Psychological Well-being and Relationship Outcomes in a Randomized Study of Family-Led Education

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Context: Family members of adults with mental illness often experience emotional distress and strained relationships.

Objective: To test the effectiveness of a family-led educational intervention, the Journey of Hope, in improving participants’ psychological well-being and relationships with their ill relatives.

Design and Setting: A randomized controlled trial using a waiting list design was conducted in the community in 3 southeastern Louisiana cities.

Participants: A total of 462 family members of adults with mental illness participated in the study, with 231 randomly assigned to immediate receipt of the Journey of Hope course and 231 assigned to a 9-month course waiting list.

Intervention: The Journey of Hope intervention consisted of 8 modules of education on the etiology and treatment of mental illness, problem-solving and communication skills training, and family support.

Main Outcome Measures: Participants’ psychological well-being and relationships with their ill relatives were assessed at study enrollment, 3 months after enrollment (at course termination), and 8 months after enrollment (6 months after course termination). Mixed-effects random regression analysis was used to predict the likelihood of decreased depressive symptoms, increased vitality, and overall mental health, and improved relationship ratings.

Results: Intervention group participants reported fewer depressive symptoms, greater emotional role functioning and vitality, and fewer negative views of their relationships with their ill relatives compared with control group participants. These improved outcomes were maintained over time and were significant (P<.05 for all) even when controlling for participant demographic and relative clinical characteristics.

Conclusion: Results show that family-led educational interventions are effective in improving participants’ psychological well-being and views of their relationships with ill relatives.

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Numerous studies1-5 have established that families are a primary source of care for adults with mental illness. Families frequently provide this care with little or no information on the etiology and treatment of psychiatric disorders, and with virtually no training in symptom management or problem-solving strategies.6,7 They often feel isolated from normative sources of social and emotional support and ignored by the mental health system.8,9 Families report a wide range of consequences related to their caregiving efforts, including negative effects on their psychological health and on relationships with their ill relatives. Many family members of adults with mental illness report high levels of depression and anxiety, poor social functioning, and excessive feelings of fear, worry, and guilt,10-14 and describe frustrating interactions with their ill relatives.15-17 A lack of practical knowledge and emotional support may account for these family members’ low levels of emotional well-being and strained relationships with their ill relatives. Studies14,18-20 suggest that family members who do not understand that many of their relatives’ behaviors, such as hostility, apathy, and social withdrawal, are psychiatric symptoms falsely attribute these behaviors to negative aspects of their relatives’ personality; these individuals are more likely to experience psychological distress and express greater criticism of their ill relatives.
Despite the growth of these programs, little empirical research has examined the effectiveness of these interventions in improving family members’ outcomes. Social learning and support theories suggest that interactions with instructors and classmates who are peers (i.e., other family members) and who share similar experiences enhance family-led education program participants’ well-being and strengthen their ability to manage illness-related problems.7-30 Indeed, studies have found that families who participated in family-led education interventions reported improved feelings of morale8 and empowerment.31,32 However, participants’ improved outcomes cannot be attributed to the interventions alone, given these studies’ use of naturalist and quasi-experimental designs.

This randomized clinical trial overcomes this knowledge gap by examining whether participation in JOH, a family-led education intervention, improves family members’ mental health and the quality of their relationships with ill relatives. We tested 3 hypotheses: (1) compared with control participants, intervention group participants would report fewer depressive symptoms, enhanced emotional well-being, and improved relationships with their ill relatives; (2) the differences between intervention and control participants would be maintained over time; and (3) these differences would persist despite the effects of family members’ demographic characteristics and the clinical features of their relatives’ illnesses.

**METHODS**

**PARTICIPANTS**

We conducted the study in 3 urban areas in Louisiana: Baton Rouge, Lafayette, and New Orleans. In each city (hereafter referred to as study site), relatives of adults with mental illness were recruited through newspaper advertisements; flyers distributed at mental health clinics, hospitals, libraries, churches, and grocery stores; televised public service announcements; and referrals from psychiatrists and social workers. Interested individuals used a toll-free number to contact the study office in Baton Rouge and were screened via telephone for eligibility criteria. Study inclusion criteria were as follows: being the relative of an adult diagnosed as having 1 of the 5 mental disorders covered in the JOH curriculum (schizophrenia, schizoaffective disorder, bipolar disorder, depression, and obsessive-compulsive disorder), being 18 years or older, having the desire to participate in the JOH intervention and the research, and having the ability to provide informed consent. Individuals uncertain of their relatives’ diagnosis were screened again by 1 of us (R.L.), a board-certified psychiatrist who determined whether the relatives’ reported symptoms met the DSM-IV criteria for one of these disorders. Research staff met with eligible participants to discuss study procedures and obtain informed consent. The study was approved by the institutional review boards of the University of Illinois at Chicago and the Louisiana Department of Health and Hospitals.

