Journal of Mental Health,
February 2007; 16(1): 69–82

informa
healthcare

Understanding and engaging families: An Education, Skills and Support Program for relatives impacted by Borderline Personality Disorder

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Abstract

Background: Few methodologically sound studies have been conducted to facilitate the understanding of relationships in families with a member suffering from severe personality disorders. Because of severity, symptomatology, and high rates of co-occurring disorders, borderline personality disorder (BPD) particularly affects family members and others in their social environment. However, there are few interventions available to address the needs of these family members.

Aim: To report on a replication and extension study of ©Family Connections (FC), a 12-week community-based BPD education program for family members.

Method: FC participants ($N = 55$) were assessed pre, post and at 3-month post program follow-up on: (i) levels of change in family well-being outcomes: burden, grief and empowerment; and (ii) differences between male and female participants in these outcomes.

Results: Findings from the original FC study were replicated and extended: Participants showed significant improvements on all well-being variables, including significant reductions in depression. Outcomes for male vs. female participants were comparable at program completion except for grief, on which women remained higher than men despite significant improvements for both.

Conclusion: BPD family members experience significant distress but benefited from this semi-structured group program led by family members. Findings support the use of the FC program.

Declaration of interest: None.

Keywords: *Personality disorders, borderline personality disorder, family members, community-based program*

Background

Mental illness is a family affair. This may be particularly true in personality disorders (PDs) because of the interpersonal nature of their characteristics. Family members are perhaps the most affected and, in turn, are the people most likely to affect the individual with the disorder. Because personality disorders occur in the context of relationships, it is surprising that few programs have been developed to serve families with relatives diagnosed with Axis II disorders, particularly in comparison to the psychoeducation programs that have been developed and made available for Axis I disorders (McFarlane, Dixon, Lukens et al., 2003).

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ISSN 0963-8237 print/ISSN 1360-0567 online
DOI: 10.1080/09638230601182052

Overview of borderline personality disorder

Borderline personality disorder (BPD) is the most prevalent PD, the most researched PD and is the PD with the greatest reported utilization of psychosocial services (Bender, Dolan, Skodol et al., 2001; Bender, Skodol, Pagano et al., 2006; Trull, Stepp & Durrett, 2003). The disorder includes problems of pervasive patterns of affective instability, severe difficulties in interpersonal relationships, behavioral or impulse dyscontrol, and disrupted cognitive processes (American Psychiatric Association, 1994).

The incidence of BPD in the general population has been variously estimated to be from about 0.7% to 2% (Swartz, Blazer, George et al., 1990; Torgersen, Kringlen, & Cramer, 2001). However, even if the more conservative estimates are correct this represents many millions of family members world-wide that are directly impacted by this severe and life-impairing psychiatric disorder.

Family member perspectives

The impact of any mental illness on family members, regardless of diagnosis, can be catastrophic. Family members often are on the front line serving as informal case managers, or as the de facto crisis intervention workers who handle calls of suicidal behavior and emergencies. Unfortunately family members are thrust into roles that require family members to manage situations for which they are ill prepared. Thus, not surprising, studies indicate that family members with a relative with a mental illness are, in general at high risk for depression (Dyck, Short & Vitaliano, 1999; Song, Biegel, & Milligan, 1997). Other data document that, in addition to depression, stress from having a relative with a mental illness is associated with burden, grief and isolation (Greenberg, Seltzer, & Greenley, 1993; Lefley, 1987).

Of note, in a study of stress among clinicians (Hellman, Morrison & Abramowitz, 1986), the three most extreme stressors for mental health providers were patient suicide attempts, threats of suicide, and patient anger, all associated features of BPD. Interestingly, all these characteristics are features associated with BPD and affect family members directly. As noted by Gunderson and Hoffman (2005, p. 4), "...families are troubled by the same problems that vex mental health professionals – problems that are even more demoralizing for families". However, family members are not trained and, frequently, are too deskilled (overwhelmed, not able to use their full set of skills) to effectively manage roles they did not volunteer to undertake.

