Effectiveness of a psychological support program for relatives of people with mental disorders compared to a control group: A randomized controlled trial

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ABSTRACT

Families of people affected by mental illness may suffer an adverse effect on well-being. In this study, the effectiveness of a cognitive—behavioral treatment designed for relatives of people with mental health problems was evaluated. The sample comprised 50 individuals: 30 in the experimental group, who completed assessment measures in pre—posttreatment and 6 months later, and 20 participants in the control group, who were assessed at baseline and 6 months later. In the experimental group, significant improvements in well-being were observed following the treatment and 6 months later, when compared to the control group, which did not demonstrate any significant changes in outcomes between the baseline and the second assessment 6 months later. This program has proven to be effective as a treatment for the relatives of people with mental disorders. Finally, several topics that may contribute to future research are discussed.

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Introduction

The prevalence rates of severe mental disorders range from 2% to 7% (schizophrenia, 1%; bipolar disorder, 2%; addictions, 5—7%; and severe depression, 4—6%) (National Institute for Health and Clinical Excellence (NICE), 2009). These disorders have a major influence on family dynamics, and they are characterized by substantial declines in cognition, mood, perception, behavior, and judgment.

Severe mental disorders such as schizophrenia, bipolar disorder, and addictive disorders have important implications not only for the people affected but also for the family environment around them, as in many cases the relatives are the primary caregivers of these patients and suffer directly the negative effects of mental and addictive disorders (Polo-López, Echeburúa, Berry, & Salaberría, 2014). In addition, in the case of the patients' parents, there is a negative impact on their ability to exercise their paternal or maternal role (Castle, McGrath, & Kulkarni, 2000; Eisenberg et al., 2008; Fernández-Montalvo & Castillo, 2004).

In fact, it is well established that living with a family member who has severe mental health problems can be very stressful. This group of relatives can experience high levels of burden as well as high rates of mental health problems (Martens & Addington, 2001). Thus, between about 15% and 66% of caregivers have significant levels of depressive symptoms (Gallagher-Thompson et al., 2000) or anxiety symptoms (Russo, Vitalino, Brewer, Katon, & Becker, 1995; Vázquez et al., 2013).

Living with a family member affected by a mental or addictive disorder often involves chronic and severe stress adversely affecting multiple areas of a person's life. Taking care of these patients involves addressing a range of stressful situations such as progressive dependence, disruptive behavior presented by the patient, restriction of freedom, loss of the previous lifestyle, and a focus on new tasks related to the disease (Stefani, Seidmann, Pano, Acrich, & Bail Pupko, 2003). Moreover, relatives may have to deal with patients' psychiatric symptoms, changes in the quality of relationships with patients, disagreements among family members, social marginalization, lack of support, and financial strains (Berry, Barrowclough, & Wearden, 2007; Castle et al., 2000).

Thus, relatives of people with severe mental disorders are at an increased risk of developing mental health problems themselves, and they actually show high rates of emotional disorders (American Academy of Child and Adolescent Psychiatry, 2002; Barrowclough & Tarrier, 1992; Palacios-Espinosa & Offir Jiménez-Solanilla, 2008;

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Rodríguez, Padilla, Caballero, & Rodríguez, 2002; Sánchez del Hoyo & Sanz, 2004; Slade, 2009). Specifically, caregivers are affected by increased rates of anxiety, depression, and distress compared to the general population (Kuipers, Onwumere, & Bebbington, 2010).

Undoubtedly, there is a need for providing support to relatives as caregivers according to the new NICE guidelines for psychosis and schizophrenia (2014). However, most of the programs carried out up to date are targeted towards reducing the level of expressed emotion and are more focused on the well-being of patients than on the caregivers' emotional needs (Budd & Hughes, 1997; Lobban, Postlethwaite, Glentworth et al., 2013). Some studies have also focused on family outcomes (positive and negative appraisal of caregiving) from a relapse prevention therapy in first-episode psychosis (Gleeson et al., 2010).

Therefore, the aim of this study was to assess the effectiveness of a psychological intervention, designed specifically for relatives of people with severe mental disorders and focused on their own well-being and emotional needs. The treatment is delivered in the setting of the clinical practice on an individual basis. The main hypothesis is that there would be clinical improvements in the experimental group after the intervention and significant differences in symptoms when compared to the control group.

Method

Design

This randomized controlled trial used a two-group experimental design with repeated measures. Randomization was performed by the order of arrival of the participants matching them by gender, age, and family illness. Thirty participants in the experimental group were assessed at pretreatment, at posttreatment (after attending the program), and at the 6-month-follow-up. In the control group, 20 participants were assessed at baseline and then 6 months later without any intervention.

Participants

The convenience sample of this study was composed of 50 participants seeking psychological support who responded to a call for volunteers made via the local media. This program was provided at no charge to the participants.