We recruited, enrolled, and randomized participants in 6 waves at each of the 3 sites, from December 1, 2000, through August 31, 2003. As shown in the Figure, 553 individuals expressed interest in participating in the study; 542 of these individuals met the eligibility criteria, and 72 of these declined participation. A total of 470 individuals consented to partici-

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**Flow diagram of participants’ progress through the randomized trial.** JOH indicates Journey of Hope.

**Psychosocial interventions that provide education about the etiology of mental illness and standard clinical treatments, problem-solving skills training, and family support have improved family members’ ability to cope with their relatives’ illness and reduced their relatives’ psychotropic recidivism.** However, much of this research has focused on family psychoeducational interventions led by mental health professionals as adjuncts to the treatment of the ill relative. Recognized as evidence-based practices for reducing patient relapse,23-25 psychoeducational programs typically are clinical-based strategies that last 9 months or longer and have the primary goal of improving patient outcomes, with enhanced family outcomes as secondary gains. However, the expense, setting, and length of psychoeducational interventions often limit their dissemination.24,26

Family-led education interventions, such as the Journey of Hope (JOH) and the National Alliance for the Mentally Ill’s Family-to-Family Education Program, have increased in number and popularity in the past decade. Delivered by trained volunteer family members, these community-based programs are independent of patients’ treatment, last 12 weeks or less, and are designed to increase family coping competencies via education on the etiology of and clinical treatments for mental illness, problem-solving skills training, and emotional support. Family-led interventions are widely available, primarily through advocacy organizations.

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The curriculum is imparted via scripted lectures, group exercises, handouts, and videotapes, and is structured to foster group discussion. Classes are taught in publicly accessible community settings, free of charge, with the typical class size ranging from 10 to 15 participants. At each of the study sites, JOH is provided 1 to 3 times per year by local National Alliance for the Mentally Ill Louisiana affiliates. Journey of Hope is available to anyone with a relationship to an individual with mental illness, including parents, siblings, spouses, adult children, other relatives, and friends. Families are encouraged to attend the course together. However, ill relatives are not permitted to participate in the program so that family members feel free to discuss issues related to their relative.

CONTROL GROUP

Control group participants were assigned to a 9-month JOH course waiting list, and were guaranteed receipt of the course after completing their study participation. To assess the integrity of this no-treatment condition, we measured receipt of any family education or support services (eg, support groups and advocacy programs) at each assessment point. Most control group participants did not receive such education or support, as described later.

STUDY PROCEDURES

We administered in-person structured interviews to participants at 3 time points: 1 month before the start of the JOH course for the intervention group (time 1, study baseline for control group participants), at JOH course termination (time 2, 3 months after baseline for the control group), and 6 months after course termination (time 3, 8 months after baseline for the control group). Participants’ demographic characteristics and ill relatives’ clinical characteristics (eg, primary diagnosis and age at first hospitalization) were collected at time 1, and additional information on changes in relatives’ psychiatric illness (eg, recent inpatient admissions) was collected at times 2 and 3.

Participants received $25 for each interview. All interview schedules were checked, precoded, and entered into a commercially available database system (SPSS; SPSS Inc, Chicago, Ill) by Chicago-based research staff. To ensure reliability of data collection throughout the study, interviewers received group training on assessment and coding procedures, and participated in monthly conference calls and quarterly project meetings. Routine checks on data quality were conducted throughout the study; these included programmed logic checks at data entry for the control group. A total of 462 participants were randomized: 231 to the intervention group and 231 to the control group.

