Family Contact and Health Status among Older Adults with Serious Mental Illnesses

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Abstract

Objectives—The purpose of this study was to explore the amount of family contact among older persons with serious mental illnesses (SMI), and to examine its relationship to health and mental health.

Methods—An analysis of baseline data was conducted from a treatment study including 180 adults age 50 and older. The amount of family contact was examined with descriptive statistics. Differences in health and mental health were examined between participants with low, moderate, or high levels of family contact. Analyses also compared these groups on health and mental health functioning, controlling for psychiatric symptoms and the number and severity of medical diseases, respectively.

Results—Over three-quarters of respondents (77.8%) reported speaking on the phone with a relative and two-thirds (67.2%) reported seeing a relative at least once during the past month. Older adults who lived with a family member had more severe mood symptoms and poorer mental health functioning. Those who lived with family or had moderate levels of family contact had more comorbid diseases and more disease severity than those with less family contact. These relationships remained significant after controlling for medical conditions or psychiatric symptoms.

Conclusions and Implications for Practice—The majority of older persons have regular family contact and those with the highest levels of family contact appear to have more

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compromised physical and mental health. Study findings provide new knowledge for practitioners regarding the importance of using family interventions to target physical health and mental illness management for older consumers who may need assistance to access medical care and treatment. Further research on the role of families in psychiatric and physical health management will provide a foundation for family interventions aimed at supporting community living among older adults.

Keywords

family issues; serious mental illness; health; mental health

Persons with severe mental illnesses such as schizophrenia and major mood disorders have a high rate of medical comorbidity, contributing to an average 25–30 years shorter life expectancy than the general population (Colton & Manderscheid, 2006). Serious mental illnesses are associated with higher rates of a variety of physical conditions, such as diabetes, hypertension, cardiovascular disease, gastrointestinal disorders, asthma, and acute respiratory ailments compared to persons without mental illness (Bresee, Majumdar, Patten, & Johnson, 2010; Curkendall, Mo, Glasser, Rose Stang, & Jones, 2004; Dickey, Normand, Weiss, Drake, & Azeni, 2002). Medical comorbidity in older adults with SMI is often compounded by poor medical care, an unhealthy lifestyle (e.g., poor diet, lack of exercise), and non-adherence to treatment (Jeste, Gladsjo, Lindamer, & Lacro, 1996; Lambert, Velakoulis, & Pantelis, 2003). Interventions and services are needed that effectively support healthy lifestyle behaviors and integrated management of physical and psychiatric disorders for persons living with serious mental illnesses.

Integrated models of psychosocial rehabilitation and health care management show substantial promise for addressing the complex health needs of older adults living in the community (Bartels & Pratt, 2009). These interventions have focused primarily on combining professional care and self-management training for both physical and psychiatric disorders. For example, a combined skills training and health management intervention for older adults, the Helping Older People Experience Success (HOPES) program, employs nurse case managers to deliver medical case management in the community (Mueser, Pratt, Bartels et al., in press; Pratt, Bartels, Mueser, & Forester, 2008). A variety of effective interventions for medical conditions such as diabetes, heart disease, and renal disease have incorporated family support as an important resource for health self-management for persons without mental illness (Weihs, Fisher, & Baird, 2002; Martire, Lustig, Schulz, Miller, & Helgeson, 2004). In contrast, the potential role of families in improving health practices and outcomes among this group of older persons has received little attention. Obtaining information about family contact and its relationship to health outcomes in older persons is an important first step to exploring the feasibility and potential promise of developing family interventions to improve the management of chronic medical illnesses for these individuals.

Social support from family members and other significant persons can improve medical illness management through practical assistance (Shumaker & Hill, 1991) or by directly influencing health behaviors (Umberson, 1992). For example, family members may perform essential functions to help older adults follow self-care regimens such as providing

reminders to take medications (Sayers, White, Zubritsky, & Oslin, 2006). Moreover, older adults are more likely to discuss health issues and symptoms with family members than with anyone else (Brody, Kleban, & Moles, 1983; Stoller, Kart, & Portugal, 1997). Given the mounting evidence that social support is a key factor in effective self-management of chronic illness in the general medical population (Gallant, Spitze, & Prohaska, 2007; Warren-Findlow & Prohaska, 2008; White, Philogene, Fine, & Sinha, 2009), and the fact that family psychoeducation is an evidence-based practice for improving the course of serious mental illnesses (Dixon et al., 2010), families and other significant persons are a potentially powerful, but untapped source of support for integrated health management among older persons.

