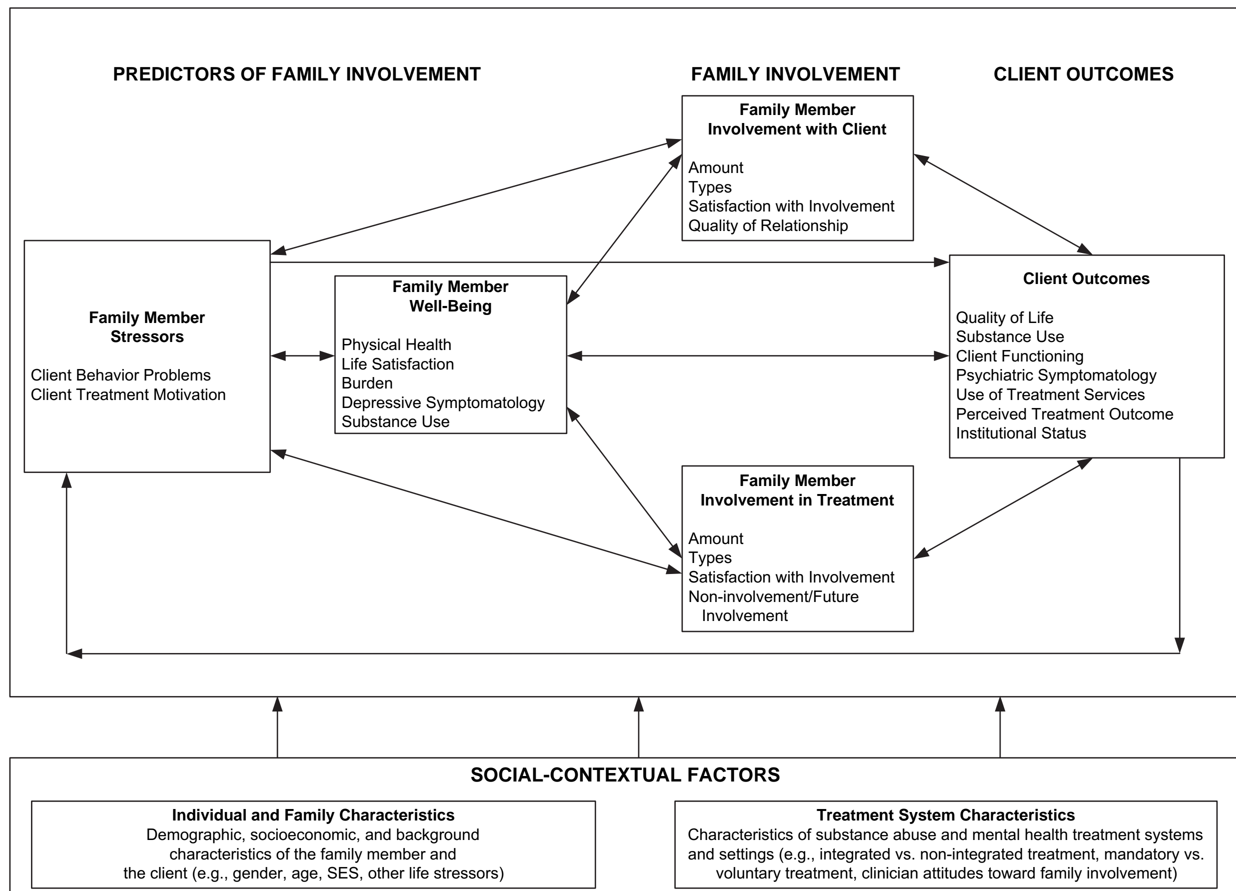

Figure 1. Conceptual Framework for Studying Family Involvement With Adults With Co-Occurring Substance and Mental Disorders.

member variables that research has shown can influence family involvement and the consequences of such involvement for client outcomes. Thus, our conceptual model extends previously separate bodies of research about families of adults with substance disorders and families of adults with serious mental illness (Biegel & Schulz, 1999) to families of adults with co-occurring substance and serious mental disorders. This model includes variables that have shown the most robust relationships in prior research (as described in the preceding literature review), as well as variables that have not received much prior empirical attention but that could be expected, on conceptual grounds, to show significant relationships. The model is intended to be illustrative rather than exhaustive in its selection of included variables.