INTRODUCTION

Developed in 1997, the intervention is an 8-week, manualized, education course for relatives of adults with mental illness. Journey of Hope is delivered by instructors who are family members of adults with mental illness. All instructors complete an extensive, mandatory, 2-day training in which they learn standard course delivery methods and how to effectively work with participants.

The goal of the JOH intervention is to provide basic education and skills training to families of persons with mental illness, and to give them the practical and emotional support they need to sustain them in their role as primary caregivers. Intervention objectives for participants include increased knowledge of the etiology and treatment of mental illness, improved problem-solving and communication skills, enhanced well-being, improved relationships with ill relatives, and increased collaborations with treatment professionals. The curriculum covers the biological causes of and clinical treatments for the 5 disorders previously listed. Communication and problem-solving skills training are taught and practiced. Participants learn about the mental health service system, how to work with treatment providers, the impact of substance use on psychiatric symptoms and treatment, crisis management, problem-solving techniques, and emotional coping strategies. Empathy for ill relatives and methods to facilitate their recovery are emphasized throughout the course. The curriculum also focuses on the emotions family members commonly experience, and helps participants recognize and accept that these emotions are normal reactions to coping with a relative’s mental illness.

The JOH intervention consists of 8 modules that are delivered in weekly 2-hour sessions over a 2-month period (Table 1).
entry and review of frequency distributions of all variables afterward to identify outlier or out-of-range values.

OUTCOME MEASURES

We examined 7 outcomes using standardized measures with stable psychometric properties. Reliability analyses were conducted for each measure at each interview time point. We used the 20-item Center for Epidemiological Studies Depression Scale11 and the 8-item depression subscale of the Brief Symptom Inventory12 to assess participants’ depressive symptoms. Coefficient α for the Center for Epidemiological Studies Depression Scale ranged from .76 to .89; and for the Brief Symptom Inventory depression subscale, from .82 to .87. The 4 mental and social functioning subscales of the Medical Outcomes Study 36-Item Short-Form Health Survey13 measured participants’ overall mental health (general mental health [5 items]; coefficient α, .82-.84), social relationships (social functioning [2 items]; coefficient α, .73-.83), energy and activity (vitality [4 items]; coefficient α, .85 and .86, respectively), and role limitations due to emotional problems (role functioning-emotional [3 items]; coefficient α, .80 and .82, respectively). We used the 7-item negative relationship subscale from the You and Your Family Scale14,15 to assess participants’ ratings of their relationships with their ill relatives (coefficient α, .81 and .82).

DATA ANALYSES

We analyzed the outcome data in 3 stages. We began by visually examining the longitudinal relationships between study condition and each of the 7 outcome measures. Next, we tested the cumulative effect of study condition on each outcome using unadjusted bivariate analyses. We then conducted multivariate, longitudinal, fixed-effects, random regression analyses to test for differences between intervention and control conditions over time. A 2-level random intercepts model was fit to the data, controlling for participant demographic and ill relative psychiatric illness characteristics as fixed effects. Random regression models were chosen to address longitudinal data concerns, such as state dependency or serial correlation among repeated observations within individual participants, missing observations because not all participants completed all interviews, individual heterogeneity or varying propensities toward the outcomes of interest because of participants’ predispositions and other unobserved influences, and the inclusion of fixed covariates (educational level, marital status, diagnosis, illness length, and lifetime inpatient admissions).16 Covariates were chosen based on prior studies11,13,16,17 that suggest that these family and ill relative demographic and clinical characteristics may affect psychological well-being and familial relationship assessments.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Intervention Group†‡</th>
<th>Control Group†§</th>
<th>Statistic</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, y†</td>
<td>36.16 (16.28)</td>
<td>36.30 (16.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male sex‡‡</td>
<td>50.7 (12.5)</td>
<td>52.6 (12.6)</td>
<td>t = 0.96</td>
<td>.33</td>
</tr>
<tr>
<td>Married‡‡</td>
<td>149 (64.5)</td>
<td>154 (65.9)</td>
<td>χ² = 0.72</td>
<td>.69</td>
</tr>
<tr>
<td>College graduate‡‡</td>
<td>86 (37.2)</td>
<td>93 (38.5)</td>
<td>χ² = 0.23</td>
<td>.63</td>
</tr>
<tr>
<td>Relationship to ill relative¶</td>
<td>129 (55.8)</td>
<td>126 (54.5)</td>
<td>χ² = 2.44</td>
<td>.66</td>
</tr>
<tr>
<td>Parent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling</td>
<td>30 (13.0)</td>
<td>37 (16.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult child</td>
<td>30 (13.0)</td>
<td>29 (12.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>22 (9.5)</td>
<td>22 (9.2)</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
<td>20 (8.7)</td>
<td>17 (7.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ill relative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, y†</td>
<td>36.16 (16.28)</td>
<td>36.70 (16.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male sex‡‡</td>
<td>50.7 (12.5)</td>
<td>51.8 (12.6)</td>
<td>t = 0.72</td>
<td>.47</td>
</tr>
<tr>
<td>Ill for ≥10 y</td>
<td>90 (50.6)</td>
<td>95 (49.7)</td>
<td>χ² = 0.15</td>
<td>.69</td>
</tr>
<tr>
<td>No. of prior hospitalizations</td>
<td></td>
<td></td>
<td>5 (4.5)</td>
<td>2.44 (1.27)</td>
</tr>
<tr>
<td>Diagnosed as having schizophrenia§§</td>
<td>33 (18.5)</td>
<td>33 (17.3)</td>
<td>χ² = 0.10</td>
<td>.75</td>
</tr>
</tbody>
</table>

