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Social Support in Late Life Mania: A GERI-BD Report

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Abstract

OBJECTIVE—Using the database of the NIMH-sponsored Acute Treatment of Late Life Mania study (GERI-BD), we assessed the role of social support in the presentation of late-life bipolar mania.

METHODS—In the first 100 subjects randomized in GERI-BD, we explored the demographic, clinical and social support characteristics (assessed using the Duke Social Support Index) and aspects of manic presentation. We selected two dependent variables: symptom severity, as determined by the Young Mania Rating Scale (YMRS) at baseline, and duration of episode. We selected nine potential independent variables, based on Pearson correlation coefficients. We derived two final models using multiple regression analysis employing an iterative process.

RESULTS—In our severity model, being married was associated with a higher YMRS score ($p=0.05$) while higher Social Interaction scores with non-family members were associated with a lower YMRS score ($p=.011$). In the episode duration model, longer duration was associated with a higher Hamilton Depression Rating Scale (HAM-D-24) score ($p=0.03$) and higher Social Interaction scores with non-family members ($p=0.0003$), younger age ($p=0.04$), higher number of persons in one's Family Social Network ($p=.017$), and higher Instrumental Support scores ($p=0.0062$).

CONCLUSIONS—In late life mania, more social interaction with one's community appears to be associated with less severe symptoms at presentation for treatment, though it can be also associated with slightly longer the duration of episode. Two aspects of the Duke Social Support Index are associated with a shorter episode duration prior to seeking treatment: being part of a larger family network and a having a higher level of instrumental support prior to treatment. The Instrumental Support Subscale measures the degree of assistance that is available for the respondent in performing daily tasks. These findings suggest that in older adults with bipolar disorder, close social interactions and support are important in limiting the length of the illness

episode prior to treatment. Social interactions involving non-family members may be less important in moderating the intensity of the symptoms at presentation.

Keywords

Bipolar Disorder; Mania; Elderly; Social Support

OBJECTIVE

Social and psychological factors (i.e. social support and stressful life events) have been associated with differences in the onset and outcomes in bipolar disorder (BD). While stressful life events have been associated with the precipitation of manic and depressive episodes, especially in the early stages of the disease¹, the role of social support in BD has received less investigation. Compared with healthy controls, bipolar patients report less social support. Studies assessing the level of received social support confirm that mixed-age bipolar patients do receive less support than either medically ill or normal controls^{2,3}. This low social support is associated with more mood symptoms and may be an important predictor of treatment response⁴.

There has been even less study of social support in elderly BD patients. Two preliminary studies^{5,6} in euthymic bipolar patients have found similar levels of social interactions and instrumental support between younger and older adults, though both groups perceived that support to be inadequate. Further, the duration of BD may moderate this relationship since late-onset bipolar patients had more instrumental social support and perceived their social support to be more sufficient than early-onset bipolar patients.

The goal of this study was to examine levels of social support, demographic characteristics and clinical features in geriatric bipolar manic patients. Our exploratory hypothesis was that at presentation for treatment, higher levels of social supports would be associated with lower symptom severity and shorter duration of the current episode.

METHODS

Design and Sample

We conducted a cross-sectional examination of the first 100 subjects randomized in an NIMH- sponsored multicenter study, Acute Treatment of Late Life Mania (GERI-BD)⁷. The study was approved by the Institutional Review Boards of all member institutions. Patients were aged 60 years or older and met diagnostic criteria for a manic, mixed-manic, or hypomanic episode of BD as defined by the DSM IV. Patients were excluded if they had a contraindication, intolerance, or non-responsiveness to lithium or valproate, active substance dependence, dementia, or a recent vascular event. Before protocol treatment was initiated, patients were evaluated using the Structured Clinical Interview for DSM-IV (SCID), and demographic, clinical, and social support variables were recorded.

Measures

Dependent Variables—The Young Mania Rating Scale (YMRS)⁸ total score at baseline, and the duration of the current episode.

Independent Variables—We selected a set of potential variables that represented demographic, clinical and domains.