Ultimately, family support may enable older persons to remain in the community rather than being institutionalized as a result of psychiatric symptoms and/or medical comorbidity. Persons with SMI are at significant risk of nursing home placement (Grabowski, Aschbrenner, Feng, & Mor, 2009). Recent data indicate that Medicaid beneficiaries with schizophrenia between the ages of 40 and 64 years of age are four times more likely to be admitted to a nursing home compared to Medicaid beneficiaries in the same age group without a mental illness (Andrews, Bartels, Xie, & Peacock, 2009). Medical comorbidity is often associated with nursing home placement among persons with SMI (Fullerton, McGuire, Feng, Mor, & Grabowski, 2009; Miller & Rosenheck, 2006). In addition, a lack of safe, affordable residential options and community supports remains a major impediment to community residence (O'Hara, 2007). Families have long provided a critical safety net for adults by finding services for their ill relatives, providing social, financial and emotional support, and serving as a last resort when the system fails (Lefley, 1996). Providing families with information about mental illness and comorbid medical problems in later life and teaching them about illness management techniques may enable them to be more helpful in supporting community living in their older relatives.

In the present study, we evaluated the amount of family contact in a community-based sample of older persons and compared their health and mental health functioning across varying levels of family contact. Because little previous research has examined the relationship between family contact and health and mental health in older persons, this study was exploratory and no formal hypotheses were tested.

Methods

Analyses for this study were conducted using baseline data from a randomized controlled trial evaluating the effectiveness of the Helping Older People Experience Success (HOPES) program compared to usual services. The HOPES program consists of a 12-month curriculum of group-based social skills training combined with nurse health care management (Pratt, Bartels, Mueser, & Forester, 2008). Study participants were adults with serious mental illnesses (defined as diagnosis of schizophrenia, schizoaffective disorder, major depression, or bipolar disorder and at least moderate impairment in multiple areas of psychosocial functioning), who were age 50 or older and were residing in the community. This analysis focused on the baseline assessments conducted prior to randomization. The institutional review boards of the State of New Hampshire, Dartmouth College, and the State

of Massachusetts approved all the procedures for the protection of human subjects. A total of 183 older adults (mean age = 60) at three public-sector mental health centers including one located in New Hampshire and two public mental health centers in Boston, Massachusetts were enrolled in the HOPES study. We excluded 3 participants from the present analysis because of missing data on key study variables, with the resulting sample size of 180 older adults.

Measures

Information about the amount of family contact was obtained from items on the Lehman Quality of Life Interview (Lehman, 1996). Respondents reported how often they talked to a family member on the telephone and how often they visited with a family member over the past month. In addition, we assessed whether respondents had any children, and if so, how often they had seen their children over the past month. Closeness with family members was rated based on how many relatives, other than their children, respondents felt close to and could talk with about private matters and could call on for help. Responses to this question were dichotomized into 0 or 1 or more relatives. For the level of family contact variable, we created three categories of in-person contact with family members over the past month: 0–1 family contacts, 2–30 family contacts, and living spouse or other family members. We refer to the three groups based on this categorization as low, moderate, and high amounts of family contact.

The primary dependent measures were assessments of physical and mental health status. First, we assessed subjective mental and physical health functioning using the scores on two components of the Medical Outcomes Survey Short Form 36 (*SF*-36): the mental component summary and the physical component summary scores. The *SF*-36 is a general health status self-report measure that yields scale scores for each of eight health domains (physical functioning, role functioning due to physical problems (physical role), bodily pain, general health, vitality, social functioning, role functioning due to emotional problems (emotional role), and mental health), and two summary measures of physical and mental health, with higher scores indicating better health functioning (Ware & Sherbourne, 1992). The *SF*-36 has demonstrated reliability and validity in a variety of disease groups (McHorney, Ware, Lu, & Sherbourne, 1994), including persons with SMI as well as in the general population (McHorney & Tarlov, 1995), To determine differences in perceived overall health, an important indicator of disease morbidity (Miilunpalo, Oja, Pasanen, & Urponen, 1997), we assessed global health status with one item from the *SF*-36 general health functioning subscale in which respondents rated their overall health on a 5-point scale, ranging from 1 = *excellent* to 5 = *very poor.*