The inclusion criteria were as follows: (a) age of 18 years or over; (b) living with a person with severe mental health problems, including psychotic disorders, bipolar disorders, severe depression, and addictive disorders; (c) no history of severe mental problems; (d) not undergoing psychological treatment; and (e) provision of informed consent.

Measures

A semi-structured interview was designed to elicit sociodemographic variables, illness characteristics, and variables related to the mentally ill family member.

The Symptom Checklist-90-Revised (SCL-90-R) (Derogatis, 1992; Spanish version by González de Rivera, 2002) is a self-administered assessment of general psychopathology. It consists of 90 questions that are answered on a five-point Likert scale, ranging from 0 (none) to 4 (very much). It measures nine areas of primary symptoms: somatization (SOM), obsessive—compulsive (OBS), interpersonal sensitivity (INT), depression (DEP), anxiety (ANS), hostility (HOS), phobic anxiety (FOB), paranoid ideation (PAD), and psychoticism (PSI). It also provides three indices (Global Severity index (GSI), Positive Symptom Total (PST), and Positive

Symptom Distress Index (PSDI)) that reflect the overall severity of the person's symptoms. The test—retest is 0.70 and the alpha coefficient 0.90 (Derogatis & Unger, 2010). The SCL-90-R has been shown to be sensitive to therapeutic changes, and it may therefore be used for either single or repeated assessments.

The State-Trait Anxiety Inventory (STAI) is a commonly used measure of trait and state anxiety (Spielberger, Gorsuch, & Lushene, 1970). It can be used to diagnose anxiety disorders and to distinguish anxiety from depressive disorders. It is also often used in research as an indicator of caregiver distress. The STAI consists of 20 items assessing trait anxiety and 20 items assessing state anxiety. All items are rated on a four-point scale (e.g., from "Almost Never" to "Almost Always"). Higher scores indicate greater anxiety. Internal consistency coefficients for the scale range from 0.86 to 0.95; test—retest reliability coefficients range from 0.65 to 0.75 over a 2-month interval (Gros, Antony, Simms, & McCabe, 2007).

The Beck Depression Inventory II (BDI-II) is a 21-item self-administered inventory designed to measure the intensity of depressive symptoms in adults and adolescents (Beck, Steer, & Brown, 1996). Respondents are asked to indicate which statement best describes how they felt during the past 2 weeks including today. Items are rated on a four-point (0—3) scale, with total scores obtained by summing up the ratings for all items. Scores ranging between 0 and 9 are indicative of minimal depression; scores that fall between 10 and 18 are considered to reflect a mild level of depression; scores of 19—28 are considered moderate; and a score ranging from 29 to 63 is labeled severe. The test—retest is 0.75 and the alpha coefficient is 0.82 (Beck, Steer, & Carbin, 1998).

The Maladjustment Scale (Escala de Inadaptación) (Echeburúa, Corral, & Fernández-Montalvo, 2000) is a self-administrated scale. It consists of six items that are answered on a Likert scale, ranging from 0 (none) to 5 (very much). The scale reflects the degree to which stressful situations affect different areas of patients' daily life: work, social life, leisure, relationships, and family life. The total score ranges from 0 to 30, with higher scores indicating greater maladjustment. A score >2 on each item denotes maladjustment. Therefore, the cutoff point of the full scale is 12. The alpha coefficient is 0.94 (Echeburúa et al., 2000).

The Stress Coping Questionnaire — SCQ (CAE — Cuestionario de Afrontamiento del Estrés) (Sandín & Chorot, 2003) is a self-administrated assessment questionnaire evaluating seven styles of coping: focused on the solution of the problem (FSP), negative self-targeting (self-criticism) (NST), positive reappraisal (PR), open emotional expression (OEE), avoidance (AVD), seeking social support (SSS), and religion (RLG). It consists of 42 questions that are answered on a five-point Likert scale, ranging from 0 (never) to 4 (almost always). Each subscale ranges from 0 to 24 with higher scores on each subscale indicating greater use of that style. The alpha coefficient is 0.85.

The Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965) is a self-administrated scale of 10 items designed to measure self-esteem. The alpha for the scale is 0.92. The test—retest reliability over a period of 2 weeks reveals correlations of 0.85 and 0.88, indicating excellent stability (Robins, Hendin, & Trzesniewski, 2001). The cutoff point of this instrument is 29 (Ward, 1977).

Treatment

The treatment consisted of 10 weekly individual sessions of 1-h duration. The psychological support program was designed based on a cognitive—behavioral approach, which emphasizes the learning ability of people to cope with stressful life events. The treatment was based on a handbook, where the objectives, content,

and tasks used for each session were described. It was delivered by the first author of this study. All participants were provided with workbooks to use during sessions, and homework tasks were assigned between sessions.

