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Accepted version. *Issues in Mental Health Nursing*, Vol. 30, No. 3 (2009): 142-150. DOI. © 2018
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Abir K. Bekhet was affiliated with Alexandria University at the time of publication.

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Relationships Among Perceived Burden, Depressive Cognitions, Resourcefulness, and Quality of Life in Female Relatives of Seriously Mentally Ill Adults

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Abstract

Providing care and support to a seriously mentally ill (SMI) family member can have deleterious effects on one's health and quality of life. This study explored relationships among perceived burden, depressive cognitions, resourcefulness, and quality of life in 60 African-American and Caucasian women family members of SMI adults. Caucasians reported greater burden than African-Americans; the groups were similar in depressive cognitions,

resourcefulness, and quality of life. In Caucasians and African-Americans, burden correlated with depressive cognitions and both correlated with poorer mental health. In African-Americans, burden also correlated with lower personal resourcefulness and both correlated with poorer mental health. The findings suggest a mediating role by depressive cognitions for both groups and by resourcefulness in African-Americans. Thus, both groups of women may benefit from positive thinking while African-Americans also may benefit from learning personal resourcefulness skills.

Introduction

Mental illness is common worldwide, with one in four adults diagnosed every year ([Kessler, Chiu, Demler, & Walters, 2005 Kessler R. C., Chiu W. T., Demler O., Walters E. E. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry*. 2005; 62: 617–627[Crossref], [PubMed], [Web of Science®], [Google Scholar]]). In 2004, the United States Census estimated that nearly 58 million adults had a diagnosable mental illness ([U.S. Census Bureau, 2005 U.S. Census Bureau. Population Estimates by Demographic Characteristics. U. S. Census Bureau: Population Division. 2005, Table 2: Annual estimates of the population by selected age groups and sex for the United States: April 1, 2000 to July 1, 2004 (NC-EST2004-02) [Google Scholar]]). Approximately 8% of adults with mental disorders have a serious mental illness (SMI; World Health Organization ([WHO, 2004 World Health Organization. The World Health Report 2004: Changing history, Annex Table 3: Burden of disease in DALYs by cause, sex, and mortality stratum in WHO regions, estimates for 2002. WHO, Geneva 2004 [Google Scholar]]), defined as a diagnosable mental disorder that is so long lasting and severe that it seriously interferes with a person's ability to take part in important life activities ([Bye & Partridge, 2004 Bye L., Partridge J. State level classification of serious mental illness: A case for a more uniform standard. *Journal of Health & Social Policy* 2004; 19(2)1–29[Crossref], [PubMed], [Google Scholar]]). Disorders considered serious mental illnesses include schizophrenia, schizoaffective disorder, major depressive disorder, obsessive-compulsive disorder, panic disorder, and other severe anxiety disorders ([Peck & Scheffler, 2002 Peck M. C., Scheffler R. M. An analysis of the definitions of mental illness used in state parity laws. *Psychiatric Services* 2002; 53(9)1089–1095 [Google Scholar]]).

Many mentally ill people are treated in the community ([Wynaden, Ladzinski, Lapsley, Landsborough, Butt, & Hewitt, 2006 Wynaden D., Ladzinski U., Lapsley J., Landsborough I., Butt J., Hewitt V. The caregiving experience: How much do health professionals understand?. *Collegian* 2006; 13(3)6–10[Crossref], [PubMed], [Google Scholar]]) and one-third to two-thirds of those with SMI live in the same household with their families ([Dyck, Short, & Vitaliano, 1999 Dyck D. G., Short R., Vitaliano P. P. Predictors of burden and infectious illness in schizophrenia caregivers. *Psychosomatic Medicine*. 1999; 61: 411–419[Crossref], [PubMed], [Web of Science®], [Google Scholar]]). This means many families must take care of their mentally ill family members ([Chang & Horrocks, 2006 Chang K. H., Horrocks S. Lived experiences of family caregivers of mentally ill relatives. *Journal of Advanced Nursing* 2006; 53(4)435–443[Crossref], [PubMed], [Web of Science®], [Google Scholar]]; [Chien & Norman, 2003 Chien W. T., Norman I. Educational needs of families caring for Chinese patients with schizophrenia. *Journal of Advanced Nursing* 2003; 44(5)490–498[Crossref], [PubMed], [Web of Science®], [Google Scholar]]). Two thirds (57–69%) of family caregivers of persons with SMI are women ([Kohn-Wood & Wilson, 2005 Kohn-Wood L. P., Wilson M. N. The context of caretaking in rural areas: Family factors influencing the level of functioning of seriously mentally ill patients living at home. *American Journal of Community Psychology* 2005; 36(1/2)1–13 [Google Scholar]]; [Tung & Gillett, 2005 Tung W. C., Gillett P. A. Stages of change for physical activity among family caregivers. *Journal of Advanced Nursing* 2005; 49(5)513–521 [Google Scholar]]) and studies have shown that these family members are at high risk of developing a depressive disorder ([Wittmund, Wilms, Mory, & Angermeyer, 2002 Wittmund B., Wilms H. U., Mory C., Angermeyer M. C. Depressive disorders in spouses of mentally ill patients. *Social Psychiatry and Psychiatric Epidemiology* 2002; 37(4)177–182 [Google Scholar]]).

