Predictors of Burden of Family Caregivers of Women with Substance Use Disorders or Co-Occurring Substance and Mental Disorders

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ABSTRACT. This study examined the impact of having a female family member with a substance use or co-occurring disorders on family caregivers. Predictors of subjective burden (worry, stigma, and displeasure) and objective burden (family disruption) on caregivers and on types of burden were explored. Subjects were 82 women receiving substance abuse treatment and their family member providing most social support. Behavioral problems of the recipient and lack of social support for caregivers predicted higher levels of family member burden, with different types of social support predicting different types of burden.
Having a dual disorder did not predict family member burden. Implications of findings for treatment are discussed. doi:10.1300/J160v07n01_03

KEYWORDS. Co-occurring disorders, family caregiving, substance abuse, mental illness, women

INTRODUCTION

Chronic illnesses, such as substance use disorders, have significant effects on families and the larger society. Providing care to a person with chronic illness especially affects family caregivers—those family members who provide the most support and assistance to their ill family member. Across chronic illnesses, many family caregivers, most of whom are women, report experiencing moderate to high levels of subjective (worry, stigma, displeasure) and objective (family disruption) burden and some caregivers experience moderate to high levels of depression as well. Recent research also indicates that caregiving is an independent risk factor for early mortality.

Data from the 2003 National Survey on Drug Use and Health indicate that over 19 million adults aged 18 years and older in the United States (9.1% of the population) met criteria for current substance abuse and dependence. For women, the focus population for this study, approximately 6.5 million (5.9%) females aged 18 years and older met criteria for current substance abuse or dependence. Rates were higher among women who were never married (15.9%) or divorced or separated (10.7%) than among women who were married (4.1%). Compared with men, women with substance abuse problems are more likely to be living with a partner who has a substance abuse problem and to be caring for dependent children (United Nations, Office of Drugs and Crime, 2004; Office of Applied Studies, 2004).

Epidemiological data in the last two decades have established that co-occurring substance use and mental disorders are common. The Epidemiological Catchment Area (ECA) study showed that the lifetime rate of substance use disorder for persons with severe mental illness was approximately half overall, with 48% of persons with schizophrenia and 56% of persons with bipolar disorder affected (Regier et al., 1990).
Findings from the more recent National Comorbidity Study (NCS), also document 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 have an active or recent (within the last six months) substance use disorder (Mueser, Bennett, & Kushner, 1995). Additionally, numerous studies report high rates of substance abuse among clients in treatment for severe psychiatric disorders (Mueser et al., 2000).

Literatures, largely separate, in the substance abuse and mental illness fields over the past decade have examined the role of families of persons with substance abuse and/or mental illness. The substance abuse literature on family involvement has placed more emphasis on the impact of family involvement on client outcomes and has not paid significant attention to the mental health impacts of family involvement on family members themselves, nor on the predictors of the mental health impacts of substance use disorders on family members. In fact, the concept of “burden” of family members does not appear in the substance abuse literature. On the other hand, the mental health literature has placed significantly more emphasis on the impact of the client’s illness on the family. Research findings from the mental health literature indicate that both stressors and resources are important in explaining caregiver burden. Behavioral problems of adults with serious mental illness have been found to be the strongest predictors of burden of family caregivers. In fact, care recipient behavioral problems have been found to be the strongest predictor of caregiver burden across chronic illnesses (Biegel, Sales, & Schulz, 1991). Lack of perceived social support, both informal and formal, has been found to be the most important resource that predicts burden of family caregiver of adults with mental illness (Biegel, Milligan, Putnam, & Song, 1994). Findings from previous research in the mental health field on predictors of burden can be utilized to identify variables that might be expected to also impact family members of women with substance use disorders or those with co-occurring substance use and mental disorders.

A number of sources of stress for families who provide care for an adult family member with a substance and/or mental disorder have been identified. Those cited most often include: isolation; coping with 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 include: worry, anger, guilt, and shame; financial and emotional strain; marital dissatisfaction and discord; diminution in the quality of life and hopefulness of family members; physical victimization; negative impacts on the normal growth and development of children in the family; and physical effects of the stress of living with a substance abuser (e.g., migraines, colitis, ulcers) (Biegel, 1998; Biegel, Song, & Milligan, 1995; Cavaiola, 2000; Fals-Stewart, O’Farrell, Birchler, Cordova, & Kelley, 2005; Freeman, 1993; Heath & Stanton, 1998; Koffinke, 1991; Lefley, 1996; Velleman, 1996).

Families are the primary source of social support to persons with a co-occurring substance abuse and mental disorder, providing direct care as well as financial support to their ill relatives. Due to the significantly worse symptomatology with which individuals rewith a co-occurring substance abuse and mental disorder present and to the nature of these symptoms (Cuffell, 1994; Drake, Rosenberg & Mueser, 1996), the impact on their families can be expected to be more significant than that on families with a member with a single disorder. For example, persons with co-occurring disorders experience 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 et al., 2000; Rosenberg et al., 2001) than are found for persons with only one diagnosis. Drug abusers with co-morbid mental disorders are more likely to engage in risky behaviors, such as unprotected sex and needle sharing, thus jeopardizing their health (Leshner, 1999).