This impact on BPD family members cannot be underestimated. BPD family members often report feeling too traumatized and disempowered to be of help to their ill relatives (Hoffman, Penney, & Woodward, 2002). Up to 73% of those diagnosed with BPD have made at least one suicide attempt with an average of 3.4 lifetime attempts (Soloff, Lynch, Kelly et al., 2000) and 10% of patients with BPD eventually commit suicide (Center for Disease Control, 1997).

Few methodologically sound studies have even been conducted to research family relationships and PDs. Prospective data on etiology and the role family members may play in the development and course of personality disorders are virtually absent, although these issues are highly controversial (Fruzzetti, Shenk, & Hoffman, 2005). To date, there are two studies in the literature (Gunderson, Daversa, Grilo et al., 2006; Hooley & Hoffman, 1999), both studies lending support to the importance of family involvement and its influence on the course of the disorder. However, programs to intervene with families modify familial interactions and/or to educate family members are almost non-existent (Hoffman & Fruzzetti, 2005) and, family members are not able to do it alone.

The focus of this paper will be on the replication and extension of findings concerning the ©Family Connections program, a modality specifically designed to address some of the issues faced by these BPD family members. To our knowledge, FC is the only researched education and support program specifically for family members who have a relative with BPD (Hoffman, Fruzzetti, Buteau, et al., 2005).

Family connections

Program rationale

A key rationale behind Family Connections stems from the same psychosocial predictor of relapse that was the impetus behind the programs designed for Axis I disorders, a construct called Expressed Emotion (EE; Hooley & Hoffman, 1999; Hoffman & Hooley, 1999). EE studies document a correlation between patient relapse and family member attitudes and beliefs expressed about the patient (Vaughn & Leff, 1976). In the Axis I family studies, the initial goal was to lower certain EE attributes or related characteristics in the family environment that were shown to affect negatively the course of the disorder.

Interestingly, when using the same research methodology with BPD patients, the EE findings were, in one way, contrary to the Axis I findings: the results showed that the more "emotionally over-involved" family members were with the patient, the *better* the patient fared over a one-year course of the illness. The significant message in the EE finding with BPD is that "helping family members stay the course with the patient" can be important to the patient's well-being (Zanarini, 2002). The Family Connections program was conceived with the over-arching goal being to support family members in their efforts to be emotionally involved with their relative in effective ways, to increase their own well being and also to have a salutary effect on the relative with BPD.

Theoretical derivations

FC was formulated on two well-known theoretical models. The first is the stress-coping-and-adaptation (SCA) model of Lazarus and Folkman (1984) which focused on the strengths, resources, and adaptive capacities of the individual. Based on the hypothesis that with major life event and challenges, functioning is disrupted (Mechanic, 1995). SCA promotes adaptive coping through the use of cognitive and behavioral strategies (Lazarus & Folkman, 1984). This paradigm with mental illness identifies that there are certain stressors, such as the ill relative's symptomatology, that typically alter the family member's life. These accompanying stressors require personal resources (coping skills) on the part of the family member to adapt to and tolerate the atypical life events and burdens that surround mental illness. In the frame of the SCA model, the development of coping strategies act as a mediator to help the family member better manage the stressors inherent in mental illness in the family environment.

The second model on which FC is based on the treatment model of Dialectical Behavior Therapy (DBT). DBT is a cognitive behavioral paradigm that has been shown repeatedly to be successful in treating BPD and related problems (Linehan, 1993a; Linehan, Heard, & Armstrong, 1993; Verheul, Van Den Bosch, & Koeter, 2003). Implementing DBT with families is also based on a biosocial theory and uses some individual skills of standard individual DBT (Hoffman, Fruzzetti, & Swenson, 1999), along with skills developed specifically for family members (Fruzzetti & Hoffman, 2002; Fruzzetti & Fruzzetti, 2003; Fruzzetti, 2006), providing a set of coping strategies for family members. Based on the dialectic of acceptance and change, family members acquire skills that promote a view of balance between their needs and the needs of their ill relative (Fruzzetti, Santiseban, & Hoffman, in press; Fruzzetti & Iverson, 2006).