For family members of adults with serious mental illness, caregiving is a part of everyday life ([Wynaden et al., 2006 Wynaden D., Ladzinski U., Lapsley J., Landsborough I., Butt J., Hewitt V. The caregiving experience: How

much do health professionals understand?. *Collegian* 2006; 13(3)6–10[[Crossref](#), [PubMed](#), [Google Scholar](#)]] and it involves considerable burden ([Angermeyer, Bull, Bernert, Dietrich, & Kopf, 2006 Angermeyer M. C., Bull N., Bernert S., Dietrich S., Kopf A. Burnout of caregivers between partners of psychiatric patients and nurses. *Archives of Psychiatric Nursing* 2006; 20(4)158–165 [Google Scholar](#)]) and emotional stress ([Tsang, Tam, Chan, & Cheung, 2003 Tsang H. W., Tam P. K., Chan F., Cheung W. M. Sources of burden on families of individuals with mental illness. *International Journal of Rehabilitation Research* 2003; 26(2)123–130[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). In fact, the terms “perceived stress” and “burden” have been used interchangeably in numerous studies of caregivers ([Takano & Arai, 2005 Takano M., Arai H. Gender differences and caregivers' burden in early onset Alzheimer's disease. *Psychogeriatrics* 2005; 5(3)73 [Google Scholar](#)]; [Tsang et al, 2003 Tsang H. W., Tam P. K., Chan F., Cheung W. M. Sources of burden on families of individuals with mental illness. *International Journal of Rehabilitation Research* 2003; 26(2)123–130[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). The burden experienced by family caregivers of mentally ill persons reflects the disruption that occurs in the family, the dependence of the mentally ill person on the family, and the strain and stigma by association experienced by the caregiver ([Baronet, 1999 Baronet A. Factors associated with caregiver burden in mental illness: A critical review of the research literature. *Clinical Psychology Review* 1999; 19(7)819–841[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]; [Rose, Mallinson, & Gerson, 2006 Rose L. E., Mallinson R. K., Gerson L. D. Mastery, burden, and areas of concern among family caregivers of mentally ill persons. *Archives of Psychiatric Nursing* 2006; 20(1)41–51[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]).

Studies suggest that caregiver burden and stress may come in part from the stigmatizing attitudes that the public holds towards mentally ill persons ([Tsang et al., 2003 Tsang H. W., Tam P. K., Chan F., Cheung W. M. Sources of burden on families of individuals with mental illness. *International Journal of Rehabilitation Research* 2003; 26(2)123–130[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). In fact, the impact of stigma by association experienced by family caregivers of the mentally ill is pervasive and strong ([Chang & Horrocks, 2006 Chang K. H., Horrocks S. Lived experiences of family caregivers of mentally ill relatives. *Journal of Advanced Nursing* 2006; 53(4)435–443[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). Studies have shown that as a result, family caregivers may avoid talking about their relative's mental illness in order to keep their family from “losing face” ([Chang & Horrocks, 2006 Chang K. H., Horrocks S. Lived experiences of family caregivers of mentally ill relatives. *Journal of Advanced Nursing* 2006; 53(4)435–443[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). Low self-esteem, damaged family relationships, and difficulty finding employment and making friends are among the serious effects of stigma by association felt by relatives of persons with mental illness ([Östman & Kjellin, 2002 Östman M., Kjellin L. Psychological factors in relatives of people with mental illness. *British Journal of Psychiatry*. 2002; 181: 494–498[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]).

Unrelenting stress and stigma by association compromise family members' quality of life. In fact, relatives of mentally ill persons judge their quality of life, especially their emotional well-being, significantly worse than the general population, and women relatives consider themselves much more burdened than men ([Fleischman & Klupp, 2004 Fleischman H., Klupp A. Quality of life in relatives of mentally ill people. *Psychiatric Praxis* 2004; 31(1)S114–S116 [Google Scholar](#)]). Research has found that the parents of mentally ill persons were significantly less satisfied than other parents with their quality of life, and lower quality of life was associated with higher perceived burden ([Foldemo, Gullberg, Ek, & Bogren, 2005 Foldemo A., Gullberg M., Ek A., Bogren L. Quality of life and burden in parents of outpatients with schizophrenia. *Social Psychiatry and Psychiatric Epidemiology*. 2005; 40: 133–138[[Crossref](#), [PubMed](#), [Web of Science](#)®], [Google Scholar](#)]). Thus, research has documented the tremendous impact that providing care to persons with serious mental illness has on the mental and physical health of family members, especially women ([Milliken, 2001 Milliken P. J. Disenfranchised mothers: Caring for an adult child with schizophrenia. *Health Care for Women International*. 2001; 22: 149–166[[Taylor & Francis Online](#)], [Google Scholar](#)]).

However, researchers also have noted the existence of positive experiences associated with family caregiving and the potential for growth that may occur with adaptation to providing care for a seriously mentally ill person ([Pollio, North, Osborne, Kap, & Foster, [2001](#) Pollio D. E., North C. S., Osborne V., Kap N., Foster D. A. The impact of psychiatric diagnosis and family system relationship on problems identified by families coping with a mentally ill member. *Family Process* 2001; 40(2)199–209 [[Crossref](#)], [[PubMed](#)], [[Web of Science](#)®], [[Google Scholar](#)]); [Stengard, [2002](#) Stengard E. Caregiving types and psychosocial well-being of caregivers of people with mental illness in Finland. *Psychiatric Rehabilitation Journal* 2002; 26(2)154–164 [[Google Scholar](#)]). In fact, about 40% of family caregivers of mentally ill persons with schizophrenia or bipolar affective disorder, 82% of whom were women, have reported low levels of burden and the ability to manage the caregiving situation well. These family caregivers, who were classified as “copers,” also reported better mental and physical health than others who were described as “anxious” or “resigned” ([Stengard, [2002](#) Stengard E. Caregiving types and psychosocial well-being of caregivers of people with mental illness in Finland. *Psychiatric Rehabilitation Journal* 2002; 26(2)154–164 [[Google Scholar](#)]).