Despite the large numbers of adults with dual disorders, as noted earlier, there has been very little research that has examined the effects of these co-occurring disorders on family members’ own well-being (Brown, Melchior, & Huba, 1999). Attention to the stresses and needs of families is important, because such stresses may have a negative effect on the support that family members can provide.

Of the eight studies of families of persons with dual diagnoses reported in the literature (Clark & Drake, 1994; Dixon, McNary, & Lehman, 1995; Kashner et. al., 1991; Mowbray et al., 1997; Ribi, 1995, Sciacca & Hatfield, 1995; Salyers & Mueser, 2001; Silver, 1999), only two studies (Salyers & Mueser; 2001; Silver, 1999) examined the burden of family members of persons with a co-occurring substance abuse
and mental disorder. In addition, the mental illnesses of the subjects in these studies were severe and persistent, such as schizophrenia. Clinical research on co-morbidity has paid little attention to the effects of co-morbidity between substance abuse and other mental problems, such as depression or anxiety (Merikangas & Stevens, 1998).

Another significant gap in the literature is that few studies have focused on co-morbidity between substance use disorders and psychopathology among women (Merikangas & Stevens, 1998). Women with co-occurring disorders report higher levels of physical, sexual, and emotional victimization when compared with women in general or to men with co-occurring disorders (Gearson & Bellack, 1999; DiNitto, Webb, & Rubin, 2002). Compared with men, women with co-occurring disorders are also more likely to be diagnosed with posttraumatic stress disorders, major depression, and generalized anxiety as disorders (Brady & Randall, 1999; Chander & McCaul, 2003).

Thus, we know very little about the levels and types of involvement of family caregivers with their ill relative with a co-occurring substance abuse and mental disorder and about the impact of caregiving (i.e., burden) upon them (Clark, 1996). This is an important knowledge gap since family support and involvement has been shown to be positively related to retention in treatment and to positive treatment outcomes for persons with substance use disorders (Higgins, Budney, Bickel, & Badger, 1994; Siddall & Conway, 1988). However, family caregivers who are stressed by the caregiving experience and who subsequently develop physical and/or mental health problems of their own may not be able to provide adequate support and assistance to their ill family member.

Unmet family caregiver needs can, therefore, pose barriers to treatment and/or can negatively impact treatment outcomes of their ill family members and so increase the risk of exacerbation of the substance abuse and/or psychiatric disorders. Given the fact that persons with dual disorders may find it difficult to access the parallel but separate substance abuse and mental health treatment systems so common in the United States (Ridgely, Goldman, & Willenbring, 1990; Ridgely, Osher, & Talbott, 1987; SAMHSA, 2002), the lack of research focused on the roles and needs of families with individuals with dual disorders becomes an even more pressing concern.

Thus, we conducted a study to enhance understanding of the impact upon families of having a female family member with a substance use disorder or co-occurring substance use and mental disorder. Our work was guided by stress-process theory (Pearlin, Mullan, Semple, & Skaff, 1990) and focused on two research questions: (1) What are the predictors
of subjective burden: worry, stigma, and displeasure; and of objective
burden: family disruption, for family members of women with sub-
stance use disorders or co-occurring substance use and mental disor-
ders? (2) Are there different predictors for different types of burden? It
is hypothesized that family members of women with co-occurring sub-
stance use and mental disorders will have higher levels of burden than
family members of women with substance use disorders only and that
having a co-occurring disorder will be a significant predictor of family
member burden.

METHODS

Subjects

Study subjects selected through purposive sampling consisted of
women participating in either an outpatient or residential substance
abuse treatment program and a family member/significant other nomi-
nated by each of these women. To be eligible for the study, the women
had to be at least 18 years old, with no diagnosis of schizophrenia and
no current use of any medication typically prescribed for a major
thought disorder, and in substance abuse treatment for three weeks or
more. In addition, women included in the study were those willing to
nominate the family member or significant other who provided them
with the most social support. Social support was defined as emotional
support (e.g., listening to my problems), instrumental support (e.g., fi-
nancial aid), and/or informational support (e.g., employment advice).

Almost all of the women who met these study eligibility criteria (97%) were
successfully contacted about the study. Of these, 96% (N = 87) agreed to participate and provided the name of a family member. Nomi-
nated family members were contacted subsequent to the woman’s inter-
view, and 95% (N = 82) of the family members agreed to be interviewed; two family members refused to participate in the study and three others
were unable to be contacted. The final study sample comprised 82 women
and 82 family members/significant others (one for each woman).

Study Design and Procedures

This study utilized an exploratory, non-experimental cross-sectional
survey design.

Data were collected by interviewers in face-to-face interviews lasting
an average of 1 hour 45 minutes for the women’s interview and 1 hour
and 20 minutes for the family members’ interview; all interviews incorporated both computerized and paper questionnaires. The study was approved by a university-based institutional review board for the protection of human subjects and obtained a Certificate of Confidentiality from the National Institute on Drug Abuse.