The format and structure of FC was formulated on a synthesis of several different treatment modalities:

(1) family psychoeducation programs, an approach that has been in existence for more than 30 years with other psychiatric disorders (Anderson, Hogarty, & Reiss, 1980); and
(2) family education programs, specifically "Family-to-Family," sponsored by the National Alliance for the Mentally Ill's (NAMI; Dixon, Lucksted, Stewart, et al. (2004).

Introduction

Family Connections *is* a manualized, education, skills training and support program. FC is conducted in a community setting in groups led by trained group leaders who are typically family members with BPD relatives themselves. The uniqueness of FC is its specific focus on issues specific to BPD with a course that provides: (i) current information and research on BPD and on family functioning; (ii) individual coping skills; (iii) family skills; and (iv) group social support and opportunities to build an ongoing support network for family members.

Initial study

In the initial FC study, changes in participant outcomes from baseline to completion of the FC program and three-month post baseline were assessed (Hoffman, Fruzzetti, Buteau et al., 2005). The original 44 FC participants reported a significant decrease in burden and grief and a significant increase in mastery (empowerment). These well-being variables were defined as follows: (i) overall burden: a family member's reported stressors due to relative's symptomatology (Reinhard, Gubman, & Horowitz, 1994), often considered as two components, objective and subjective burden (Hoenig & Hamilton, 1966); (ii) grief: cognitive, emotional and psychological problems such as sadness, pain and loss associated with having a relative with mental illness (Miller, Dworkin, Ward et al. 1990); (iii) mastery: the identification of self-management skills to cope with having a relative with mental illness (Hoffman et al., 2005).

Replication study

Increasing demand for the FC program both suggested both the need for and provided the opportunity to conduct a replication study to confirm and expand the initial findings. The study hypotheses were that initial study results would be replicated such that participants would demonstrate a decrease in burden and grief, and an increase in mastery. In addition, it was hypothesized that depression would decrease in this study despite no change in the initial study. The depression hypothesis was included based on the finding from many Axis 1 family programs in which change in depression was consistently documented (McFarlane et al., 2003). With a larger FC sample here, compared with the initial study (Hoffman et al., 2005), it was anticipated that more statistical power would detect such a change in depression.

In addition, this study explored a topic that is a relatively understudied phenomenon in mental illness family literature, the similarities and differences in well-being between male and female family members (parents, partners and siblings of someone with BPD). Research studies on mental illness in general have reported disproportionately more on male patients (Struening, Stueve, Vine et al., 1995), although quite the reverse is true with BPD where the majority of researched subjects have been female.

In family research and mental illness however, the experiences of female family members of persons with mental illness have been more the general focus. In fact, male family members by and large have been ignored (Cordell & Thomas, 1990; Greenberg, Greenley, Seltzer, & McKee, 1993; Maurin & Boyd, 1990). The reasons for the relative absence of research on male family members are, perhaps, twofold: (i) community values support that women assume the majority of responsibility for an ill relative (Kaye & Applegate, 1990; Miller & Cafasso, 1992); and (ii) women are participants in family programs more often than men and thus, more accessible for study (Pickett-Schenk, 2003). The past few decades, however, seem to have brought some changes with men becoming increasingly more active in assuming responsibilities for an ill family member (Brown & Powell-Cope, 1993; Grosser & Vine, 1991; Kaye & Applegate, 1990). Thus, it is relevant and important to understand the experiences of both men and women in these roles as family members of someone with BPD, and then to ascertain whether modified services are warranted.

To date, to our knowledge, there are no data available on sex differences in the well-being of family members who have a relative with BPD. It was hypothesized, however, that given the higher levels of distress reported in female family members who have a relative with other psychiatric disorders (Cuijpers & Stam, 2000; Greenberg, Seltzer, & Greenley, 1993; Noh & Turner, 1987; Webb, Pfeiffer, & Mueser, 1998) men and women would differ. In the current study, sex differences were examined in scores at program entry and program completion, as well as the amount of change from program entry to completion.