Learning to adapt or cope with adverse life experiences involves the acquisition of skills that constitute “resourcefulness.” Resourcefulness is a collection of well-learned cognitive behavioral self-control skills that may be used to regulate the potentially negative effects of thoughts, feelings, or sensations that might otherwise interfere with the performance of daily activities ([Rosenbaum, [1990](#) Rosenbaum M. *Learned resourcefulness: On coping skills, self-control, and adaptive behavior*. Springer, New York 1990 [[Google Scholar](#)]). Resourcefulness has been found to promote healthy, independent, and productive life styles in older adults ([Zauszniewski, Chung, & Krafcik, [2001](#) Zauszniewski J. A., Chung C., Krafcik K. Social cognitive factors predicting the health of elders. *Western Journal of Nursing Research* 2001; 23(5)490–503 [[Google Scholar](#)]). Studies also have shown that persons with greater resourcefulness report more positive affect, fewer depressive cognitions ([Zauszniewski, Bekhet, Lai, McDonald, & Musil, [2007](#) Zauszniewski J. A., Bekhet A. K., Lai C. Y., McDonald P. E., Musil C. M. Effects of teaching resourcefulness and acceptance on affect, behavior, and cognition of chronically ill elders. *Issues in Mental Health Nursing* 2007; 28(6)575–592 [[Taylor & Francis Online](#)], [[Google Scholar](#)]), and better self-rated health and functioning ([Zauszniewski, Eggenchwiler, Preechawong, Roberts, & Morris, [2006](#) Zauszniewski J. A. Resourcefulness. *Encyclopedia of nursing research*, J. J. Fitzpatrick, M. Wallace. Springer, New York 2006; 256–258 [[Google Scholar](#)]). In addition, greater resourcefulness has been found to predict better self-care ([Kreulen & Braden, [2004](#) Kreulen G. J., Braden C. J. Model test of the relationship between self-help promoting nursing interventions and self-care and health status outcomes. *Research in Nursing & Health*. 2004; 27: 97–109 [[Crossref](#)], [[Google Scholar](#)]) and psychological and physical health ([Zauszniewski et al., [2001](#) Zauszniewski J. A., Chung C., Krafcik K. Social cognitive factors predicting the health of elders. *Western Journal of Nursing Research* 2001; 23(5)490–503 [[Google Scholar](#)]) and to influence positive behavior change ([Lévesque, Gauvin, & Desharnais, [2003](#) Lévesque L., Gauvin L., Desharnais R. Maintaining exercise involvement: The role of learned resourcefulness in process of change use. *Psychology of Sport and Exercise*. 2003; 4: 237–253 [[Crossref](#)], [[Google Scholar](#)]).

Although resourcefulness has been studied in caregivers ([Gonzalez, [1997](#) Gonzalez E. W. Resourcefulness, appraisals, and coping efforts of family caregivers. *Issues in Mental Health Nursing* 1997; 18(3)209–227 [[Crossref](#)], [[Google Scholar](#)]); [Musil, Warner, Zauszniewski, Jeanblanc, & Kercher, [2006](#) Musil C. M., Warner C. B., Zauszniewski J. A., Jeanblanc A. B., Kercher K. Grandmothers, caregiving, and family functioning. *The Journals of Gerontology: Social Sciences* 2006; 61(2)89–98 [[Crossref](#)], [[Google Scholar](#)]); [Rapp, Shumaker, Schmidt, Naughton, & Anderson, [1998](#) Rapp S. R., Shumaker S., Schmidt S., Naughton M., Anderson R. Social resourcefulness: its relationship to social support and well-being among caregivers of dementia victims. *Aging and Mental Health* 1998; 2(1)40–48 [[Taylor & Francis Online](#)], [[Web of Science](#)®], [[Google Scholar](#)]); [Rosswurm, Larrabee, & Zhang, [2002](#) Rosswurm M. A., Larrabee J. H., Zhang J. Training family caregivers of dependent elderly adults through on-site and telecommunication programs. *Journal of Gerontological Nursing*. 2002; 28: 27–38 [[PubMed](#)], [[Google Scholar](#)]); [Zauszniewski, Picot, Roberts, Debanne, & Wykle, [2005](#) Zauszniewski J. A., Picot S. J., Roberts B. L., Debanne S. M., Wykle M. L. Predictors of resourcefulness in African-

American women. *Journal of Aging and Health* 2005; 17(5)609–633 [[Google Scholar](#)]), research on resourcefulness in family members of the seriously mentally ill is lacking. And no research has examined relationships among perceived burden, stigma by association, depressive cognitions, personal and social resourcefulness, and physical and mental health-related quality of life in family members of SMI adults.

Relationships among perceived burden (including stigma by association, strain, dependence, and family disruption), depressive cognitions, resourcefulness (personal and social), and health-related quality of life have been suggested by [[Zauszniewski's \(2006\)](#) Zauszniewski J. A., Lai C., Tithiphontumrong S. Development and testing of the Resourcefulness Scale for older adults. *Journal of Nursing Measurement* 2006; 14(1)57–68[[Crossref](#)], [[PubMed](#)], , [[Google Scholar](#) theory of resourcefulness and quality of life. However, these associations have not been examined in women relatives of adults with SMI and it is unknown whether the relationships hold for both Caucasian and African-American women family members.

Recent studies have shown a greater prevalence of mental disorders among African-Americans than Caucasians, possibly owing to racial and socioeconomic disparities ([Nelson, [2006](#) Nelson C. A. Of eggshells and thin-skulls: A consideration of racism-related mental illness impacting black women. *International Journal of Law and Psychiatry* 2006; 29: 112–136 [[Google Scholar](#)]). African-Americans tend to enter treatment for mental problems at later, more advanced stages of illness, are misdiagnosed more often, are diagnosed with a serious mental illness more often, and discontinue treatment for mental conditions sooner than Caucasians ([Anglin, Link, & Phelan, [2006](#) Anglin D. M., Link B. G., Phelan J. C. Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services* 2006; 57(6)857–862[[Crossref](#)], [[PubMed](#)], [[Web of Science](#) [®]], , [[Google Scholar](#)]; [Nelson, [2006](#) Nelson C. A. Of eggshells and thin-skulls: A consideration of racism-related mental illness impacting black women. *International Journal of Law and Psychiatry* 2006; 29: 112–136 [[Google Scholar](#)]). Often, they receive inadequate mental health care because of misdiagnosis or lack of access to important services. These factors may contribute to feelings of burden and stigma by association experienced by African-American family members of persons with serious mental illness ([Anglin et al., [2006](#) Anglin D. M., Link B. G., Phelan J. C. Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services* 2006; 57(6)857–862[[Crossref](#)], [[PubMed](#)], [[Web of Science](#) [®]], , [[Google Scholar](#)]).