Interviewers were trained in classroom sessions on the use of the Computerized Diagnostic Interview Schedule (CDIS) described later (Robins, Helzer, Croughan, & Ratcliff, 1981; Helzer, Robins, & McEvoy, 1985) and each interviewer practiced using computerized tutorials and live interviews. Interviewers also received classroom and role playing sessions on other components of the women’s and family members’ survey instruments. Women’s interviews were conducted in private offices at the treatment centers; interviews with family members were conducted at a research office located on the campus of an academic medical center. Family members were provided transportation assistance to facilitate their travel to the interview site. All respondents, both the women and their family members, received a $45 food store gift card for their participation. Data for this study were drawn from both the women’s interview and the interview with her family member. For ease in describing the measures used in the study and in relating study findings to the larger body of literature on caregiving, the women in the study will be referred to as “care recipients” and their family members will be referred to as “caregivers.” It should be noted that while the term “family caregiver” is widely used in the mental health research literature, it has not been used in the substance abuse literature.

Measures

A stress-coping model was utilized to identify stressors and resources hypothesized to impact subjective burden (worry, stigma, and displeasure) and objective burden (family disruption) (Biegel & Schulz, 1999; George, 1980; Pearlin et al., 1990). Based upon the research model, the potential predictors of burden were categorized as stressors, as resources, or as contextual variables (care recipient and caregiver characteristics) as discussed later.

Stressors

Care Recipient Behavioral Problems. The Client Behaviors Scale developed by Biegel and colleagues (Biegel, Milligan, Putnam, & Song,
1994) for use with family caregivers of persons with mental illness was adapted for the current study. Modifications to the scale were based on a review of the literature on the behavioral problems displayed by the study population that may be perceived as stressful by family members. Using a five-point scale ranging from 0 (Never) to 4 (Constantly or almost constantly), caregivers were asked to report the frequency with which the care recipient had displayed a wide range of behaviors in the last 12 months. The modified scale consisted of 58 items and included behavior problems such as problems managing money, irritability, caused trouble with the neighbors, did things to embarrass you. A summated score was computed, with higher scores indicating a greater degree of care recipient behavioral problems. The internal consistency of the scale was very high (Cronbach’s alpha = .97).

Care Recipient Criminal Justice Status. The care recipient was asked to report whether or not she had been in jail or prison in the last six months.

Care Recipient Substance Use and Mental Disorders. Care recipient substance use disorder was assessed at treatment intake by the structured Clinical Intake Assessment Interview-Cleveland (CIAI-C), a computerized assessment instrument yielding a DSM-compatible diagnosis. This scale is used by all the treatment agencies in the county in which the study was conducted (University of Akron, 2001). Mental disorders were assessed by use of the generalized anxiety disorder, depression, dysthemia, posttraumatic stress disorder, and mania/hypomania sections of the Computerized Diagnostic Interview Schedule (CDIS). The CDIS has demonstrated reliability and validity (Robins, Helzer, Croughan, & Ratcliff, 1981; Helzer, Robins, & McEvoy, 1985) and is based upon criteria from the Diagnostic and Statistical Manual, fourth edition (DSM-IV). It provides a DSM-compatible diagnosis, and distinguishes current from lifetime disorders (Robins, Cottler, Bucholz, Compton, North, & Rourke, 1999).

As was expected, all of the care recipients in this study met the criteria for at least one current (last 12 months) substance use disorder (either abuse or dependence). Care recipients were coded as having a dual disorder if the CDIS indicated the current presence (last 12 months) of at least one of the targeted mental disorders (anxiety, depression, dysthemia, PTSD, or mania/hypomania).

Extent of Care Recipient’s Alcohol and/or Drug Problems. Caregivers were asked to assess the extent of the care recipient’s drug and/or alcohol problems over the past 12 months on a four-point scale
ranging from Not at all (0) to Severe (3). A higher score indicates more problems.

Extent of Care Recipient’s Emotional Problems. Caregivers were asked to assess the extent of the care recipient’s emotional problems over the past 12 months on a four-point scale ranging from Not at all (0) to Severe (3). A higher score indicates more problems.

Caregiver Resources

Overall Social Support. The Interpersonal Support Evaluation List (ISEL) was used as a measure of overall social support. This 16-item scale has been well-validated (Cohen, Mermelstein, Kamarck, & Hoberman, 1985). A summated score, from 0 to 48, was computed to represent the level of caregivers’ perceived social support, with higher scores indicating more overall social support. The internal consistency of the scale in our sample was good (Cronbach’s alpha = .81).

Caregiving-Specific Social Support. Caregivers were asked to rate the amount of caregiving help and support they received from family or friends. Each caregiving support source was rated separately using the following five-point scale: Much less than needed (1), Somewhat less than needed (2), Just the right amount (3), Somewhat more than needed (4), or Much more than needed (5). The variables were then recoded into two dichotomous variables: Amount of help received from family/friends is “Just right or more” (options 3, 4, or 5) or “Less than would like” (options 1 or 2).