*Numbers and degrees of freedom vary because of missing data.
†Data are given as number (percentage) of each group unless otherwise indicated.
‡N = 231 for the participants and N = 191 for the ill relatives.
¶Percentages may not total 100 because of rounding.

PARTICIPANT CHARACTERISTICS

Participant demographic characteristics and relatives’ clinical characteristics are presented in Table 2. The success of the study’s randomization procedures was confirmed by the absence of statistically significant differences at time 1 between intervention and control group participants regarding sex, marital status, educational level, and relationship to ill relative. No significant differences were found regarding the ill relative’s age, sex, illness length, number of hospitalizations, and diagnosis of schizophrenia.

INTERVENTION IMPLEMENTATION

Fidelity

The intervention was delivered at each site by a team of 2 trained instructors. With the exception of the Baton
Rouge site, the same pair of instructors delivered all waves of the intervention. In Baton Rouge, one instructor taught only the first wave of the intervention and was replaced by another trained instructor who taught the remaining 5 waves. A second instructor taught half of the waves (n=3) and was replaced by another trained instructor who taught the final 3 waves of the intervention.

Before intervention implementation, all instructors attended a 2-day training session that included a review of standard curriculum content and training on prescribed instruction procedures for the intervention. A log assessing fidelity to curriculum content and adherence to prescribed instruction procedures was developed for each of the 8 modules. Following each class, the study coordinator (C.B.) telephoned instructors and completed the log for that module to determine fidelity to the content prescribed for that module (eg, brain biology, behavior management strategies) and prescribed instructional modalities (eg, videotape, role play exercise). Each log component was scored as 1 if the prescribed element occurred, and 0 otherwise. Fidelity scores were computed as the proportion of prescribed elements present for that module. Across all modules taught in all waves, total course fidelity ranged from 89.9% to 100.0%, with a mean of 96.6%. There were no significant differences in course fidelity across waves (χ²=84.00, P=.22), by site (χ²=30.00, P=.47), or by instructor (χ²=56.00, P=.23). Overall, results indicate excellent intervention fidelity.

Intervention Completion Rates

Attendance logs for each participant were maintained by instructors with the help of research staff. Attendance at each class was coded as 1 for presence and 0 for absence, and total attendance was computed by summing attendance scores for each class. On average, participants attended 6 of 8 classes (mean, 5.98 classes; SD, 2.34 classes). There were no significant differences in attendance by wave (F(3.225)=1.28, P=.27), site (F(2.225)=0.58, P=.56), or instructor (F(1.15)=1.15, P=.34). Reasons for non-attendance were assessed at time 2 and included work-schedule conflicts, physical illness, transportation problems, and conflicts with ill relatives.