Although family involvement is undoubtedly influenced by many factors, our model focuses on two major sources of influence drawn from stress-process theory: stressors experienced by the family member and the family member's well-being (Biegel et al., 1991; Townsend & Franks, 1995). Stressors on family members were operationalized in terms of client problem behaviors (e.g., mood swings, unpredictable behavior, social withdrawal) and client treatment motivation (e.g., desire to be in treatment, belief that treatment can be helpful). These two stressors were chosen because of their theoretical and empirical importance for understanding family member well-being, involvement, and client outcomes (Biegel et al.; Simpson et al., 2000). In addition to the extant literature discussed thus far, this part of the model also was informed by the authors' previous programs of research on family care. For example, research with family members of adults with severe mental illness, consistent with research across chronic illnesses, found that client problem behaviors was the strongest predictor of family caregiver burden (Biegel et al., 1994, 1995; Song et al., 1997). In addition, longitudinal research with adult family members caring for elders with dementia revealed that elders' behavior problems were a significant predictor of chronic depression in caregivers (Alspaugh, Stephens, Townsend, Zarit, & Greene, 1999).

Family member well-being is conceptualized as multidimensional (including physical, psychological, and behavioral dimensions). Well-being is operationalized in terms of the family members' physical health, life satisfaction, objective burden (disruptions to family life caused by the person with substance use and mental disorders) and subjective burden (the emotional costs of having a person with co-occurring disorders in one's family), depressive symptomatology, and substance use. Although there could be many ways to operationalize well-being (e.g., anxiety), we include the facets that have been most widely studied, as described in the preceding literature review, or that are most conceptually relevant to our model (e.g., family members' substance use). This multifaceted conceptualization of family member well-being is a notable strength of our model, compared to mental health caregiving research that has focused primarily on family member burden. Our conceptualization enables the investigation of differential antecedents and consequences across well-being domains and differential rates of change over time in different facets of well-being. For example, lower client treatment motivation may predict higher family member burden but be unrelated to other aspects of well-being (e.g., family members' physical health). In turn, aspects of well-being may have differential consequences, for example, family member burden may be a stronger predictor of family member involvement with the client (or client outcomes) than family members' physical health. A multifaceted conceptualization of family member well-being also allows linkages with the large body of research on well-being in family members providing support to populations other than the dually diagnosed, including adults with severe mental illness and dependent elderly individuals.

Family member well-being, along with family member stressors, is expected to influence both the family member's involvement with the client and the family member's involvement in the client's treatment. Inclusion of two types of involvement has several advantages: It allows a more comprehensive description of the nature of family involvement, so one can explore the extent to which the two types of involvement are related to each other, examine whether these two types of involvement have different antecedents and different consequences for client outcomes, and study whether the two types of involvement have differential rates of change over time. Both types of involvement can be operationalized in terms of the quantity, nature, and perceived quality of the involvement. For example, family involvement in treatment can include the amount of involvement, the types of involvement, and satisfaction with the amounts and types of involvement with professionals.

Family member stressors, well-being, and involvement are all expected to predict client outcomes. Stressors and well-being are hypothesized to have both direct effects on client outcomes and indirect (i.e., mediated) effects on client outcomes (through family member involvement with the client and in the client's treatment). Our model conceptualizes client outcomes as multifaceted, with a wider range of outcomes, both positive and negative, than in previous research, namely, quality of life, substance use, functioning, psychiatric symptomatology, use of treatment services, perceived treatment outcome, and institutional status. As with well-being, including multiple client outcomes enables investigation of differential predictors and differential rates of change. In other words, some outcomes (such as client functioning) may show greater change (for better or worse) than other outcomes (such as client substance use), and predictors (such as greater family involvement in treatment) may be significantly related to some outcomes (such as client functioning) but not to other outcomes.

Over time, changes in family member stressors and well-being are hypothesized to predict changes in family member involvement with the client and involvement in the client's treatment. These changes in family member involvement, in turn, are hypothesized to predict changes in client outcomes. As can be seen in Figure 1, all pathways are potentially bidirectional. For example, client outcomes may have reciprocal effects with other parts of the model over time. Improvement in client outcomes (e.g., increased client use of treatment services) may predict improvement in family member well-being (e.g., decreased burden) or improvement in family member involvement with the client (e.g., increased frequency of family member involvement with the client). Although the model allows for potential reciprocal influences, the current state of research in the area of dual diagnoses and families is such that more longitudinal research investigating unidirectional influences is needed before plausible bidirectional hypotheses can be developed and tested.