Support Received from the Care Recipient. This variable was measured using Greenberg et al. (1994) adaptation of an instrument used in the National Survey of Families and Households (Sweet, Bumpass, & Call, 1988). Respondents were asked to rate, from (0) None to (3) A lot, the amount of assistance received from the care recipient in 10 areas, including: meal preparation and other household chores, financial assistance, care during illness, and companionship. A summated scale was created, with higher scores indicating higher levels of support received from the care recipient. The internal consistency of the scale in the current study was very good (Cronbach’s alpha = .91).

Caregivers’ Likelihood to Ask for Help. Caregivers were asked their likelihood of asking people they know for help in providing support for their family member. This variable was measured on a four-point scale from (1) Very unlikely to (4) Very likely.
Contextual Variables

Caregiver Gender. (1) Male or (0) Female.

Caregiver Age. Caregiver age was recorded in years.

Caregiver Relationship to Care Recipient. (1) Significant other (spouse/partner) or (0) Non-significant other (other relative).

Caregiver Outcomes

Based on findings from previous research indicating the multidimensional nature of caregiver burden, burden was conceptualized as having both subjective and objective components (Biegel, Milligan, Putnam, & Song, 1994; Tessler & Gamache, 1995). Subjective and Objective Burden were measured by four subscales of the Family Experiences Interview Schedule that have established construct validity and reliability (Tessler & Gamache, 1995).

Worry. Caregivers reported the frequency with which they experienced worries concerning the care recipient during the past 12 months (e.g., care recipient’s safety, social life, or financial management). The scale’s seven items were rated on a five-point scale from (0) Never to (4) Constantly or almost constantly. A summated score was computed, with a higher score indicating a greater degree of worry. Acceptable reliability was reached for the scale (Cronbach’s alpha = .79).

Displeasure. The displeasure scale assesses the extent of agreement with eight statements regarding negative feelings that caregivers may have experienced in the past 12 months, in relation to the care recipient (e.g., disappointment with her, embarrassed by her behavior, gets depressed when thinking about her). The eight items were scored on a four-point scale from (1) Strongly agree to (4) Strongly disagree. Responses to the eight items were summed to create a total score, with higher scores indicating a greater degree of displeasure. Good reliability was reached for the scale (Chronbach’s alpha = .90).

Stigma. The stigma scale measures concerns that caregivers had in the past 12 months about the way they would be perceived or treated by others in their social environment (e.g., worry that people would find out, keeping care recipient’s alcohol or drug use a secret, worry that best friends will treat you differently). The scale includes nine items, scored on a five-point scale from (0) Never to (4) Constantly or almost constantly. A summated score was computed, with a higher score indicating a greater degree of stigma. Good reliability was reached for the scale in the current study (Cronbach’s alpha = .89).
Impact. The impact scale indicates the degree to which the caregiver’s life was disrupted by the caregiving role in the past 12 months in four areas: missed or late for school or work; changes or disruptions in social and leisure activities; disruptions or changes in household routine; and being prevented from giving other family members time and attention. The four areas were each scored on a five-point scale from (0) Never to (4) Constantly or almost constantly. The scale had acceptable reliability (Cronbach’s alpha = .79).

RESULTS

Demographic and Socioeconomic Characteristics

Care recipients ranged in age from 21 to 55 years, with a mean age of 34.12 years (SD = 8.50). Only one-half of care recipients (50%) had a high school education or greater. Most (81.7%) of the care recipients were African American, the remaining were Latino (11.0%) or of other origin (7.3%). Slightly more than half (51.2%) were currently residing at an inpatient treatment program, one-third (32.9%) lived in their own home, with the remainder residing in the family caregiver’s home (12%) or living with a relative or friend (3.6%).

Caregivers ranged in age from 18 to 77 years, with a mean age of 40.04 years (SD = 13.59). Unlike caregivers for other populations, a large proportion, 40.2%, were male and 59.8% female. Almost one-third (31.7%) were the significant other of the care recipients; the remainder were either a sibling (23.2%), parent (19.5%), child (11.0%), or other relative (14.6%). Half of the caregivers (50.0%) were never married; 24.4% were divorced/separated; 22.0% were married; and the remaining 3.7% were widowed. Similar to the care recipients, 84.1% of the caregivers defined themselves as African American, 12.2% as Latino, and 3.6% as other. More than third (37.8%) of the caregivers worked full time, 22% worked part time, and 29.0% were unemployed.