Receipt of Nonintervention Education and Support Services

There were no significant differences in intervention and control group participants’ use of nonintervention family education and support services across the study period. At time 1, 34 (14.7%) of the intervention group participants and 34 (14.7%) of the control group participants reported that they were receiving some education and support services (χ²=0.00, P>.99). At time 2, 32 (14.9%) of the intervention group participants and 25 (11.7%) of the control group participants reported receipt of such services (χ²=0.95, P=.33); and at time 3, 32 (5.8%) of the intervention group participants and 19 (9.2%) of the control group participants reported use of family education or support services (χ²=1.67, P=.20).

FOLLOW-UP RATES AND ATTRITION

As shown in the Figure, 429 subjects (92.9%) completed time 2 interviews and 411 (89.0%) completed time 3 interviews, for a combined attrition rate of 11.0%. There were no statistically significant differences in follow-up rates between intervention and control conditions. At time 2, 215 (93.1%) of the intervention group participants and 214 (92.6%) of the control group participants completed interviews (χ²=0.03, P=.86); at time 3, 205 (88.7%) of the intervention group participants and 206 (89.2%) of the control group participants completed interviews (χ²=0.02, P=.88). There were no statistically significant differences between participants who completed interviews and those who did not complete interviews regarding study condition or model covariates, with one exception: participants whose ill relatives had a primary diagnosis of schizophrenia were less likely to complete time 3 interviews (χ²=4.23, P=.04).

EMOTIONAL WELL-BEING AND RELATIONSHIPS WITH ILL RELATIVES

We graphed and visually inspected the longitudinal relationship between study condition and outcome for each of the 7 dependent variables. Bivariate analyses of emotional well-being indicate that intervention group subjects had significantly fewer depressive symptoms as measured by the Center for Epidemiological Studies Depression Scale at time 2 (mean, 16.37 vs 17.91; t(225)=−2.02, P=.04) and as measured by the Brief Symptom Inventory at time 3 (mean, 7.95 vs 8.71; t(209)=−2.25, P=.02), and greater time 2 emotional role functioning (mean, 79.22 vs 70.56; t(225)=2.48, P=.01). Intervention group participants reported less negative views of their relationships with their ill relatives at time 2 (mean, 13.63 vs 14.28; t(225)=−2.09, P=.04) and at time 3 (mean, 13.44 vs 14.12; t(209)=−2.02, P=.04).

Next, we conducted multivariate random regression model analyses with each of the outcomes as the dependent measure and study condition as the independent variable, controlling for participant and ill relative confounds as described earlier. The results (Table 3 and Table 4) showed significant main effects for the intervention, with intervention group participants achieving superior outcomes on 5 of the 7 measures. Intervention group participants reported fewer depressive symptoms than controls on the Center for Epidemiological Studies Depression Scale and on the Brief Symptom Inventory (Table 3). Significant main effects for the intervention also were found in participants' emotional role functioning and the measure of vitality, both of which were higher among intervention group participants than controls (Table 4). Effects fell just short of significance for the measures of general mental health and social functioning (Table 3). Significant main effects also were found for participants' relationship assessments: intervention group participants reported fewer negative relationships with relatives than did control group participants (Table 4).

The effects of time were significant for all study outcomes (Tables 3 and 4). Intervention and control group participants reported improved emotional well-being and
improved relationships with ill relatives throughout the study period. Finally, none of the participants’ demographic characteristics or the relatives’ clinical characteristics were consistently significant across outcomes.

**COMMENT**

Despite their demonstrated effectiveness in improving family members’ ability to cope with their relatives’ mental illness, professional-led psychoeducation programs may be less accessible to families compared with family-led interventions, such as JOH and the Family-to-Family Education Program.24,30,32 Given the potentially greater dissemination, availability, and, therefore, use of family-led education interventions, establishing their effectiveness in regard to family outcomes is critical. Our study findings contribute to this empirical effort. Random regression model results indicate that, compared with those assigned to the control condition, family members who received the 8-week JOH intervention reported fewer depressive symptoms, enhanced emotional role functioning, greater vitality, and improved views of their relationships with their ill relatives. Intervention group participants’ superior outcomes were significant even when controlling for the effect of participant demographic characteristics and illness-related clinical characteristics. Furthermore, these differences were maintained over time.