To summarize our model, stressors experienced by the family member are expected to affect the family member's well-being. In turn, both the family member's stressors and well-being are expected to affect the family member's involvement with the client and involvement in the client's treatment. The family member's involvement, in conjunction with the family member's stressors and well-being, is expected to affect the client's treatment outcomes. Both direct effects and indirect (i.e., mediated) effects are proposed in this model. As noted in Figure 1, the model also recognizes the influence of a variety of social-contextual factors on all elements of the model. Although the list of potentially important social-contextual variables could be expanded ad infinitum, our model depicts only those variables that existing literature suggests may be related to key constructs: notably, demographic and socioeconomic characteristics of the family member and client (e.g., race, gender, income), other background characteristics of the family member (e.g., life stress and other roles and responsibilities, such as employment), and selected characteristics of the client's treatment (e.g., clinician attitudes toward family involvement, integrated vs. nonintegrated services).

Implications for Future Research and Practice

Although research about persons with co-occurring substance and mental disorders is increasing, it has principally focused on prevalence rates, specific comorbidities, clinical correlates, and strategies for client treatment. Existing research has documented that large percentages of people with a diagnosed substance disorder also have at least one mental disorder and vice versa (Kessler et al., 1996; Regier et al., 1990). However, our literature review shows that much of the research on families and chronic illness is not theory based and that very little research has examined the roles and needs of families of dually diagnosed individuals and the effects of dual diagnoses on the family.

The more severe symptomatology of individuals with co-occurring disorders (Drake, Rosenberg, & Mueser, 1996) can be expected to have an even greater impact on families than having an ill relative with a single diagnosis. Given that the inadequacies of the substance abuse and mental health treatment systems are compounded when one has an illness that cuts across service systems, the lack of research on the roles and needs of families with dually diagnosed individuals represents a significant gap in our knowledge base. Since the problem of dual disorders became more readily apparent in the early 1980s, researchers have demonstrated that parallel but separate mental health and substance abuse treatment

systems as well as sequential treatment, the most common model utilized, have not demonstrated effective outcomes (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998). As noted earlier, families play significant roles in helping their substance abusing or mentally ill relatives seek and stay engaged in treatment. In order to improve treatment outcomes for clients with co-occurring substance and mental disorders, research is sorely needed that focuses on understanding what effects having a client with dual disorders has on the family member and what effects family member involvement has on client outcomes.

Further research can help improve clinical practice with persons with co-occurring substance and mental disorders: first, on the levels and types of involvement of family members of persons with co-occurring disorders with their ill relatives, their involvement in the client's treatment, and on the social-contextual factors (e.g., demographic variables, treatment system characteristics) that influence such family involvement; second, on family members' levels of burden and the effects of substance abuse and mental health treatment upon both the family member and the client; third, on the relationship between family involvement and client adherence to treatment and recovery from co-occurring substance and mental disorders; and fourth, on factors that may positively or negatively affect family involvement in the treatment of their ill relative.

Research on families of dually diagnosed clients may face a number of methodological challenges, particularly for longitudinal studies. As with any study collecting data from multiple family members, it can be challenging to recruit and retain families where multiple members agree to be interviewed. This may be particularly true for families of dually diagnosed clients if family members are estranged from each other or if the client's (or family member's) functioning is poor. The combination of a mental disorder and a substance use disorder may compound the challenges of recruiting and retaining clients, particularly for clients whose dual disorders are not well controlled. As with any longitudinal study, selective attrition (e.g., higher rates of attrition from the study among family members or clients who have higher depressive symptomatology or greater substance abuse) could jeopardize study findings and their generalizability. Therefore, future studies in this area will need to find creative ways to recruit and retain their samples. In addition, future studies will need to carefully consider their methodological approach to the many sources of potential heterogeneity within samples; for example, variability in duration and nature of the client's mental and substance use disorders (in particular, combinations of multiple mental health disorders and polydrug usage), the stage of treatment and nature of treatment (which may or may not be integrated), or the family member's (and client's) demographic characteristics, such as socioeconomic status, gender, and race.