Methodology

This replication study followed the study design of the original FC study (Hoffman et al., 2005). Participants were family members who were referred to the 12-week program from various sources (therapists, staff at NAMI offices, psychiatric institutions, the Borderline Personality Disorder Resource Center and/or NEA-BPD). At each of the five existing sites there were waiting lists for entrance into the program. All potential participants signed written informed consent prior to the initial assessment.

Participants

Fifty-five family members participated in the replication study. The age of participants ranged from 27 – 75, with an average of 53.40 years (SD = 8.84). Seventy-seven percent of participants were parents of ill family members; 56% of these were mothers and 21% were fathers; 9% were spouses, 2% were partners and 5% were children; 7% percent were siblings. 55.4% of family members lived with their relative. Thirty-one family members attended FC alone without others from their family; 26 attended with another person from their family, typically a spouse or partner. The age of BPD relatives ranged from 17 – 77 with a mean of 28.77 (SD = 11.21). The average number of years since the onset of the disorder (reported by family members) was 13.73 (SD = 11.50; median = 11.00) and the average number of hospitalizations was 2.60 (SD = 3.41; median = 2.00). Forty-three percent of ill relatives had been hospitalized within the last six months; 57% had not.

Dropout rate for the program, as defined by missing more than three sessions in the 12-week series, was 7%. Group attendance was high with an average of 83.25% sessions attended. Assessments were completed at program entry, post program completion and at six-month post baseline (three months after the end of the FC program), with 91% ($n = 50$) returning the follow-up questionnaire.

Analyses

As reported in Hoffman et al. (2005), hierarchical linear modeling (HLM) was used (Raudenbush, Bryk, & Congdon, 2000); the method of estimation used was full maximum likelihood was used to assess change from pre- to post-test, and from post test to six months post baseline. In the context of these studies, HLM was a more appropriate analysis than traditional repeated measures because the data structure includes nesting of time points within family members (allowing multiple family members to be included in the analysis without introducing problems of dependence in the data). The current analysis includes 12.3% missing data at the six months post baseline assessment and additional data missing at random at the first two time points. Repeated measures ANOVA procedures delete participants who do not have data at all time points involved in the analysis, while HLM includes these participants in the analysis, thereby increasing the power of the analysis.

Analyses similar to those in the Hoffman et al. study (2005) were conducted. Thirty-one of the family members were the only person from their family participating in this study, while the remaining family members were coupled with someone else from their family. Because only slightly more than half of all family members were nested within the higher-level unit of a dyad, and because our hypotheses pertain to individual level change, two level models were pursued for this replication instead of the three level models in conducted in the initial study. Therefore, we have three time points nested within each of 55 family members.

Using HLM, total burden, subjective burden, objective burden, depression, grief and empowerment were modeled separately as a function of change between pre and post, and between post and the six-month post baseline. The passage of time during each period is represented in the model by a dummy variable at level 1. Therefore, the model includes two dummy variables at level 1, the first representing the difference between pre-and post-test, the second representing the difference between post-test and the six-month post baseline follow-up. Posttest is the category chosen as the reference group (represented by the intercept in the model) so that the level-1 slope coefficients would represent the relevant mean levels of change between each pair of time points.

Results

The HLM models indicate that levels of overall burden, subjective burden, objective burden, grief and depression decreased, and mastery increased, from pre FC to post FC ($d = .56$; $d = .41$; $d = .52$; $d = .28$; $d = .32$; $d = -.95$, respectively). See Table I for participant level means on each well-being variable at each of the three time points.

During the three-month period after FC ended1 grief continued to decrease ($d = .18$) and mastery also decreased ($d = .23$), while depression, total burden, objective burden and subjective burden showed no change. See Table II for all model coefficients corresponding to significant findings.

Table I. Descriptive statistics.