This study was designed to examine the relationships among perceived burden (including indicators of stigma by association, strain, dependence, and family disruption), depressive cognitions, resourcefulness (personal and social), and health-related quality of life indicators (physical and mental health) in African-American and Caucasian women family members of adults with SMI.

METHODS

The study was part of a larger, cross-sectional study of family members of adults with SMI, whose results have been reported elsewhere ([Zauszniewski, Bekhet, & Suresky, [2008](#) Zauszniewski J. A., Bekhet A. K., Suresky M. J. Factors associated with perceived burden, resourcefulness, and quality of life in women family members of adults with serious mental illness. *Journal of the American Psychiatric Nurses Association* 2008; 14(2)125–135 [[Google Scholar](#)]).

Sample

The sample comprised 60 women family members of adults with SMI. Participants were women (ages 18–65 years) who were able to read and understand the English language. It was not necessary for the mentally ill person to be living in the same household with the participant. Equal groups of Caucasian and African-American women were recruited so that the sample included 30 women in each group. To recruit family members, notices describing the research were posted in community mental health centers, local churches, places of business (grocery stores, department stores, restaurants, coffee houses, bookstores, libraries, etc.), and community

support groups. Interested family members contacted the researchers to learn more about the study and to schedule an appointment for data collection.

The average age of the women family members was 46 years ($M = 46.28$, $SD = 11.71$); 23% had completed high school or less, 50% had completed some college or had an associate degree, and 27% had a baccalaureate degree or higher. Forty percent were mothers of mentally ill persons, 23% were sisters, and 37% were aunts, wives, daughters, or cousins. The mentally ill person's average age was 38 years ($M = 37.75$, $SD = 13.96$). Diagnoses included schizophrenia (45%), bipolar disorder (45%), major depression (8%), and panic disorder (2%). Forty percent of the female relatives lived in the same household with the SMI adult and 68% said that they provided care for or assisted their family member with basic daily needs.

Although the sample was small, it was adequate for examining descriptive trends reflecting substantial differences between groups ($d = .80$) and substantial correlations among the study variables ($r = .50$) at a significance level of $\alpha = .05$, and power of $B = .80$ ([Cohen, 1992 Cohen J. A power primer. *Psychological Bulletin* 1992; 112(1)155–159[Crossref], [PubMed], [Web of Science ®], [Google Scholar]]).

Instruments

Study participants completed a demographic questionnaire and measures of perceived burden, depressive cognitions, resourcefulness, and quality of life. Demographic information was obtained through open-ended questions about age, race/ethnicity, and number of years of education they completed.

Perceived Burden

Perceived burden was measured by the 27-item Overall Caregiver Burden Scale ([Biegel, Milligan, Putnam, & Song, 1994 Biegel D. E., Milligan S. E., Putnam P. L., Song L. Y. Predictors of burden among lower socioeconomic status caregivers of persons with chronic mental illness. *Community Mental Health Journal* 1994; 30(5)473–494[Crossref], [PubMed], [Web of Science ®], [Google Scholar]]), which contains four subscales: stigma (6 items), family disruption (11 items), client dependence (4 items), and caregiver strain (5 items). Internal consistency estimates have been reported for the total scale ($\alpha = .89$), and four subscales: stigma ($\alpha = .83$), family disruption ($\alpha = .79$), client dependency ($\alpha = .67$), and caregiver strain ($\alpha = .64$). Evidence for construct validity was obtained through confirmatory factor analysis, which revealed four factors reflecting the four dimensions. Each subscale correlated significantly with the total scale and modestly with other subscales; correlations ranged from .37 to .56. ([Biegel et al., 1994 Biegel D. E., Milligan S. E., Putnam P. L., Song L. Y. Predictors of burden among lower socioeconomic status caregivers of persons with chronic mental illness. *Community Mental Health Journal* 1994; 30(5)473–494[Crossref], [PubMed], [Web of Science ®], [Google Scholar]]).

Depressive Cognitions

Depressive cognitions were measured by the Depressive Cognition Scale (DCS; [Zauszniewski, 1995 Zauszniewski J. A. Development and testing of a measure of depressive cognitions in older adults. *Journal of Nursing Measurement* 1995; 3(1)31–41[PubMed], [Google Scholar]]). The DCS is an 8-item instrument on which respondents use a 6-point Likert scale from strongly agree (5) to strongly disagree (0) to indicate the degree to which a particular statement describes their current thoughts. Each item reflects one depressive cognition (e.g., hopelessness, worthlessness, etc.); however, the items are phrased positively so that strong disagreement with an item indicates the presence of a depressive cognition. Scores range from 0 to 40, and when scoring is reversed, higher scores indicate more depressive cognitions. Scores approaching 40 indicate negative cognitions that may precede clinical depression. In a study of community elders, [Zauszniewski (1995)] Zauszniewski J. A. Development and testing of a measure of depressive cognitions in older adults. *Journal of Nursing Measurement* 1995; 3(1)31–41[PubMed], [Google Scholar] reported acceptable internal consistency ($\alpha = .78$) and construct validity with a measure of psychosocial development. In another study of elders, [Zauszniewski (1997)]

Zauszniewski J. A. The Depressive Cognition Scale: Further psychometric evaluation. *Journal of Nursing Measurement* 1997; 5(2)191–200 [[Google Scholar](#)] demonstrated construct validity for the DCS by significant correlations in the expected directions ($p < .001$) with measures of depression, resourcefulness, adaptive functioning, and life satisfaction ($r_s = .54, -.37, -.60, -.57$, respectively). Confirmatory factor analysis indicated the presence of a single factor with all item loadings exceeding .30; 40% of the total variance was explained.