We assessed medical comorbidity using a modified version of the Charlson Comorbidity Index (Charlson, Pompei, Ales, & MacKenzie, 1987) (developed by Bogner et al. 2005). The Charlson Comorbidity Index has been validated as a predictor of mortality and morbidity associated with medical conditions (Needham, Scales, Laupacis, & Pronovost, 2005). Participants were asked questions about common disabling conditions of late-life, including myocardial infarction, heart failure, high blood pressure, diabetes, and joint

disease. The comorbidity index is a weighted score that reflects the number and severity of 16 medical conditions.

Self-reported depression was assessed with the Center for Epidemiological Studies Depression (CES-D) Scale (Radloff, 1977). This self-report instrument consists of 20 items designed to measure depressive symptomatology, including depressed mood, psychomotor retardation, lack of well-being, and interpersonal difficulties. Each item is scored from 0 to 3, depending on the frequency or duration with which a specific symptom has occurred during the preceding week with possible total scores ranging from 0 to 60, with higher scores indicating greater severity of depression.

Finally, the expanded version of Brief Psychiatric Rating Scale (BPRS-E) was used as an objective measure of psychiatric symptoms such as depression, anxiety, hallucinations and delusions (Lukoff, Nuechterlein, & Ventura, 1986). The BPRS-E is an interviewer-administered measure that evaluates the severity of psychiatric symptoms over the previous two weeks on a Likert scale ranging from 1, not present, to 7, extremely severe. A total severity score is obtained by adding the scores from each item, and subscales are derived by adding scores on specific items together. In the present study, we focused on the four symptom subscales assessing depression-anxiety, psychosis, negative symptoms, and activation based on the factor solution of Velligan et al. (2005). All of the above health and mental health variables were evaluated as continuous variables.

Analysis

The analyses addressed two questions: 1) What is the extent of family contact among older adults? 2) Are there differences in health and mental health functioning between older adults with low, moderate, or high levels of family contact? The amount of family contact was examined with descriptive statistics. Bivariate correlations were computed with the Pearson r-product moment correlation coefficient to examine the inter-correlations between the dependent variables (i.e., mental health variables and physical health variables). We used analyses of variance (ANOVAs) to examine differences in health and mental health functioning between participants with low, moderate, and high levels of contact with family members. Post-hoc analyses using Tukey's Honestly Significant Difference test for multiple comparisons were used to examine differences in measures of health and mental health functioning that were significant in the ANOVA. Then, differences between the three groups on measures of health and mental health status were evaluated using analyses of covariance (ANCOVA), controlling for psychiatric symptoms and the number and severity of medical diseases, respectively. Post hoc multiple comparison tests were conducted if the main group effect was significant to determine which means differed. The level of significance for the statistical tests was set at $p < .05$. Analyses were calculated using the SPSS software, version 17 (SPSS, Chicago, IL).

Results

Baseline demographic characteristics of the study sample are presented in Table 1. The study sample was largely Caucasian (86.1%) with 6.7% of respondents identifying themselves as Hispanic. Approximately one-third of the sample had never been married (35.6%). Half

lived independently (51.7%), and 11.7% lived with family members. A slight majority of respondents had a primary mental health diagnosis of schizophrenia or schizoaffective disorder (56.1%), and the mean duration of illness was 27.9 years.

As shown in Table 2, the majority of respondents (77.8%) reported speaking with a relative on the telephone during the past month, and 67.2% reported getting together with a relative during the past month. The average number of face-to-face contacts with a relative was 12.9 (SD = 12.6) during the past month. Of those who lived apart from family members, two-thirds (62.9%) had face-to-face contact with a family member during the past month with an average of 6 (SD = 9.9) visits during this time period. Over half of respondents had children (59.2%), and of those 57.5% reported seeing them during the past month. Sixty-eight percent of respondents reported that they had at least one relative other than their children to whom they felt close and could talk with about private matters and could call on for help.

Table 3 provides the correlations between the measures of mental health status and physical health status. Most of the correlations among the mental health variables were strong. Likewise, the correlations among the physical health variables were all statistically significant. With respect to correlations among mental health and health variables, CES-D depressive symptoms, depression/anxiety symptoms on the BPRS-E, and mental health functioning were strongly associated with physical health functioning and perceived overall health. Interestingly, there were no significant correlations between any of the mental health variables and comorbid medical diseases.