Substance Use and Mental Disorders

Based on the CIAI-C and the CDIS, over half (56.1%) of the care recipients met the criteria for a current dual disorder (mental illness and substance use disorder), while 43.9% had only a current substance use
disorder. Most of the care recipients (77.6%) were dependent on more than one substance: Over half were diagnosed with current cocaine dependence (55.6%) and one-half with alcohol dependence (50.6%). Other substances with current dependence included: marijuana (27.2%), PCP (8.6%), opiates (4.9%), and sedatives (1.2%). When asked to assess the extent of their care recipients’ drug or alcohol problems, over half (56%) of family caregivers perceived these problems to be moderate or severe. Care recipients’ current mental disorders, based on CIAI-C data, included Major Depression (40.2%), Post-traumatic Stress Disorder (28%), Mania (22%), Generalized Anxiety Disorder (13.4%), Hypomania (3.7%), and Dysthymia (2.4%). When asked to assess the extent of their care recipients’ emotional problems, one-half (50%) of family caregivers perceived these problems to be moderate or severe. Very few caregivers (3.6%) had a current substance dependence disorder themselves, as measured by the CDIS.

Caregiver Support Systems

Over half (56%) of family caregivers indicated that they were unlikely to ask others for help in providing support for their care recipient. Almost half (48%) of family caregivers had no contact with their relative’s treatment provider during the past six months.

Caregiver Burden

As can be seen in Table 1, the degree of caregiver burden varied by burden type. As a group, caregivers in this sample experienced moderate levels of Worry and Displeasure, and lower levels of Stigma and Impact.

Predictors of Caregiver Burden

Because the number of potential predictor variables was too large to enter in the regression analyses for each dependent variable given the sample size, bivariate Pearson Correlation analyses were conducted first. Variables that were statistically significant in the bivariate analyses were used as predictor variables in the regression analyses. Other variables were retained as predictors on the basis of theory or prior empirical evidence. Subjects missing one or more scales or measures were excluded from the analyses.

In addition, the bivariate analysis aimed to identify high (r > .70) correlations, in order to avoid multicollinearity problems. A high correlation
was found between caregiver gender and caregiver’s relationship to the care recipient (coded 1 = Significant other) \((r = - .78, p < .01)\). Caregiver gender was used in the regression analyses based on previous research suggesting that burden levels differ by caregiver gender. Although the care recipient’s dual disorder status was not significantly correlated with any of the burden scales in the bivariate analyses, it was still utilized as a predictor in the regression analyses given its importance in addressing the study hypothesis.

A series of separate simultaneous multiple regression analyses for each of the four burden scales were conducted, utilizing predictor variables that were statistically significant in the respective bivariate analyses. Table 1 includes descriptive statistics for variables utilized in the regression analyses of one or more burden scales. Because different variables were used in each regression equation, we will not attempt

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**TABLE 1. Descriptive Statistics for Variables Used in the Multivariate Analyses**

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>M</th>
<th>SD</th>
<th>Actual Range</th>
<th>Potential Range</th>
<th>(\alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjective burden</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worry</td>
<td>18.30</td>
<td>6.30</td>
<td>3-28</td>
<td>0-28 (low to high)</td>
<td>.79</td>
</tr>
<tr>
<td>Stigma</td>
<td>8.96</td>
<td>8.84</td>
<td>0-30</td>
<td>0-36 (low to high)</td>
<td>.89</td>
</tr>
<tr>
<td>Displeasure</td>
<td>20.70</td>
<td>5.70</td>
<td>8-32</td>
<td>8-32 (low to high)</td>
<td>.90</td>
</tr>
<tr>
<td><strong>Objective burden</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact</td>
<td>4.90</td>
<td>3.90</td>
<td>0-15</td>
<td>0-16 (low to high)</td>
<td>.79</td>
</tr>
<tr>
<td><strong>Predictors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR Behavioral problems</td>
<td>89.76</td>
<td>47.09</td>
<td>2-194</td>
<td>0-232 (low to high)</td>
<td>.97</td>
</tr>
<tr>
<td>CR Jail or prison in past six months</td>
<td>0.19</td>
<td>.39</td>
<td>–</td>
<td>(1 = Yes) –</td>
<td></td>
</tr>
<tr>
<td>CR Dual diagnosis</td>
<td>0.57</td>
<td>.50</td>
<td>–</td>
<td>(1 = Dual diagnosis) –</td>
<td></td>
</tr>
<tr>
<td>Extent of CR’s drug/alcohol problems in the past 12 months</td>
<td>1.68</td>
<td>1.29</td>
<td>0-3</td>
<td>0-3 (not at all to severe) –</td>
<td></td>
</tr>
<tr>
<td>Extent of CR’s recent emotional problems</td>
<td>1.43</td>
<td>1.18</td>
<td>0-3</td>
<td>0-3 (not at all to severe) –</td>
<td></td>
</tr>
<tr>
<td>Overall social support</td>
<td>35.99</td>
<td>7.65</td>
<td>7-48</td>
<td>0-48 (low to high)</td>
<td>.81</td>
</tr>
<tr>
<td>Less help from family</td>
<td>0.41</td>
<td>.49</td>
<td>–</td>
<td>(1 = Less help) –</td>
<td></td>
</tr>
<tr>
<td>Less help from friends</td>
<td>0.50</td>
<td>.50</td>
<td>–</td>
<td>(1 = Less help) –</td>
<td></td>
</tr>
<tr>
<td>Support from CR</td>
<td>14.28</td>
<td>8.63</td>
<td>0-30</td>
<td>0-30 (low to high)</td>
<td>.91</td>
</tr>
<tr>
<td>CG gender</td>
<td>0.40</td>
<td>.49</td>
<td>–</td>
<td>(1 = Male) –</td>
<td></td>
</tr>
<tr>
<td>CR age</td>
<td>34.12</td>
<td>8.5</td>
<td>21-55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(\text{CR} = \text{Care Recipient}; \text{CG} = \text{Caregiver.}\)
to compare explained variance across regression models. Rather, explained variance will be discussed within each of the four models later.