Variable	Range	Pre Mean (SD)	Post Mean (SD)	Follow-up Mean (SD)
Burden	20–80	54.44 (10.67)	48.18 (11.80)	47.15 (12.98)
Objective Burden	10–40	26.19 (5.69)	23.07 (6.22)	21.93 (7.03)
Subjective Burden	10–40	28.13 (6.42)	25.39 (6.86)	24.47 (7.33)
Depression	14–56	27.61 (8.65)	24.93 (8.04)	25.55 (8.95)
Grief	15–75	55.61 (11.78)	52.42 (11.15)	50.28 (12.47)
Mastery	15–60	38.11 (6.14)	43.88 (6.03)	42.52 (5.79)

Examination of gender differences

Thirty-three percent of participants were men ($n = 19$), 67% were women ($n = 38$). Men and women did not differ in the percentage of FC sessions attended, t (55) = −.332, ns [M = 82.48% (SD = 14.42) and M = 83.64% (SD = 11.42), respectively]. Male and female participants did not differ in age [t (53) = −.210, ns; M = 53.05 (SD = 10.50) and M = 53.58 (SD = 7.99), respectively]; nor did the average age of their ill relatives differ [t (55) = .008, ns; M = 28.79 (SD = 8.24) and M = 28.76 (SD = 12.53)]. Both male and female participants were more likely to be parents of their ill relatives than not, [$\chi^2 = 3.12$ (1), ns]. But while 73.7% of male family members lived with their ill relative 45.9% of female family members lived with their ill relative [$\chi^2 = 3.91$ (1), $p < .05$]. There was no gender difference with regard to whether or not the ill relative had been hospitalized in the last six months [$\chi^2 = 3.64$ (1), ns].

Gender differences of participants at program entry and program completion

Gender differences were varied. At the beginning of FC, women reported higher levels of grief than did men, t (54) = −4.34, $p < .01$ [Male: M = 47.33 (SD = 10.01) and Female: M = 59.87 (SD = 10.35)]. While men and women did not report statistically different levels of overall burden at baseline, when burden was broken down into its components of objective and subjective burden, women reported experiencing more subjective burden than men at baseline, t (51) = −2.60, $p < .05$; [Male: M = 24.67 (SD = 6.60) and Female: M = 29.50 (SD = 5.89)]; there was no difference in ratings of men and women on objective burden. At entry, there was no gender difference in level of stress, depression or mastery. See Table III for means and standard deviations.

At the end of FC, women still reported higher levels of grief than did men, [t (51) = −3.39, $p < .01$; Male: M = 45.82 (SD = 8.41) and Female: M = 55.81 (SD = 10.95)]. No other gender differences emerged at program completion. It is important to note, however, that when controlling for scores at program entry, there is no longer a gender difference for grief at program completion. See Table III.

Gender differences in amount of change

To examine whether or not gender predicted the degree of baseline to program completion change in any of the outcomes, gender of participant was added as a level 2 predictor of pre to post change in the multilevel models for each outcome. Again, gender differences varied. Gender was a significant predictor of change for overall burden, subjective burden and grief such that women experienced higher levels of pre to post change than did men. However,

Table II. Outcome variables: Coefficients and significance.