The results of the one-way ANOVAs testing differences in health and mental health status among the three family contact groups are summarized in Table 4. With respect to mental health status, the three groups differed significantly in self-reported depressive symptoms, clinician rated depression-anxiety and activation on the BPRS-E, and overall mental health functioning. Post hoc comparisons revealed that respondents who were living with family members had significantly higher levels of self-reported depressive symptoms and depression-anxiety symptoms on the BPRS-E, and poorer overall mental health functioning than those with 0–1 family contacts during the past month and those with 2–30 family contacts during the past month. Post hoc comparisons also indicated that respondents who were living with family had significantly higher activation symptoms on the BPRS-E than those with 0–1 family contacts during the past month. There were no significant differences among the three family contact groups on the BPRS-E psychosis and negative symptom subscales.

In terms of physical health status, the three family contact groups differed significantly in perceived overall health. Post hoc comparisons indicated that respondents who were living with family had significantly poorer perceived overall health ratings than those with 0–1 family contacts during the past month and those with 2–30 family contacts during the past month. The three groups also differed significantly on the Charlson comorbidity index. Post hoc comparisons indicated that respondents who were living with family and those who had 2–30 family contacts during the past month had significantly higher scores on the Charlson than those with 0–1 family contacts during the past month. There were no significant differences between the three family contact groups on physical health functioning scores.

Also summarized in Table 4 are the results of ANCOVAs used to evaluate differences in health and mental health functioning among the three family contact groups, controlling for psychiatric symptoms and the number and severity of comorbid diseases, respectively. Differences among the three family contact groups on the BPRS-E depression-anxiety subscale and mental health functioning remained significant after controlling for the number and severity of comorbid diseases. However, group differences in self-reported depressive symptoms and BPRS-E activation symptoms were no longer significant after controlling for comorbid diseases. In terms of health status, differences between contact groups in comorbid diseases remained significant after controlling for psychiatric symptoms, while group differences in perceived overall health status were no longer significant after controlling for psychiatric symptoms.

Discussion

There is a paucity of research on family contact and its relationship to health outcomes in older persons with serious mental illnesses and to our knowledge no interventions incorporate families as a key resource in psychiatric or physical disease management for older persons. This cross-sectional exploratory study provides data on family contact and its relationship to health and mental health among older persons that adds to the knowledge base from which to inform future treatment strategies. Specifically, two important findings have implications for developing family interventions for this vulnerable population. First, the majority of respondents (67.2%) had at least monthly contact with a family member. Of those who lived apart from family, two-thirds (62.9%) had face-to-face contact with a family member during the past month. These findings are consistent with other studies showing that most older adults with serious mental illnesses have regular contact with family members (Guada, Brekke, Floyd, & Barbour, 2009; Meeks & Hammond, 2001), a prerequisite for using family interventions to target physical and mental illness management.

Second, older adults who had the highest levels of family contact tended to have the most compromised physical and mental health functioning. This pattern of findings was observed even when psychiatric symptoms and physical disease severity were statistically controlled in the analyses. These findings suggest that family members may play a role in assisting older relatives with mental illnesses and comorbid medical conditions to get a variety of needs met that enable them to live in the community and avoid institutionalization in hospitals or nursing homes. For example, families may help older persons follow therapeutic routines and attend scheduled health care visits. In order to be optimally effective in the management of psychiatric and physical diseases, however, family members need information about mental and physical illnesses and their management. Families are usually minimally involved in the treatment of either psychiatric or physical problems in an older relative (Bedard, Gibbons, & Dubois, 2007). If provided the necessary information and an opportunity to collaborate with professionals families could potentially make an impact on further reducing disability and preventing institutionalization among older persons.

Family psycho-education programs are designed to teach family members about mental illnesses and its treatment, and to provide ongoing support in the care of a relative (Mueser & Glynn, 1999). These programs have mainly targeted families of younger and middle-aged

adults. Family psycho-education programs tailored to meet the unique needs of family members caring for an older relative may facilitate collaboration between families and providers in the care and treatment of older persons. It may also be critical for such programs to provide information to families about common comorbid physical conditions and their treatment.