Worry

Eight predictors of Worry were included in the model: frequency of care recipient behavioral problems, care recipient’s institutional status, care recipient dual disorder, extent of care recipient’s perceived drug/alcohol problem, extent of care recipient perceived emotional problems, support from care recipient, the care recipient’s age, and caregiver’s gender. As shown in Table 2, the regression equation explained 34% of the total variance in caregiver’s worry ($R^2 = .34$, $p < .001$). Of the eight predictor variables, only the frequency of care recipient behavioral problems was significant after controlling for the effect of the other predictor variables, greater behavioral problems predicted higher levels of worry ($\beta = .39$, $p < .01$).

Stigma

Table 3 reports findings of the multiple regression analysis of stigma. Predictor variables for stigma were the frequency of care recipient behavioral problems, care recipient’s institutional status, care recipient

<table>
<thead>
<tr>
<th>Variable</th>
<th>Worry</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>$B$</td>
<td>SE $B$</td>
</tr>
<tr>
<td>CR Behavioral problems</td>
<td>0.05*</td>
<td>0.02</td>
<td>0.39</td>
</tr>
<tr>
<td>CR in jail or prison</td>
<td>2.75</td>
<td>1.71</td>
<td>0.18</td>
</tr>
<tr>
<td>Extent of CR’s drug/alcohol problems in the past 12 months</td>
<td>0.44</td>
<td>0.56</td>
<td>0.09</td>
</tr>
<tr>
<td>Extent of CR’s recent emotional problems</td>
<td>−0.10</td>
<td>0.61</td>
<td>−0.02</td>
</tr>
<tr>
<td>Support from CR</td>
<td>−0.01</td>
<td>0.09</td>
<td>−0.13</td>
</tr>
<tr>
<td>CR Age</td>
<td>0.08</td>
<td>0.08</td>
<td>0.11</td>
</tr>
<tr>
<td>CG Gender</td>
<td>−2.07</td>
<td>1.44</td>
<td>−0.17</td>
</tr>
<tr>
<td>CR Dual-disorder</td>
<td>1.34</td>
<td>1.38</td>
<td>0.11</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.34**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>4.44 (df = 78)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01, **p < .001.

CR = Care Recipient; CG = Caregiver.
dual disorder, extent of care recipient’s perceived drug/alcohol problem, overall social support, and help from friends and caregiver gender. The overall model accounted for 28% of the total variance in stigma ($R^2 = .28, p < .001$). Controlling for the effects of other predictors in the model, receiving less help from friends than the care recipient would like (compared with receiving just the right amount of help or more) ($\beta = .24, p < .05$), predicted higher levels of stigma.

**Displeasure**

For displeasure, predictor variables included the frequency of care recipient behavioral problems, care recipient’s institutional status, care recipient dual disorder, extent of care recipient’s perceived drug/alcohol problem, extent of care recipient perceived emotional problems, support from care recipient, and caregiver’s gender. As shown in Table 4, the regression equation explained 37% of the total variance in displeasure ($R^2 = .37, p < .001$). Controlling for the effect of other predictors, a higher extent of care recipient behavioral problem ($B = .04, p < .01$) and lower levels of support received from the care recipient ($\beta = -.29, p < .05$), predicted higher levels of caregivers’ displeasure.

**TABLE 3. Multiple Regression Analysis of Caregiver Burden: Stigma (N = 79)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Stigma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
</tr>
<tr>
<td>CR Behavioral problems</td>
<td>0.03</td>
</tr>
<tr>
<td>CR in jail or prison</td>
<td>3.61</td>
</tr>
<tr>
<td>Extent of CR’s drug/alcohol problems in the past 12 months</td>
<td>0.94</td>
</tr>
<tr>
<td>Overall social support</td>
<td>-0.20</td>
</tr>
<tr>
<td>Less help from friends</td>
<td>4.15*</td>
</tr>
<tr>
<td>CG gender</td>
<td>2.63</td>
</tr>
<tr>
<td>CR Dual-disorder</td>
<td>-1.11</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.28***</td>
</tr>
<tr>
<td>$F$</td>
<td>4.00 ($df = 78$)</td>
</tr>
</tbody>
</table>

*p < .05, ***p < .001.  
CR = Care Recipient; CG = Caregiver.
Impact

The findings of multiple regression analyses of Impact is given in Table 5. Predictor variables included the frequency of care recipient behavioral problems, care recipient’s institutional status, care recipient dual disorder, extent of care recipient’s perceived drug/alcohol problem, overall social support, help from family, and caregiver gender. The overall model accounted for 34% of the total variance in impact ($R^2 = .34$, $p < .001$). Controlling for the effect of other predictors in the model, a higher extent of care recipient behavioral problems ($\beta = .31$, $p < .01$) and perceived less help from family than the care recipient would like (compared with receive just the right amount of help or more) ($\beta = .26$, $p < .05$), predicted a greater impact of the caregiving role.