Resourcefulness

Resourcefulness was measured by the 28-item Resourcefulness Scale ([RS; Zauszniewski, Lai, Tithiphontumrong, 2006 Zauszniewski J. A., Lai C., Tithiphontumrong S. Development and testing of the Resourcefulness Scale for older adults. *Journal of Nursing Measurement* 2006; 14(1)57–68[[Crossref](#)], [[PubMed](#)], , [[Google Scholar](#)]]), which contains two subscales capturing personal and social resourcefulness. The items use a 6-point Likert-type scale. Participants indicate the degree to which each item describes their behavior, ranging from extremely descriptive to extremely nondescriptive. Scores range from 0 to 5 with no neutral point. A higher composite score indicates greater total resourcefulness. The 16-items that measure personal resourcefulness were selected from [[Rosenbaum's \(1990\)](#)] Rosenbaum M. *Learned resourcefulness: On coping skills, self-control, and adaptive behavior*. Springer, New York 1990 [[Google Scholar](#)] measure of learned resourcefulness; these items reflect self-help strategies used in specific situations. The 12 items that measure social resourcefulness reflect formal and informal help-seeking behaviors that may be used in similar situations. Sample items measuring personal and social resourcefulness are, “When I am faced with a number of things to do, I usually plan my work” and “When it is hard for me to make a decision, I ask someone to help me think things through.” Internal consistency has been estimated by Cronbach's α of .83, .79, and .85 for the total scale, and personal and social resourcefulness subscales, respectively ([Zauszniewski et al., 2006 Zauszniewski J. A. Resourcefulness. *Encyclopedia of nursing research*, J. J. Fitzpatrick, M. Wallace. Springer, New York 2006; 256–258 [[Google Scholar](#)]]). Evidence for construct validity and the presence of the two dimensions of resourcefulness have been suggested by confirmatory factor analysis: the 16 items from the personal resourcefulness subscale loaded cleanly on one factor, while the 12 items from the social resourcefulness subscale loaded cleanly on a second factor. No items were found to have substantial cross-loadings on both factors that exceeded .30. However, because personal and social resourcefulness are theoretically related constructs, construct validity was further demonstrated by substantial intercorrelation between the two subscales ($r = .41, p < .001$) ([Zauszniewski et al., 2006 Zauszniewski J. A. Resourcefulness. *Encyclopedia of nursing research*, J. J. Fitzpatrick, M. Wallace. Springer, New York 2006; 256–258 [[Google Scholar](#)]]).

Quality of Life

Quality of Life was measured by the Short Form 12 (SF-12; [Ware, Kosinski, & Keller, 1996 Ware J. E., Kosinski M., Keller S. D. A 12-item Short Form Health Survey (SF-12): Construction of scales and preliminary tests of reliability and validity. *Medical Care* 1996; 32(3)220–233 [[Google Scholar](#)]]), a measure containing two subscales: physical function and psychological well-being. The 12 items comprising this instrument are weighted to yield scores on both subscales. The two subscales (physical and mental health) have demonstrated internal consistency reliability, with Cronbach's alphas for both scales exceeding the recommended level of .70 ([Luo, Lynn, Kakouras, Edwards, Pietrobon, Richardson, & Hey, 2003 Luo X., Lynn G. M., Kakouras I., Edwards C. L., Pietrobon R., Richardson W., Hey L. Reliability, validity, and responsiveness of the short form 12-item survey (SF-12) in patients with back pain. *Spine* 2003; 1(28)1739–1745 [[Google Scholar](#)]]); there is published evidence for criterion validity with the SF-36 ([Müller-Nordhorn, Roll, & Willich, 2004 Müller-Nordhorn J., Roll S., Willich S. N. Comparison of the short form (SF)-12 health status instrument with the SF-36 in patients with coronary heart disease. *Heart*. 2004; 90: 523–527 [[Google Scholar](#)]]), as well as reported evidence for sensitivity to change over time and in response to intervention ([Müller-Nordhorn et al., 2004 Müller-Nordhorn J., Roll S., Willich S. N. Comparison of the short form (SF)-12 health status instrument with the SF-36 in patients with coronary heart disease. *Heart*. 2004; 90: 523–527 [[Google Scholar](#)]]); [Salyers, Bosworth, & Swanson, 2000 Salyers M., Bosworth H., Swanson J. Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care* 2000; 38(11)1141–1150[[Crossref](#)], [[PubMed](#)], [[Web of Science](#)®], , [[Google Scholar](#)]]).

RESULTS

To examine similarities and differences between African-American and Caucasian women family members of adults with SMI, we looked for descriptive trends on the mean scores on measures of perceived burden, including stigma by association, strain, dependence, and family disruption; depressive cognitions; personal and social resourcefulness; and quality of life indicators, including measures of physical and mental health.

Table 1 shows the mean scores for the study variables along with the *t*-scores and *p*-values indicating level of significance. Caucasian women family members reported greater perceived burden than African-American women ($t = 2.71, p < .01$) on all four components of the measure of perceived burden; significant differences were found for strain ($t = 2.91, p < .01$) and family disruption ($t = 3.02, p < .01$), with stigma approaching significance ($t = 1.89, p < .07$). Caucasian and African-American women family members reported similarly low levels of depressive cognitions. African-American women family members had slightly higher scores than Caucasians on overall resourcefulness and personal resourcefulness, but somewhat lower scores on social resourcefulness. Caucasian women family members reported slightly better health-related quality of life, particularly in terms of their physical health.