Family members of older persons may be particularly well suited to provide specific supports for the management of medical conditions in addition to psychiatric symptoms as they often have frequent contact with an older relative and may have a detailed understanding about the factors that influence daily self-care. For example, family members can influence medication adherence and diet and exercise behaviors in an older relative. As families often create the practical, social, and emotional context for self-care, they have the potential to significantly influence health behaviors and ultimately, health outcomes for older persons.

Over the past decade, there have been increasing efforts to involve family members in the care of chronically ill persons across a number of medical conditions, including diabetes, heart disease, and asthma (Weihs, Fisher, & Baird, 2002). In a review of emerging models for mobilizing family support for chronic disease management for individuals without mental illness, Roseland and Piette (2010) identified three separate foci of recent models: (1) involving family in specific support roles and setting concrete goals for enacting new supportive behaviors; (2) training family members in supportive communication and coping techniques; and (3) involving family directly in clinical care processes. Future research is needed to identify the specific ways in which family-based programs can address the complex needs of older persons coping with both mental illness and comorbid medical conditions.

Limitations and Strengths

Interpretation of the findings of this analysis should be tempered by several study limitations. First, the fact that the study sample was comprised of clients who were participating in a controlled study of psychosocial treatment limits the generalizability of the findings to the broader population of older persons living with mental illness. The racial composition of the sample (86.1% white) reflects the composition of the population of New Hampshire and Massachusetts where the larger study was conducted and thus the findings do not generalize to more ethnically diverse populations. In addition, there was a lack of information about the nature and quality of the respondents' relationships with family members. It is possible that higher levels of family contact did not equate to more support for older persons.

Finally, the associations reported here are cross-sectional so that the directionality of the observed effects cannot be determined. We suggest that the association between higher family contact and greater psychiatric and medical severity is due to the protective effects of families in preventing institutionalization for older adults who have the greatest mental and physical health care needs. An alternative, but less plausible possibility, is that greater family contact leads to more severe psychiatric and medical problems. Longitudinal research would help to clarify the nature and directionality of these relationships.

The community-based nature of the study is a major strength. The sample of adults with serious mental illness age 50 and older provided a rare opportunity to examine family contact and its relationship to health and mental health status in later stages of life. Future research should include in-depth assessments of family contact (e.g., type and frequency) and an exploration of the role of family members in helping a relative get his or her needs met, influencing personal lifestyle behaviors, and managing physical and psychiatric disorders in later life.

Conclusions

To date, little attention has been given to the role of families in influencing health and mental health outcomes for older persons living with serious mental illnesses. There is often a presumption that older adults have little to no family contact (Beeler, Rosenthal, & Cohler, 1999). However, we found that two-thirds of older adults in our sample had regular contact with a family member, and that those with the poorest health and mental health functioning had the highest levels of contact. Further research is needed that examines the range of supports family members provide for psychiatric and physical disease management among older adults, as well as gaps in knowledge and skills related to disease management, in order to inform the development of family interventions to address these problems.

Acknowledgments

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Table 1

Sample Characteristics of Older Adults with Serious Mental Illnesses

Age (mean, *sd*)	60.2	(7.9)
Gender (*n*, %)		
Male	75	(41.7)
Female	105	(58.3)
Marital Status (*n*, %)		
Currently married	21	(11.6)
Divorced/widowed/separated	95	(52.8)
Never married	64	(35.6)
Have children (*n*, %)	107	(59.1)
Race (*n*, %)		
White	155	(86.1)
Non-white	25	(13.9)
Ethnicity (*n*, %)		
Hispanic	12	(6.7)
Non-Hispanic	169	(93.9)
Education (*n*, %)		
Completed high school	133	(73.9)
Did not complete high school	47	(26.1)
Residential status (*n*, %)		
Independent	93	(51.7)
Living with family members	21	(11.7)
Supervised/supported housing	63	(35)
Homeless	3	(1.6)
Diagnosis (*n*, %)		
Schizophrenia/schizoaffective	101	(56.1)
Mood disorder	79	(43.9)
Duration of Illness (mean, *sd*)	27.9	(12.7)