Fixed effect		FC change	Gender change	FC change	Gender change
		Burden		Grief	
Intercept	Intercept	48.275***	48.279***	51.989***	51.954***
		(1.647)	(1.643)	(1.571)	(1.574)
Pre-Post change	Intercept	6.165***	2.876	3.490**	−.177
		(1.232)	(1.802)	(1.160)	(1.815)
Gender			4.927*		5.631*
			(2.014)		(2.088)
Post-Follow change	Intercept	−.914	−.893	−1.940*	−1.898*
		(.986)	(.986)	(.897)	(.893)
Variance Comp.					
Level 1	Within	24.211	24.173	20.022	19.830
Level 2	Intercept	125.167**	124.620**	116.571**	116.916**
	Pre-Post Slope	33.060	29.720**	31.432**	34.610**
		Subjective Burden		Objective Burden	
Intercept	Intercept	25.397**	25.409**	23.132**	23.166**
		(.939)	(.937)	(.900)	(.900)
Pre-Post change	Intercept	2.823**	.850	2.740**	1.049
		(.689)	(1.127)	(.772)	(1.151)
Gender			2.727*		2.475
			(1.239)		(1.277)
Post-Follow change	Intercept	−.453	−.462	−1.007	−1.036
		(.586)	(.586)	(.681)	(.681)
Variance Comp.					
Level 1	Within	7.848	7.824	9.238	9.242
Level 2	Intercept	40.372**	40.170**	31.949**	31.958**
	Pre- Post Slope	7.871**	7.944**	8.452**	7.130*
		Mastery		Depression	
Intercept	Intercept	43.867***	43.867	24.663**	24.656**
		(.804)	(.803)	(1.150)	(1.152)
Pre-Post change	Intercept	−5.753***	−5.210***	2.944**	1.606
		(.730)	(1.153)	(.990)	(1.527)
Gender			−0.817		2.018
			(1.338)		(1.751)
Post-Follow change	Intercept	−1.434*	−1.438*	.736	.749
		(.630)	(.631)	(1.019)	(1.018)
Variance Comp.					
Level 1	Within	9.960	9.961	25.857	25.774
Level 2	Intercept	25.359**	25.241**	46.501**	46.796**
	Pre-Post Slope	8.900**	9.149**	1.073	1.236

gender was not a significant predictor of change for mastery and depression. An interaction with gender was also tested at level two for pre to post change as such a relationship seems reflected in the raw means; this analysis, however, showed no statistical significance. See Table II for all model coefficients.

Discussion

This study examined a second cohort of 55 FC participants. The goal was to see whether the findings in the initial FC study would be replicated (Hoffman et al., 2005) and whether the

Table III. Pre and post descriptive statistics by gender.

	Men		Women	
	Pre	Post	Pre	Post
Burden	50.67 (11.80)	48.20 (11.86)	56.33 (9.67)	48.16 (11.94)
Objective Burden	24.81 (6.30)	22.93 (6.16)	26.88 (5.33)	23.13 (6.35)
Subjective Burden	24.67 (6.60)	24.71 (6.75)	29.50 (5.89)	25.74 (6.98)
Depression	25.71 (8.49)	25.44 (8.25)	28.56 (8.69)	24.66 (8.03)
Grief	47.33 (10.01)	45.82 (8.41)	59.86 (10.35)	55.81 (10.95)
Mastery	38.30 (6.96)	42.83 (4.66)	38.02 (5.79)	44.42 (6.62)

FC program would have an impact on well being for participants. Additional analyses were also conducted to evaluate whether there were differences between male and female participants in measures at pretest, or further sex differences in how much improvement was shown from pre to post program participation.

Findings from the initial FC study were supported here, and extended. Participants in the current study reported significant decreases in burden and grief and a significant increase in mastery from pre-test to post-test. Interestingly, however, findings between the studies were different for depression. Unlike the initial study, in which depression did not change significantly from pre to post, depression scores did improve (i.e., decreased) in the current study. This discrepancy between the two studies on the depression findings may result any of several factors that differed between the two studies: (i) pretest levels of depression; (ii) leader experience; and/or (iii) statistical power.

First, depression scores in the two studies were statistically equivalent both at program entry and program completion. However, depression scores in the current study were 1.8 points higher than in the initial study at pre test. Although this difference is not statistically significant, it may have allowed more room for change from pre to post in the present study. In fact, post test scores in both studies approached the normal range, suggesting a floor effect. Thus, small differences in pretest severity may account for the difference between the two studies. This may be important because a wide range of participant levels of depression were included. Current results suggest promising results even for those who enter the FC program with higher levels of depression.

Second, program group leaders in the present study also had been the leaders in the first study. Having had more experience, perhaps they were more effective in teaching, modeling, and leading the group.

Finally, significant changes in depression in the current study (but not in the first study) may be due to increased power because the second study has 11 more subjects than the first. Of course, further research is needed to better understand the impact of FC on participants' depression.