TABLE 1 Comparison of African-American and Caucasian Women Caregivers of SMI Adults on Perceived Burden, Depressive Cognitions, Resourcefulness, and Quality of Life

Variable	Caucasian Mean	African-American Mean	<i>t</i> -score (1, 58)	<i>p</i> -value
Perceived burden	52.00	38.73	2.71	.009
Stigma	9.33	6.47	1.89	.064
Strain	11.73	8.40	2.91	.005
Dependency	8.67	8.37	0.39	.696
Disruption	22.27	15.50	3.02	.004
Depressive cognitions	8.40	8.33	0.04	.970
Resourcefulness	89.43	90.23	-0.20	.840
Personal	54.53	58.37	-1.52	.133
Social	34.90	31.87	1.38	.175
Quality of life	81.25	80.34	0.19	.847
Mental health	37.88	40.94	-1.05	.297
Physical health	43.37	39.40	1.27	.20

We then conducted a Pearson's correlation analysis that examined associations among the components of perceived burden that were found to be significantly different between the Caucasian and African-American women family members and the other study variables, including depressive cognitions, personal and social resourcefulness, and physical and mental health indicators of quality of life. We examined correlations for the total sample and then separately for African-Americans and Caucasians. These correlations are shown in Table 2.

TABLE 2 Correlations between Measures of Perceived Burden and Depressive Cognitions, Personal and Social Resourcefulness, and Physical and Mental Health in African-American and Caucasian Women Caregivers of SMI Adults

Perceived Burden	Stigma	Strain	Disruption

Correlate	Total Sample	African-American	White Caucasian	Total Sample	African-American	White Caucasian	Total Sample	African-American	White Caucasian	Total Sample	African-American	White Caucasian
Depressive cognitions	.40**	.38	.50**	.31	.25	.40	.41* —	.46	.43	.38**	.35	.50**
Personal resourcefulness	-.38* —	-.41	-.24	-.20	-.15	-.19	-.43**	-.46	-.31	-.42* —	-.49* —	-.26
Social resourcefulness	-.12	-.20	-.20	-.13	-.11	-.26	-.17	-.31	-.18	-.08	-.20	-.11
Mental health	-.52* —	-.51* —	-.50* —	-.36**	-.29	-.42* —	-.51**	-.51* —	-.48* —	-.52* —	-.52* —	-.49* —
Physical health	-.14	-.20	-.23	-.08	-.21	-.03	-.12	-.18	-.22	-.16	-.19	-.31

* $p < .01$,

** $p < .001$.

The results for the total sample showed that greater perceived burden was correlated significantly and in the expected directions with depressive cognitions ($r = .40, p < .001$), personal resourcefulness ($r = -.38, p < .001$), and mental health ($r = -.52, p < .001$). These findings were similar for the African-American women. However, for the Caucasian women, a significant correlation between perceived burden and personal resourcefulness was not found.

Next, correlations between stigma by association and the other variables were examined for the total sample and the two groups of women family members. For the total sample, stigma by association was significantly correlated with depressive cognitions ($r = .31, p < .01$) and mental health ($r = -.36, p < .001$) in the expected direction. These findings were similar for Caucasian women. However, in the African-American women, stigma was not significantly correlated with depressive cognitions or mental health. Table 2 shows the correlations for the total sample and the African-American and Caucasian women family members.

Correlations between strain and the other variables were examined for the total sample and the groups of women family members. For the total sample, strain was significantly correlated, in the expected direction, with depressive cognitions ($r = .41, p < .001$), personal resourcefulness ($r = -.43, p < .001$), and mental health ($r = -.51, p < .001$). These findings were similar for the African-American women. However, in the Caucasian women, strain was significantly correlated with depressive cognitions and mental health, but not with personal resourcefulness. Table 2 shows the correlations for the total sample and the two groups of women.

Finally, correlations between family disruption and the other variables were examined for the total sample and the groups of women family members. For the total sample, family disruption was significantly correlated, in the expected direction, with depressive cognitions ($r = .38, p < .001$), personal resourcefulness ($r = -.42, p < .001$), and mental health ($r = -.52, p < .001$). Family disruption was significantly correlated with mental health for both groups. However, it was significantly associated with depressive cognitions only in the Caucasian women family members ($r = -.50, p < .001$) and significantly associated with personal resourcefulness only in the African-American women ($r = -.49, p < .001$). Table 2 shows these correlations for the total sample and the African-American and Caucasian women family members.

A final analysis involved examination of the correlations among depressive cognitions, personal and social resourcefulness, and the physical and mental health components of quality of life (Table 3). In the total sample, significant correlations in the expected direction were found between depressive cognitions and both mental health ($r = -.69, p < .001$) and physical health ($r = -.39, p < .001$). Correlations between depressive cognitions and mental health also were significant for both African-American women ($r = -.75, p < .001$) and Caucasian women ($r = -.57, p < .001$), but depressive cognitions were correlated significantly with physical health only in the Caucasian women ($r = -.63, p < .001$). Although social resourcefulness was not associated with mental or physical health in either the African-American or Caucasian women, personal resourcefulness was significantly correlated with mental health in the total sample ($r = .53, p < .001$) and in African-American women ($r = .64, p < .001$), and significantly associated with physical health in Caucasian women ($r = .38, p < .001$).