Despite gaps in our knowledge base noted above, there are important implications for clinical practice from the extant research. Foremost, is the importance of involving family members in the treatment of adults with co-occurring substance and mental disorders. The literature suggests that such involvement currently occurs to a greater extent in substance abuse than in mental health settings. Some new clinical intervention models for families of adults with co-occurring disorders are being developed and have undergone initial pilot testing (Mueser & Fox, 2002; Mueser, Fox, & Mercer, 2002).

Second, positive clinical outcomes for clients with co-occurring disorders are dependent upon the use of effective treatment modalities; thus, evidence-based treatment models for this population should be utilized. Historically, treatment approaches for individuals with co-occurring disorders have been either nonexistent or fragmented and, therefore, ineffective in demonstrating positive outcomes for the psychiatric or substance use disorder (Drake, Mueser, Clark, & Wallach, 1996).

Researchers have shown that the most common treatment models (e.g., parallel but separate mental health and substance abuse treatment systems and sequential treatment) have not demonstrated effective outcomes (Drake et al., 1998). As a result, integrated treatment programs, which treat disorders simultaneously, have begun to appear and have been recognized as an evidence-based practice for this population. Treatment models, such as the integrated dual disorders treatment model (Mueser et al., 2003) for adults with co-occurring disorders, recognize the importance of addressing family members' needs and involving family members in treatment. Further, such involvement is included in the fidelity scales that have been developed to assess the implementation of this intervention. However, integrated treatment programs often lack the resources and expertise

to implement family interventions; in addition, family interventions may not be seen as a service priority, considering other competing demands. Given the important roles that family members can and do play in addressing the daily living and social support needs of clients with co-occurring disorders, we believe that the involvement of family members in treatment programs should be given much higher priority.

In conclusion, the conceptual framework outlined in this article is intended to help improve clinical practice with adults with co-occurring disorders and their family members. The proposed framework addresses gaps in knowledge, guides further knowledge development about the nature and types of family involvement with dually diagnosed adults, identifies factors that facilitate or impede family involvement, and examines the effects of family involvement on client outcomes. The proposed model is innovative for several reasons. First, it applies a stress-process theoretical framework from previous research with families of persons with mental illness and families of impaired elders to a new population of families of persons with substance and mental disorders. In so doing, this model brings together in one unified theoretical framework variables that have previously been studied separately in the substance abuse and mental health literatures. For example, although the substance abuse literature has placed more emphasis on client outcomes than the mental health literature, the mental health literature has placed more emphasis on the impact of a client's illness on the family. The current framework allows a more comprehensive examination of a range of both client and family member variables that influence family involvement and the consequences of such involvement for client outcomes.

Second, the framework permits investigation of the interconnections between family member wellbeing (physical health, burden, depressive symptomatology, substance use) and client outcomes (quality of life, substance use, functioning, psychiatric symptomatology, use of treatment services, perceived treatment outcome, institutional status), through the collection of data from dyads consisting of a family member and a dually diagnosed client. This enables the expansion of existing approaches, which are largely individualistic, to a more systemic focus.

Finally, many components of our model are conceptualized as multifaceted or multidimensional in nature. This conceptualization conveys distinct advantages to empirical research efforts. For example, distinguishing two types of involvement has several advantages: It allows researchers to more comprehensively describe the nature of family involvement, investigate the extent to which the two types of involvement are related to each other, examine whether these two types of involvement have different antecedents and different consequences for client outcomes, and study whether the two types of involvement have differential rates of change over time. In addition, the model can better differentiate future targets for interventions with family members compared to most existing research. The multifaceted conceptualizations of both family member wellbeing and client outcomes provide similar strengths to our model.

Further research on family involvement with clients and family involvement in the treatment process is needed to help improve client treatment models. By understanding the influence of family members' involvement on the treatment of the dually diagnosed client and the factors that facilitate and impede this involvement, treatment strategies can be developed to enhance the participation of the family in the treatment process and to strengthen family member involvement with the client. Given the poor treatment outcomes of dually diagnosed clients compared to clients with a single diagnosis, this is a particularly salient issue.

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