When examining follow-up results three months after program completion, replication findings were generally consistent with the initial findings, except for the following differences:

(1) The initial study showed a further decrease in burden from post to follow-up with all other variables showing no change from three months program completion, and
(2) The current study showed that initial improvements in overall burden, subjective burden, objective burden and depression were maintained from post to follow-up, while grief and mastery continued to improve during the follow-up period after

> program completion. Of particular note is the fact that all improvements were either maintained or extended during the follow-up period; on no measures did participants show decrements during the follow-up period.

Differences in follow-up data between the two studies may be a result of: (i) difficulties with the variance/covariance matrix in the HLM models; (ii) increased power: post to follow-up change was tested with more power in the replication study, therefore increasing the ability to detect changes; (iii) enhanced performance of group leaders (see above); or (iv) the amount of post-program contact that group members had with each other. For example, some groups scheduled regular, organized meetings on a monthly basis reviewing FC skills and extending peer support. Other groups met sporadically either as a group or in self-selected subgroups.

These findings contribute to the development of three important goals for future research: (i) to perform studies examining whether the 12-week length of the program is optimal; (ii) to conduct a randomized controlled trial to better understand potential long-term change in participant well-being; and (iii) to determine the impact, if any, of family members participating in FC on the relative with BPD. Let us consider these three issues in turn.

First, we know nothing about the optimal length of the FC program. Perhaps offering a "graduate" program ("advanced" group) or booster sessions would either enhance outcomes or help maintain them. Either addition could reinforce skills learned or facilitate participation in an informal peer support network. The length of the program itself could also be varied. Perhaps a longer program would be more beneficial, or a shorter program sufficient. Alternatively, a longer program might be perceived as too burdensome, perhaps being too long of a commitment, and a shorter program might provide too little time to provide meaningful improvements.

It is important to note though that although the present findings are robust (two studies), respectable and reliable, the effect sizes are generally modest for most outcome variables. Further research into putative mechanisms of change, optimal length of the program, and so on, would likely provide clues to help enhance the existing program. Thus, although it is clear that the existing FC program structure and curriculum is highly satisfying to participants, and that they demonstrate and maintain improvements in their well being over the course of their participation in FC and beyond, there remains much room for improvement.

In addition, a randomized controlled trial is needed for a variety of reasons. Although it is unlikely that time alone is responsible for the changes found, other "inert" or non-specific factors must be considered, such as heightened expectancies or simple attention. Only by comparing the FC program to an alternative program can the true impact of the FC program per se be measured. Furthermore, the components of the program responsible for improvements need to be identified. For example, if FC were compared to a "support" control condition, the relative impact of the education and skill component vs. the social support component of the FC program could begin to be understood and the relative effectiveness of the components parsed. And, of course, longer follow-up is desirable to measure the enduring impact of FC participation.

Finally, it is important to examine the impact on the person with BPD when his or her family member(s) participate in FC. Given the transactional model on which the FC program is predicated, we would anticipate that there would be salutary effects for the BPD family member. That is, if family members are learning to manage themselves more effectively, find more balance, reduce their own negativity, and also learn how to be more attentive and validating of their loved ones, this should result in some improvement in the family member with BPD. But, this has not yet been evaluated. Thus, there could be no effect, and even a negative effect is possible.

The second set of analyses of this study explored well-being and gender differences. Participant gender was examined in relation to well-being levels at program entry, program completion and amount of change during the course of the program. In general, it is important to emphasize that men and women were more similar than different in their outcomes. However, data documented that grief and subjective burden did differ between male and female FC participants. Both variables showed sex differences at program entry (women reported higher levels of grief and subjective burden). Depression and mastery were not statistically different between men and women at pretest.

On measures of grief and subjective burden, women entered FC reporting higher levels than men. Interestingly, women showed significantly more reductions than men in their levels of subjective burden and grief during the course of FC. However, comparability at post test between men and women on burden scores, women remained statistically higher on grief scores than men. (It is important to note that when statistically taking into account the fact that women began FC with higher levels of grief than men, sex is no longer a significant predictor of scores at program completion.) Thus, the question remains: if women began the program with higher subjective burden and grief scores, why was this gender gap resolved at program completion for subjective burden but not for grief?