TABLE 3 Correlations among depressive cognitions, resourcefulness, and physical and mental health in African-American and Caucasian women

Correlate	Mental Health			Physical Health		
	Total sample	African-American	White Caucasian	Total sample	African-American	White Caucasian
Depressive cognitions	-.69**	-.75**	-.57**	-.39**	-.24	-.63**
Personal resourcefulness	.53**	.64**	-.05	.02	.14	.38
Social resourcefulness	.20	.33	-.04	0.2	.01	.10

* $p < .01$,

** $p < .001$.

DISCUSSION

Multiple factors affect the quality of life of women family members of adults with serious mental illness. These factors may be associated with the racial/ethnic group to which women belong as well as their perception of burden, tendency toward depressive thinking, and resourcefulness skills. In this study, African-American women differed from Caucasian women in their perceptions of the burden of being a family member of a SMI adult. The Caucasian women reported significantly greater burden due to family disruption. They also perceived more stigma by association than African-Americans, but this finding only approached significance.

The finding that Caucasian women family members reported greater burden than African-Americans is consistent with other studies of family caregivers of the mentally ill, including the study by [Perlick, Rosenheck, Kaczynski, Swartz, Cañive, and Lieberman \(2006\)](#) Perlick D. A., Rosenheck R. A., Kaczynski R., Swartz M. S., Cañive J. M., Lieberman J. A. Components and correlates of family burden in schizophrenia. *Psychiatric Services* 2006; 57(8)1117–1125 [[Crossref](#)], [[PubMed](#)], [[Web of Science](#)®], [[Google Scholar](#)], which reported that African-Americans caring for persons with schizophrenia reported less family disruption than Caucasians, and the study by [Horwitz and Reinhard \(1995\)](#) Horwitz A. V., Reinhard S. C. Ethnic differences in caregiving duties and burden among parents and siblings of persons with severe mental illnesses. *Journal of Health and Social Behavior* 1995; 36(2)138–150 [[Google Scholar](#)], which found that African-Americans reported less stigma than Caucasians. Interestingly, these findings from studies of family caregivers of SMI persons are consistent with findings from studies of caregivers of elders with dementia—which also is considered a mental illness. In a meta-analysis of ten studies of dementia caregiving, [Connell and Gibson \(1997\)](#) Connell C. M., Gibson G. D. Racial, ethnic, and cultural differences in dementia caregiving: Review and analysis. *The Gerontologist* 1997; 37(3)355–364 [[Crossref](#)], [[PubMed](#)], [[Web of Science](#)®], [[Google Scholar](#)] found that African-American caregivers consistently reported lower stress. More recently, studies by [Haley et al. \(2004\)](#) Haley W. E., Gitlin L. N.,

Wisniewski S. R., Mahoney D. F., Coon D. W., Winter L., Corcoran M., Schinfeld S., Ory M. Well-being, appraisal, and coping in African-American and Caucasian dementia caregivers: Findings from the REACH study. *Aging & Mental Health* 2004; 8(4)316–329 [Taylor & Francis Online], [Web of Science®], [Google Scholar] and by [Toth-Cohen (2004)] Toth-Cohen S. Factors influencing appraisal of upset in black caregivers of persons with Alzheimer disease and related dementias. *Alzheimer Disease and Associated Disorders* 2004; 18(4)247–255 [PubMed], [Web of Science®], [Google Scholar] both reported that in comparison with Caucasian dementia caregivers, African-Americans appraised their stress as benign. However, in a secondary analysis of data from 1,296 caregivers who participated in a national survey, [Kang (2006)] Kang S. Y. Predictors of emotional strain among spouse and adult child caregivers. *Journal of Gerontological Social Work* 2006; 47(1–2)107–131 [Taylor & Francis Online], [Google Scholar] reported less emotional strain among Caucasian caregivers. While the sample for [Kang's (2006)] Kang S. Y. Predictors of emotional strain among spouse and adult child caregivers. *Journal of Gerontological Social Work* 2006; 47(1–2)107–131 [Taylor & Francis Online], [Google Scholar] study was large, it was drawn from Medicare beneficiary enrollment files and therefore included elders with both physical and mental disabilities. The sample was restricted to the elderly and it is unknown how many may have had a serious mental illness.

The study reported here was focused on women family members of SMI adults who were not elderly. The perceived burden experienced by women family members of SMI persons, whether African-American or Caucasian, may differ fundamentally from the burden experienced by women caregivers of family members suffering from other physical or mental disabilities. Thus, studies comparing family caregivers of persons with diverse medical and psychiatric conditions, and studies examining differences across various age groups (i.e., children versus elders) are needed.

This study found no differences in depressive cognitions, resourcefulness, or quality of life between the African-American and Caucasian women family members of SMI adults. Dementia caregiver studies have shown that African-American caregivers are more resourceful than Caucasians ([Gonzalez, 1997] Gonzalez E. W. Resourcefulness, appraisals, and coping efforts of family caregivers. *Issues in Mental Health Nursing* 1997; 18(3)209–227 [Crossref], [Google Scholar]) and yet African-American caregivers report more depressive symptoms and depressive cognitions than their Caucasian caregiver counterparts ([Drentea & Goldner, 2006] Drentea P., Goldner M. A. Caregiving outside of the home: The effects of race on depression. *Ethnicity & Health* 2006; 11(1)41–57 [Taylor & Francis Online], [Web of Science®], [Google Scholar]). This study is the first to examine differences in depressive cognitions, resourcefulness, and quality of life in women family members of persons with mental illness. The findings should be interpreted cautiously because of the small sample. However, given the known effects of caregiver burden on the mental and physical health of caregivers of the mentally ill ([Perlick et al., 2007] Perlick D. A., Rosenheck R. A., Miklowitz D. J., Chessick C., Wolff N., Kaczynski R., Ostracher M., Patel J., Desai R. Prevalence and correlates of burden among caregivers of patients with bipolar disorder enrolled in the systematic treatment enhancement program for bipolar disorder. *Bipolar Disorder* 2007; 9(3)262–273 [Google Scholar]), further examination of variables that may be amenable to intervention, including depressive cognitions and resourcefulness, is recommended.