Social support was measured using the abbreviated Duke Social Support Index (DSSI),⁹ a questionnaire designed to evaluate the size and utilization of a subject's social network. Three subscales of the DSSI, previously derived by factor analysis,⁹ and two exploratory scales (*) were measured:

1. ***Social Interaction (SI)*** -- number of relatives and friends with whom the subject has significant interaction.
2. ***Instrumental Social Support (IS)*** – type of assistance a subject has with day-to-day activities.
3. ***Subjective Social Support (SS)*** – measures items that refer to frequency of feeling understood.
4. ****Family Network Size (FN)*** – number of relatives in the patient's household. FN was calculated from the number of family members that the subject identified living with him or her, as well as the number of family members that lived within a one hour distance with whom the subject had significant interaction
5. ****Satisfaction with Instrumental Support (SIS)*** – subjective assessment of adequacy of assistance with daily activities.

Depression symptoms were rated using the Hamilton Depression Rating Scale (24 item) using the GRID system¹⁰.

Statistical Analysis

A set of candidate variables were selected for each of the two models based on the Pearson Correlation coefficient p value being ≤ 0.20 . We made the final selection of independent variables by running a series of multivariate regressions, and successively removing one variable that made the smallest contribution to the model. As a final check, we performed the iterative elimination process using all of the original variables examined. The analysis was conducted using SAS version 9.3 software (c) 2002–2010 by SAS Institute Inc., Cary, NC.

RESULTS

Table 1 presents demographic, clinical and social support measures that were examined. We identified nine variables significantly correlated with the two dependent variables (Table 2). These variables were used in the two multivariate regression analyses.

For the YMRS score, the final model included marital status and the SI score. We found that if the subject were married, the YMRS was higher by 2.7 ± 1.4 points ($p=0.053$). Higher SI scores were associated with a lower YMRS score by 0.5 ± 0.2 ($p=0.0113$).

For the duration of episode prior to treatment, the model included HAM-D, age, and three social support variables. Higher HAM-D was associated with longer episode duration by

0.093±0.04 (p=0.0310). Age was positively associated with duration (0.11±0.05) (p=0.0390). Among the social support subscales, higher FN and IS scores were associated with shorter duration (p = 0.0171 and 0.0062 respectively), while the higher SI scores were associated with a longer duration (p=0.0003).

DISCUSSION

In this sample of elderly bipolar manic subjects presenting for treatment, shorter duration of the index episode was associated with the presence of family either in the house or living close by, and with greater instrumental social support (support for activities of daily living, for example). Greater social interaction with non-family members involving activities among peers and the community was associated with less severe symptoms; however this level of social interaction was also associated with a more prolonged episode duration prior to presentation for treatment. These findings underline the empirical observation that in older adults with BD, close social interactions are important in limiting the length of illness episodes and getting a patient to treatment. The finding that social interactions outside of the household and immediate family may be related to longer duration or less severe illness suggests that older adults that remain active with friends, neighbors, or community activities are probably less severely ill overall, and this may contribute to the delay they have in getting treatment.

Our findings are consistent with previous studies of social support in BD. O'Connell et al¹⁵, in a study that included older subjects, found that limited social support was associated with more severe mood symptoms during the year following hospitalization. Johnson et al⁴ found that limitations of social support appeared to be the most important predictor of change in depression symptoms across a 6 month follow-up in a cohort aged between 30 and 65 years.

Interestingly, neither perceived social support nor satisfaction with instrumental support were associated with the severity or duration of the subject's current episode. This stands in contrast to late life unipolar depression studies in which impaired perceived social support was associated with depressive symptoms in elderly adults generally^{12,13}, and predictive of greater frequency¹⁴ and severity¹⁶ of depressive symptoms in unipolar elderly. It was also found to be linked to poorer outcome at follow-up^{17,18}.

There are several limitations to our study. First, we assessed social support parameters only in elderly manic patients, and not in other patient or normal control comparison groups. Secondly, the scales did not assess the actual level of social support either required or received by the elderly manic patient, but only their perception of its adequacies. Finally, the study reports only on cross-sectional data. It does not report on the influence social support factors may have on acute treatment outcome, relapse or recurrence.