We may look at course content and group process for some possible explanations. First, it is interesting to note that burden, a phenomenon that has been explored in some depth with families and mental illness, is the experience most-often identified in this literature (Glanville & Dixon, 2005; Gubman & Tessler, 1987; Noh & Turner, 1987; Veltman, Cameron, & Stewart, 2002). Typical gender role expectations provide one way to understand why women enter the FC program at higher levels of subjective burden. The role of women has been more associated with nurturance and support, and women are more likely to provide support and care-giving, all behaviors related to subjective burden (Cook et al., 1997). Conversely, male caregiving roles are more likely to be concrete and managerial, which are related to *objective* burden (Cook, Pickett, & Cohler, 1997; Lefley, 1987; Maurin & Boyd, 1990). The FC course content places a central emphasis on participants' emotional needs, which highlights *subjective* burden experiences. Topics such as "Observing One's Own Limits" and "Setting Relationship Priorities" provide information and skills that may be related more to participants' subjective burden experiences. In addition, homework practice assignments encourage family members to take care of their own needs with the explicit goal to lower subjective burden.

Grief is the other gender-related variable, and in contrast to burden, is a relatively untapped area of research in mental illness and families (Miller et al. 1990; MacGregor, 1994), and gender differences have not been reported (Struening et al., 1995). In this study, levels of grief of female family members were higher than males at pretest. What might account for sex differences (higher scores for women) on grief at both the pre and post tests? Both program content and group milieu may have an impact. Women, in particular, report grieving around the concept of a pathological or dysfunctional family and experience guilt about the impact of the illness both on the identified patient and on other family members. This aspect of the grieving process, mourning the loss of a family ideal, in part because women may relate more to the female caregiving role and the real or perceived responsibilities incumbent on being female in the family.

Grief change may result from the teaching of self- management skills such as Relationship Mindfulness, Validation, and Radical Acceptance (Fruzzetti & Hoffman, 2002). For example, considerable time is focused on accepting what cannot be changed while dialectically balancing acceptance with a focus on change and problem solving.

For both men and women who participate, important changes in grief, burden, mastery, and depression have been shown, which are maintained (or continue to improve) during the follow-up period. The FC program offers easy access, is community-based, and is free of cost to participants. Two studies have demonstrated these positive results, although the relative importance of the FC components of family psychoeducation, individual and family skills, and social support, has not yet been identified. Participants may be helped through the mutual sharing or support they receive in the group. In addition, participant well-being changes may be related to improvements in their ill relatives, which have not yet been evaluated, as noted above.

It is apparent that that Family Connections is a promising program for relatives of people with BPD. The model in FC focuses on family members learning to: (i) manage their own emotional arousal, which allows them to pay more attention, act more and react less; (ii) self-manage to be less invalidating; (iii) be more mindful of their BPD relative, better able to listen, understand, and accept his or her experiences; and (iv) provide a validating response to the BPD relative's experiences. Validation is a key FC component, predicated of course on emotional self-management and relationship mindfulness. Given the enormous differences between clinic and non-clinic families on both validating and invalidating responses (e.g., Shenk & Fruzzetti, 2006), reducing invalidation and increasing validation are important goals. And, continued examination of validating and invalidating family behaviors is a fecund area for research.

While more research is needed, at this point FC offers stressed and distressed family members some hope of ameliorating grief, burden and depression, and on increasing their sense of mastery an empowerment vis-à-vis their family member with BPD.

Acknowledgements

Grateful appreciation to the National Institute of Mental Health for the support of this research.

Note

1 When testing post-test to follow-up change for all outcomes, a problem was encountered with the variance/covariance matrix. Setting the level one residual parameter variance to a near-zero value did not alleviate this problem, so post to follow-up change was tested as a fixed rather than a random effect. As a result, change from post-test to follow-up in these two models was tested with degrees of freedom according to the number of level-one units rather than the level two degrees of freedom used in the testing of pre to post change. Because of this change in the model, the following results should be interpreted with caution, as they were tested with more degrees of freedom than the other outcomes in this study, and than the outcomes in the initial study (Hoffman et al., 2005).

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