This study found that greater stigma was associated with poorer mental health. This is consistent with other research on stigma, which has shown stigma to have adverse effects on physical health and self-esteem ([Wahl & Harman, 1989] Wahl O. F., Harman C. R. Family views of stigma. *Schizophrenia Bulletin* 1989; 15(1)131–139 [Crossref], [PubMed], [Web of Science®], [Google Scholar]). The present study also found that fewer depressive cognitions were correlated with better physical and mental health and greater personal resourcefulness was associated with better mental health. Similarly, [Zauszniewski (1996)] Zauszniewski J. A. Self-help and help-seeking behavior patterns in healthy elders. *Journal of Holistic Nursing* 1996; 14(3)223–236 [Google Scholar] found a significant relationship between depressive cognitions and lower personal and social resourcefulness in healthy, community dwelling elders, while greater personal resourcefulness was associated with the absence of depressive cognitions and with more adaptive functioning. Research has shown

that resourcefulness leads to adaptive functioning in depressed adults ([Zauszniewski, [1995](#) Zauszniewski J. A. Development and testing of a measure of depressive cognitions in older adults. *Journal of Nursing Measurement* 1995; 3(1)31–41 [[PubMed](#)] , [[Google Scholar](#)] , [[1996](#) Zauszniewski J. A. Self-help and help-seeking behavior patterns in healthy elders. *Journal of Holistic Nursing* 1996; 14(3)223–236 [[Google Scholar](#)] , life satisfaction in persons with chronic pain and healthy elders ([Lefort, Gray-Donald, Rowart, & Jeans, [1998](#) Lefort S. M., Gray-Donald K., Rowart K. M., Jeans M. E. Randomized controlled trial of a community-based psycho-education program for the self-management of chronic pain. *Pain* 1998; 74(2–3)297–306 [[Crossref](#)] , [[Google Scholar](#)] , and better perceived health in caregivers and in diabetic women ([Rapp et al., [1998](#) Rapp S. R., Shumaker S., Schmidt S., Naughton M., Anderson R. Social resourcefulness: its relationship to social support and well-being among caregivers of dementia victims. *Aging and Mental Health* 1998; 2(1)40–48 [[Taylor & Francis Online](#)] , [[Web of Science](#)®] , [[Google Scholar](#)] ; [Zauszniewski et al., [2001](#) Zauszniewski J. A., Chung C., Krafcik K. Social cognitive factors predicting the health of elders. *Western Journal of Nursing Research* 2001; 23(5)490–503 [[Google Scholar](#)])).

In this study, physical health did not emerge as relevant for African-American women; it was not associated with perceived burden, depressive cognitions, or personal or social resourcefulness, although mental health was associated with all three. Because both depressive cognitions and personal resourcefulness were associated with mental health, the effects of these variables on the relationship between perceived burden and mental health warrant further examination. It may be that the effects of perceived burden on mental health, particularly the effects of emotional strain and family disruption, may be mediated by depressive cognitions or personal resourcefulness. Thus, African-American women family members of SMI adults may benefit from interventions that promote positive thinking and teaching the problem-solving, self-controlling, self-help skills that constitute personal resourcefulness.

For Caucasian women family members in this study, perceived burden was associated with mental health, while personal resourcefulness was associated with physical health, and depressive cognitions were related to both physical and mental health. The role played by depressive cognitions appeared to be pivotal in mediating the effects of perceived burden on mental health. Therefore, Caucasian women family members of the seriously mentally ill may benefit from interventions that promote positive thinking in order to enhance or maintain their mental health.

The findings from this study provide direction for tailoring interventions for women family members of SMI persons. While both African-American and Caucasian women may benefit from cognitive-behavioral interventions, the effects on diverse aspects of quality of life may differ. The success of intervention programs that promote positive thinking and skills similar to those constituting resourcefulness has been demonstrated with family members of persons with SMI ([Sherman, [2006](#) Sherman M. Updates and five-year evaluation of the S. A. F. E. program: A family psychoeducational program for serious mental illness. *Community Mental Health Journal* 2006; 42(2)213–219 [[Google Scholar](#)]). However, there is a need for further research on the impact of caring for SMI persons on the quality of life of family members ([Saunders, [2003](#) Saunders J. C. Families living with severe mental illness: A literature review. *Issues in Mental Health Nursing* 2003; 24(2)175–198 [[Taylor & Francis Online](#)] , [[Google Scholar](#)]). Additional dimensions of health-related quality of life (i.e., social and spiritual) should be examined in relation to physical and mental health ([Hines-Martin, [1998](#) Hines-Martin V. P. Environmental context of caregiving for severely mentally ill adults: An African-American experience. *Issues in Mental Health Nursing* 1998; 19(5)433–451 [[Taylor & Francis Online](#)] , [[Google Scholar](#)]). Finally, future research should take into account socioeconomic and cultural factors that may contribute to differences in burden and stigma experienced by African-American women family members of the mentally ill ([Anglin et al., [2006](#) Anglin D. M., Link B. G., Phelan J. C. Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services* 2006; 57(6)857–862 [[Crossref](#)] , [[PubMed](#)] , [[Web of Science](#)®] , [[Google Scholar](#)])).

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Funding for the study was provided by a Research Initiation Grant (Frances Payne Bolton School of Nursing) awarded to Dr. Jaclene A. Zauszniewski for her study of "Resourcefulness and Quality of Life in Family Members of Adults with Serious Mental Illness."

The authors acknowledge the editorial assistance of Elizabeth M. Tornquist of the University of North Carolina at Chapel Hill.

The co-investigators wish to thank Dr. Chien-yu Lai, project manager for the study, for her contributions to earlier presentations related to this manuscript.

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