The care recipients’ behavioral problems were the only variable that predicted more than one type of caregiver burden, showing statistically significant effects in three of the four regression equations. In order to obtain a fuller understanding of the kinds of behavioral problems that caregivers reported as most problematic, we examined the frequency distributions of each of the 58 behaviors included on the Behavioral Problems Scale. Behavioral problems were rated by caregivers using a
five-point scale from 0 (Never) to 5 (Constantly). The most problematic care recipient behaviors were: managing money ($M = 2.9$); too much time on her hands with nothing to do ($M = 2.7$); too dependent, irritability (both $M = 2.55$); lying or being untruthful ($M = 2.52$); mood swings ($M = 2.43$); and being anxious or worried, and displaying feelings of depression or extreme sadness (both $M = 2.33$).

**DISCUSSION**

Family caregivers in the current study experienced moderate levels of two of the three types of subjective burden (Worry and Displeasure), and lower levels of Stigma. The level of objective burden (Impact), was relatively low. Study findings demonstrate the multidimensional nature of caregiver burden and the need to separately examine burden types. The finding that family caregivers experienced moderate levels of Worry and Displeasure, extends previous research concerning the impact of chronic illness to family caregivers of women with substance abuse and suggests the need for substance abuse professionals to address the needs of family caregivers as discussed further. It should be noted that the methodology of this study may have resulted in an underestimation of

**TABLE 5. Multiple Regression Analysis of Caregiver Burden: Impact (N = 78)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Impact</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Behavioral problems</td>
<td></td>
<td>0.03**</td>
<td>0.01</td>
<td>.31</td>
</tr>
<tr>
<td>CR in jail or prison</td>
<td></td>
<td>1.46</td>
<td>1.1</td>
<td>.15</td>
</tr>
<tr>
<td>Extent of CR’s drug/alcohol problems in the past 12 months</td>
<td></td>
<td>0.58</td>
<td>.36</td>
<td>.19</td>
</tr>
<tr>
<td>Overall social support</td>
<td>−0.02</td>
<td>.05</td>
<td>−.04</td>
<td></td>
</tr>
<tr>
<td>Less help from family</td>
<td>2.06*</td>
<td>.85</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>CG Gender</td>
<td>1.17</td>
<td>.86</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>CR Dual-disorder</td>
<td>0.02</td>
<td>.80</td>
<td>.00</td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = .34^{***}$

$F = 5.06 (df = 77)$

*p < .05, **p < .01, ***p < .001.

CR = Care Recipient; CG = Caregiver
the level of burden of family caregivers. We do not have data concerning the length of time that study subjects had been in treatment. It might be expected that the burden levels of family caregivers of women who had been in treatment for a short while, especially inpatient treatment, might be lower than for caregivers of women with a long history of treatment or of women not in treatment.

Consistent with findings from previous research with caregivers of adults with serious and persistent mental illness and with caregivers of persons with dementia, care recipient behavioral problems was a significant predictor of caregiver burden, cutting across types of burden. Thus, higher levels of Worry, Displeasure, and Impact were predicted by higher levels of behavioral problems by care recipient. In fact, care recipient behavioral problems were the only predictor of more than a single type of burden.

The role of social support as predictor of caregiver burden was also consistent with previous research (Biegel et al., 1994). The need to examine specific types of social support of caregivers, rather than social support in general, has been identified in previous study findings. Previous research with family members of adults with mental illness found that family members often reported moderate to high levels of overall social support. However, family caregivers also reported that they had few if any persons to talk to concerning the problems and stresses of providing care to a family member with mental illness. Therefore, when examining social support of caregivers, it’s important to focus on social support in the context of their caregiving experience. In the present study, we found, that consistent with the above, overall social support was not predictive of the levels of caregiver burden. However, caregiver specific social support and support from the care recipient played an important role. Thus, a higher level of Stigma was predicted by less perceived help from friends, and a higher level of caregiver displeasure was predicted by less support from the care recipient, whereas a higher level of caregiving Impact was predicted by less perceived help from family members.