Table 2

Family Contact and Closeness Among Older Adults with Serious Mental Illnesses

Telephone Contact			
Past month talked w/family on phone (*n*, %)			
	Yes	140	(77.8)
	No	40	(22.2)
No. times talked w/family on phone (mean, *sd*)[a]		12.5	(11.6)
Face-to-Face Contact (Includes those living with family)			
Past month got together w/family (*n*, %)			
	Yes	121	(67.2)
	No	59	(32.8)
No. times got together with family (mean, *sd*)[b]		12.9	(12.6)
(Excludes those living with family)			
Past month got together w/family (*n*, %)			
	Yes	100	(62.9)
	No	59	(37.1)
No. times got together with family (mean, *sd*)[b]		6.0	(9.9)
Contact with Children			
Have children (*n*, %)			
	Yes	106	(59.2)
	No	74	(40.8)
Seen at least one child in past month (*n*, %)			
	Yes	61	(57.5)
	No	119	(42.5)
Closeness with Relatives			
Family confidant (*n*, %)			
	Yes	121	(68.0)
	No	59	(32.0)

[a] Descriptive statistics based on *n*=140 who had telephone contact with family in the past month

[b] Descriptive statistics based on *n*=121 who had in-person contact with family in the past month

Table 3

Pearson Product-Moment Correlations of Mental Health and Physical Health Variables

Variable	1	2	3	4	5	6	7	8	9
(1) CES-D	-	.68***	.19*	-.02	.04	-.79***	.36***	-.36***	.14
(2) BPRS-E Depression/anxiety		-	.48***	.15*	.16*	-.61***	.27***	-.36***	.07
(3) BPRS-E Psychosis			-	.62***	.31***	-.16*	-.05	-.08	-.09
(4) BPRS-E Activation				-	.29***	.06	-.11	-.06	-.06
(5) BPRS-E Retardation					-	-.09	-.04	.01	-.09
(6) SF-36 Mental						-	-.37***	.29***	-.10
(7) Perceived Health							-	-.34***	.26***
(8) SF-36 Physical								-	-.36***
(9) Medical Comorbidity									-

*
$p < .05$.

***
$p < .001$.

Table 4

Means (standard deviations) of Mental Health and Health Functioning between Older Adults with Low, Moderate, or High Amounts of Family Contact Over the Past Month.

	0–1 contacts (n=83)	2–30 contacts (n=61)	Living w/family (n = 36)	ANOVA F	ANOVA df	ANCOVA F	ANCOVA df
Mental Health Variables[a]							
CES-D total score (mean, sd)	20.7 (11.9)[c]	21.4 (13.7)[c]	27.0 (13.4)[d]	F=3.30*	2,175	F=2.58	2,172
BPRS-E depression/anxiety (mean, sd)	2.6 (.93)[c]	2.6 (1.1)[c]	3.2 (.91)[d]	F= 5.43**	2,177	F=4.86**	2,174
BPRS-E psychosis (mean, sd)	2.2 (1.1)	2.1(.95)	2.1 (.80)	F=.411	2,177		
BPRS-E activation (mean, sd)	1.9 (.65)[c]	1.8 (.69)	1.6 (.50)[d]	F = 2.69*	2,177	F=2.71	2,174
BPRS-E negative symptoms	2.3 (.60)	2.4 (.75)	2.4 (.48)	F = .546	2,177		
SF-36 mental health (mean, sd)	61.6 (19.9)[c]	57.9 (21.9)[c]	48.4(23.9)[d]	F = 4.78*	2,177	F=3.76*	2,174
Physical Health Variables[b]							
Perceived health (mean, sd)	2.8 (1.1)[c]	3.0 (1.1)[c]	3.5 (1.1)[d]	F= 5.14**	2,176	F=2.18	2,170
SF-36 physical health (mean, sd)	58.2 (25.3)	55.7 (24.6)	46.9 (24.5)	F=.572	2,168		
Comorbidity index (mean, sd)	2.1 (2.1)[c]	2.9 (2.5)[d]	3.2 (2.1)[d]	F = 4.54*	2,175	F=4.35*	2,168

[a] ANCOVAs controlled for Charlson comorbidity index.

[b] ANCOVAs controlled for BPRS-E depression-anxiety, psychosis, activation, and retardation subscales, and CES-D scores.

[c,d] Tukey's HSD post hoc test of multiple comparisons were performed. Different letters indicate significant difference between groups.

* p .05

** p .01