We surmise that JOH intervention participation improves family members’ emotional well-being in ways posited by social support and learning theories (ie, exposure to and interactions with similar others strengthens coping ability).27,31 First, a common finding in the research literature4,31,41 on family education programs is that exposure to others who also have relatives with mental illness and who share similar caregiving experiences decreases participants’ feelings of guilt, shame, and isolation. Thus, JOH participants’ psychological well-being may have improved as a result of interactions with other family members on whom they might rely for advice, friendship, and affirmation of their caregiving efforts. Second, as peers who personally understand the problems associated with psychiatric disorders, JOH instructors serve as credible role models for participants.29 Interactions with

Table 3. Effects of Study Condition (Intervention vs Control) on Participant CES-D, BSI Depression Subscale, and SF-36 General Mental Health and Social Functioning Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>CES-D</th>
<th>BSI Depression Subscale</th>
<th>SF-36 General Mental Health</th>
<th>SF-36 Social Functioning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (SE)</td>
<td>z Score</td>
<td>P Value</td>
<td>Estimate (SE)</td>
</tr>
<tr>
<td>Intercept</td>
<td>20.48 (1.14)</td>
<td>17.97</td>
<td>&lt;.001</td>
<td>57.35 (1.03)</td>
</tr>
<tr>
<td>Intervention condition</td>
<td>-1.64 (0.82)</td>
<td>-1.99</td>
<td>.04</td>
<td>-1.51 (0.22)</td>
</tr>
<tr>
<td>Time</td>
<td>-1.37 (0.25)</td>
<td>-1.87</td>
<td>.06</td>
<td>-0.68 (0.22)</td>
</tr>
<tr>
<td>Married</td>
<td>-2.64 (0.67)</td>
<td>-3.03</td>
<td>.002</td>
<td>-2.51 (0.78)</td>
</tr>
<tr>
<td>College graduate</td>
<td>-3.44 (0.85)</td>
<td>-1.74</td>
<td>.08</td>
<td>-2.26 (0.76)</td>
</tr>
<tr>
<td>Schizophrenia diagnosis</td>
<td>-1.40 (1.04)</td>
<td>-1.43</td>
<td>.15</td>
<td>-1.63 (0.54)</td>
</tr>
<tr>
<td>Illness &gt;10 y</td>
<td>-1.14 (0.84)</td>
<td>-1.37</td>
<td>.17</td>
<td>-0.33 (0.75)</td>
</tr>
<tr>
<td>No. of prior hospitalizations</td>
<td>0.13 (0.07)</td>
<td>1.79</td>
<td>.07</td>
<td>-0.02 (0.06)</td>
</tr>
</tbody>
</table>

Abbreviations: BSI, Brief Symptom Inventory; CES-D, Center for Epidemiological Studies Depression Scale; SF-36, 36-Item Short-Form Health Survey.

*For this variable, 1 indicates the intervention group; and 0, the control group.

Table 4. Effects of Study Condition (Intervention vs Control) on Participant SF-36 Role Functioning and Vitality Outcomes and on the Relationship With the Ill Relative

<table>
<thead>
<tr>
<th>SF-36</th>
<th>Role Functioning</th>
<th>Vitality</th>
<th>Negative Views of the Relationship With the Ill Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (SE)</td>
<td>z Score</td>
<td>P Value</td>
</tr>
<tr>
<td>Intercept</td>
<td>52.51 (4.06)</td>
<td>12.92</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Intervention condition</td>
<td>5.69 (2.69)</td>
<td>2.11</td>
<td>.03</td>
</tr>
<tr>
<td>Time</td>
<td>3.45 (1.12)</td>
<td>3.07</td>
<td>.002</td>
</tr>
<tr>
<td>Married</td>
<td>8.16 (2.86)</td>
<td>2.85</td>
<td>.004</td>
</tr>
<tr>
<td>College graduate</td>
<td>8.45 (2.80)</td>
<td>3.02</td>
<td>.002</td>
</tr>
<tr>
<td>Schizophrenia diagnosis</td>
<td>4.73 (3.44)</td>
<td>1.37</td>
<td>.17</td>
</tr>
<tr>
<td>Illness &gt;10 y</td>
<td>5.25 (1.74)</td>
<td>1.91</td>
<td>.06</td>
</tr>
<tr>
<td>No. of prior hospitalizations</td>
<td>-0.55 (0.23)</td>
<td>-2.38</td>
<td>.02</td>
</tr>
</tbody>
</table>

Abbreviation: See Table 3.