These findings contribute to a limited but growing literature assessing the impact that social support systems can have in the expression of BD. It suggests that intervention at a social level may be an important component in the treatment of elderly with BD, and that multi-dimensional treatment programs should be developed that support treatment and recovery.

Further, these finding anticipate the analyses of the full GERI-BD program that can examine how social support characteristics affect acute treatment outcomes.

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Key Points

1. Higher social interactions scores were associated with less severe manic illness at presentation for treatment
2. Having more family members was associated with shorter duration of the manic episode prior to treatment
3. Close social interaction scores were associated with shorter duration of the episode

TABLE 1

Demographic and Clinical Characteristics in Geriatric Bipolar Manic Subjects (N=100).

DEMOGRAPHICS	Means±SD (Range) or Number (Percent)
AGE (yrs)	68.9±7.1 (60–84)
GENDER	
Male	50 (50%)
Female	50 (50%)
RACE	
White	86 (86%)
Black	13 (13%)
Asian	1 (1%)
ETHNICITY	
Hispanic	9 (9%)
Not Hispanic	91 (91%)
MINORITY:	
Black or Hispanic	20 (20%)
MARRIED	37 (37%)
MOOD DISORDER	
YMRS	26.4±6.7 (18–47)
HAM-D	12.2±9.0 (0–39)
EPISODE DURATION (months)	2.5±4.0 (0.5–28)
AGE at ONSET (First Episode)	35.1±18.5 (9–81)
DUKE SOCIAL SUPPORT	
Family Network Subscale (FN)	6.4±4.2 (1–14)
Social Interaction Subscale (SI)	6.5±3.3 (0–13)
Subjective Support Subscale (SS)	16.9±3.4 (8–21)
Instrumental Support Subscale (IS)	7.7±3.4 (0–12)
Satisfaction with IS (SIS)	0.58±0.50 (0–1)

TABLE 2
Selection of Independent Variables For Severity (YMRS) and Duration of Current Episode Models

Variable	YMRS Illness Severity			Illness Duration (Months)		
	Pearson Correlation	P Value	Variable Selection	Pearson Correlation	P Value	Variable Selection
HAM-D	0.0587	0.5618	Not a candidate	0.2504	0.0120	* Independent *
Married	0.1359	0.1776	* Independent *	-0.1394	0.1667	Eliminated
Age	0.0236	0.8156	Not a candidate	-0.1805	0.0723	* Independent *
Female	-0.0538	0.5953	Not a candidate	-0.0676	0.5043	Not a candidate
Minority**	-0.03957	0.6959	Not a candidate	-0.04629	0.6475	Not a candidate
AGE at ONSET	-0.0271	0.7936	Not a candidate	0.02768	0.7889	Not a candidate
Duke Social Support Subscales						
Family Network	-0.0952	0.3375	Not a candidate	-0.20322	0.0426	* Independent *
Social Interaction	-0.2181	0.0301	* Independent *	0.1539	0.1283	* Independent *
Subjective Support	-0.0712	0.4838	Not a candidate	-0.0305	0.7647	Not a candidate
Instrumental Support	0.0539	0.5962	Not a candidate	-0.1965	0.0512	* Independent *
Satisfaction with Instrumental Support	0.0018	0.9862	Not a candidate	-0.0588	0.5630	Not a candidate
Dependent Variables						
YMRS	1.00000	.		-0.1083	0.2835	Not a candidate
Duration	-0.1083	0.2835	Not a candidate	1.00000	.	

Final Models:

YMRS = 28.715 + (2.705 * MARRIED) - (0.524 * SOCIAL INTERACTION)

DURATION = 9.922 + (0.0938 * HAMILTON-24) + (-0.1106 * AGE) + (-0.22561 * FAMILY NETWORK) + 0.46595 * SOCIAL INTERACTION + (-0.32898 * INSTRUMENTAL SUPPORT)