Bivariate or multivariate analyses did not find any relationship between the care recipients having a dual disorder, as compared with a substance use disorder alone, and caregiver burden. Therefore, the study hypothesis was not supported. The small sample size of the current study restricted our ability to fully examine all potential elements of the stress-coping model. Thus, our analyses were limited to examining main effects of substance use disorder only versus dual disorders. Our simplified conceptual model did not allow examination of potential
mediators and moderators that may influence burden outcomes. Additional analyses (not shown) revealed that women with a current dual disorder did not differ significantly from women with substance use disorder alone in terms of key demographic variables or other variables related to caregiver burden. However, more complicated relationships involving dual disorder status may have been undetected in the present study. It is conceivable, for example, that care recipient dual disorder status may exacerbate the effects of other stressors or attenuate the effects of specific resources on different types of caregiving burden. In addition, the concept of dual disorders may be too generic. Most care recipients in our study were dependent on more than one substance, and of the women with dual disorders, most had more than one current mental disorder. Given our limited sample size, we were unable to examine different combinations of substance use and mental disorders and the potential impact of these various combinations on caregiver burden.

**IMPLICATIONS OF FINDINGS**

The findings of this study suggest several implications for practice and policy in the substance abuse field. Substance abuse agencies have long stressed the importance of involving families in the treatment of clients, believing, with support from empirical studies, that family involvement can have a positive impact on client outcomes such as abstinence, reduced relapse, general functioning, psychiatric symptomatology and client treatment engagement (Fals-Stewart et al., 2005; Fals-Stewart, O’Farrell, & Birchler, 2003; McCrady, Epstein, & Sell, 2003). However, the needs of family caregivers themselves have not been routinely addressed by the substance abuse treatment system. In fact, while the concepts of caregiver burden and depression have been examined in a number of studies in the mental health field, there has been little empirical investigation of such burden in the field of substance abuse. Research in the mental health field indicates that family caregivers of adults with mental illness often have substantive levels of depressive symptomatology. Such symptoms may undermine caregivers’ abilities to provide support to their family member or to participate in their family member’s treatment. The substance abuse field has a rich history of family education, involvement, and support. It would, therefore, be philosophically consistent for substance abuse agency personnel in considering the needs of family members, to assess the presence of caregiver burden and depression in
family members and to develop mechanisms, perhaps in conjunction with the mental health system, to address such needs.

Interventions to address the needs of family caregivers are more likely to be effective if they are tailored to address the causes of different types of family caregiver distress. The findings of this study suggest that interventions to address caregiver burden should be focused on helping caregivers address care recipient behavioral problems and strengthening caregiver support systems. Concerning the former, across chronic illnesses, caregivers indicate that they want information to both help them understand the nature of the care recipient’s behavioral problems such as the ones identified in this study (e.g., problems managing money, mood swings, anxiety, worry, irritability, depression) as well as about strategies to address these problems. In the substance abuse field, Behavioral Couples Therapy, an intervention for married or co-habitating alcoholic or drug-abusing patients, has been successfully utilized in controlled trials to enhance relationship functioning (Fals-Stewart et al., 2005). In the mental health field, there are empirically based psychoeducational interventions for family caregivers of a variety of relationships (such as spouse or parent), which can be adapted for use by family members of persons with substance abuse problems to help them address such behavioral problems (McFarlane, 2002).

Study findings concerning caregiver specific social support demonstrate the importance of addressing multiple sources of informal social support such as from family members, friends, and the care recipients themselves. The finding that almost one-half of the family caregivers in this study indicate that they were unlikely to ask anyone for help with their caregiving role suggests that substance abuse agencies need to provide outreach to family members. Family education programs and family support groups have been used successfully in the substance abuse field and are an importance mechanism to help family caregivers of persons with substance abuse problems strengthen their social support systems in a non-threatening, non-stigmatizing fashion. Support groups, in particular, can help family members identify, discuss, and address specific problems relating to their family members’ addiction and treatment.

The finding in this study that over one-half of the care recipients receiving outpatient or inpatient treatment for substance dependence also had a co-occurring mental disorder, suggests the need for substance abuse agencies to address the mental health problems of their clients. However, there are funding obstacles to accomplishing this goal. The care recipients in this study were low-income women. The substance
abuse agencies that treated these women offered very limited mental health services because funding from the mental health system was focused on individuals with severe and persistent mental illness rather than the diagnoses common to these women.

**LIMITATIONS OF STUDY**

The sample in this study of lower socioeconomic women, primarily African American, from the Midwest, limits its generalizability to similar populations. In addition, generalizability of study findings is also limited to the specific psychiatric disorders studied. Although this study was theoretically based, its cross-sectional design limits causal inferences. Future research studies are needed that utilize larger samples and longitudinal study designs. This would allow testing of a more comprehensive stress-coping framework to address mediating and moderating as well as direct effects. It would also allow for further examination of: Various combinations of specific substance use and mental disorders, the role of caregiver relationship (e.g., parent, spouse/partner, and sibling), and caregiver gender. Further study of caregiver gender in the context of substance use and dual disorders is important since previous research in other caregiving situations has found that male caregivers experience lower levels of caregiver burden. Future studies should also control for length of time in treatment episode by interviewing women and caregivers early in the treatment process and perhaps by also including a sample of women with substance use disorders who are not currently in treatment.

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