*For this variable, 1 indicates the intervention group; and 0, the control group.
instructors who are perceived to be successfully meeting the challenges of their own relatives’ illness may strengthen participants’ sense of well-being and confidence in their ability to do the same. Third, enhanced well-being also may be because of group discussions of the emotional cycles families typically experience in reaction to their relatives’ mental illness. During these discussions, JOH participants are encouraged to express feelings of anger and sadness, identify and implement strategies for self-care, and develop plans to move forward with their own lives. Sharing these feelings with others who face similar problems may decrease feelings of powerlessness and hopelessness and increase feelings of self-efficacy.

Our results confirm prior education intervention studies that suggest that teaching families about the biological causes of mental illness may improve their views of their relationships with their ill relatives by helping them understand that symptoms such as social isolation and lethargy are the by-product of psychiatric disorders, and not willful behaviors. In addition to curriculum on the etiology of mental illness, other features of the JOH course also may contribute to this finding. One of the innovative components of this intervention is its emphasis on patient recovery. “Person first” concepts (ie, that the person is not the illness) are stressed throughout the course. Participants learn to work with, rather than for or against, their ill relatives, and to honor their relatives’ choices about treatment and personal life goals. These unique course features, combined with receipt of didactic information about the etiology of mental illness, may decrease families’ negative relationship assessments.

Although intervention group participants had significantly greater improvements in outcomes, controls also exhibited improved outcomes throughout the study period. This reflects a process defined by Solomon and colleagues as continued maturation, during which families’ ability to cope with their relatives’ mental illness naturally increases over time. The difference in outcomes between the 2 groups suggests that receipt of education may accelerate this process for intervention group participants, enabling them to more quickly achieve gains in their emotional well-being and relationships with their ill relatives.

There are several study limitations. Given our use of an inactive control group, it is possible that intervention participants’ improved outcomes may be placebo effects resulting from simply receiving attention from JOH instructors and classmates, rather than because of the intervention itself. Although use of an attention control group may have been preferable, evidence suggests that such groups may increase human subjects’ risks. We determined that depriving control group participants who enrolled in the study seeking family-led education of any opportunity to receive the JOH intervention following their research participation was unethical. An additional concern was the potential for higher attrition rates among controls because of nonreceipt of a family-led intervention. We, therefore, chose a waiting list design guaranteeing receipt of the intervention to minimize these risks.

The intention of our randomized clinical trial was to test the intervention in a population in which it is traditionally offered and in a way that did not alter program principles. Thus, the generalizability of our findings is limited by the fact that we did not draw subjects from a national probability sample of relatives of adults with mental illness or from clinical populations. Instead, we tested the intervention in Louisiana sites where the program is offered regularly by the National Alliance for the Mentally Ill Louisiana affiliates, and, in accordance with JOH program principles, used passive recruitment strategies to enroll family members who voluntarily sought assistance in dealing with their relatives’ mental illness. We believed it unfair to require control participants to wait a year or more to receive the JOH course; thus, our use of a 6-month postintervention follow-up does not allow us to determine whether outcome gains were maintained long-term (ie, 12 or 24 months’ postintervention). Finally, we did not test changes in family members’ relationships with their ill relatives, only their self-reported ratings of these relationships. We, therefore, cannot determine whether intervention participation results in actual improvements in these relationships, such as fewer arguments or more quality time spent with ill relatives.

In sum, the results of our randomized clinical trial contribute to the emerging research establishing family-led educational interventions as an evidence-based practice. Specifically, our findings suggest that participation in family-led education programs increases family members’ coping ability by decreasing depressive symptoms, enhancing emotional well-being and vitality, and improving their views of their relationships with their ill relatives. Changes in these outcomes suggest that family-led interventions may have important clinical implications. Many family members experience poor psychological health and discordant relationships related to their caregiving efforts; interventions such as JOH and the Family-to-Family Education Program may be effective, accessible, and affordable tools in reducing distress among this population. Given the growth and availability of these programs, additional analyses—and additional randomized clinical trials of family-led education interventions—are needed to determine the effect of program participation on other outcomes, such as knowledge of the etiology and treatment of psychiatric disorders, and to further establish these interventions’ efficacy in improving family members’ ability to cope with their adult relatives’ mental illness.

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