The main objective of the program was to help families understand the relative's mental disorder, providing them with tools to manage their discomfort and strategies to improve their relationship with the ill family member. Another aim was to provide them with effective coping strategies to use in the face of potential stress.

The program included psychoeducation about the specific disorder and the modification of maladaptive thoughts, behavioral symptoms, and deficits related to living with a person with severe mental disorder. The intervention was tailored to the specific features of each participant. The program is summarized in Table 1.

Procedure

The treatment program was carried out at the Unit of Clinical Psychology of the Basque Country University between 2010 and 2013. This psychological support program was approved by the University Ethics Committee.

Following informed consent, in which anonymity and confidentiality were stressed, the initial assessments were performed in two sessions. The experimental group was assessed at pretreatment, at posttreatment (after attending the program), and at the 6-month follow-up. The control group was assessed at baseline and after a period of 6 months without treatment, in order to check whether the passing of time had generated any change in the measures. All the questionnaires were self-reported.

Data analysis

SPSS 20.0 was used for analyzing the data. Data were analyzed using descriptive statistics: means and standard deviations for quantitative variables and frequencies and percentages for qualitative variables.

Regarding comparison between the two groups, the normality assumption was checked using the Kolmogorov—Smirnov test, which was not met in some variables (Age, SCL Hostility—Phobic Anxiety—Psychoticism, SCQ-Religion, BDI, and Maladjustment). Therefore, analysis of covariance (ANCOVA) tests were used with pretest variables as covariates, and the partial eta squared (η^2) was calculated in order to estimate the magnitude of the difference between groups and the effect size of the intervention.

Table 1
Components of the psychological support program for relatives of people with mental disorders.

Session	Components
1	Family history and explanation of the impact of familial disease
2	Psychoeducational intervention: specific disease of relatives
3	Anxiety management training and relaxation techniques
4	Relationship between emotions—thoughts—behaviors
	Cognitive distortions about guilt, shame, and anger
5	Thoughts management training:
	Event—automatic thought—discussion—adaptive thinking
6	Sadness management (working with meaningful activities and related thoughts)
	Increased self-esteem (identifying strengths)
7	Social skills training and communications skills
	Assertiveness
8	Contingency management with the person with mental disorder
9	Problem solving
10	Summing up and closure: relapse prevention
	What have I learned about my situation?

Results

Sample characteristics

The sample characteristics are summarized in Table 2. Most participants were female (80%), with an average age of 44 years. In most cases, they were married or living as a couple. Thirty-eight percent of the subjects were parents of persons with mental disorders, 18% were sisters or brothers, and 32% were sons or daughters.

In most cases, the type of the family member's mental disorder

Table 2
Sociodemographic characteristics, degree of kinship, and variables related to the mental disorder.

Degree of kinship and mental disorder characteristics	Sample N = 50	
	N	%
Degree of kinship		
Son/Daughter	19	38
Mother	11	22
Father	5	10
Sister/brother	9	18
Couple	6	12
Type of mental illness		
Psychotic disorder	27	54
Bipolar disorder	10	20
Addictions	6	12
Personality disorders	4	8
Depression	3	6
In treatment (the ill family member)		
Yes	38	76
No	12	24
Previous treatment (partaker)		
None	26	52
Psychopharmacological	12	24
Psychological	7	14
Both	5	10
Drug habits of the partaker		
None	18	36
Alcohol	16	32
Smoke	8	16
Smoke + alcohol	6	12
Smoke + alcohol + cannabis	2	4
Victim of aggression		
No	32	64
Yes	18	36
Time spent living M SD		
Years of cohabitation	24.4	7.8

Sociodemographic characteristics	Sample N = 50	
	M	SD
Age	44.56	15.5
Gender	N	%
Women	40	80
Men	10	20
Marital status		
Married/Couple	31	62
Single	13	26
Divorce/Separate	5	10
Widower	1	2
Education		
University level	28	56
First level	11	22
Secondary level	11	22
Labor status		
Working	31	62
Unemployed	12	24
Studying	6	12
Studying and working	1	2
Monthly income		
More than 1000€	26	52
Less than 1000€	24	48

was a psychotic disorder (54%), followed by bipolar disorder (20%) and addictions (12%). Regarding participants, more than half (52%) had not undergone any previous treatment. Thirty-six percent of the sample suffered aggressions from the family member with mental disorder.

On comparison, both groups were homogeneous, except in the age variable. Participants in the control group ($M = 48$ years old, $SD = 16.4$) were older than those in the experimental group ($M = 42$ years old, $SD = 14.6$) ($t = -3.638$; $p < 0.001$).

Results of treatment: between-group analysis

The means and standard deviations in the different variables and at each assessment point (pre-, post-, and 6-month follow-up) of both groups are displayed in Table 3.

Regarding the effectiveness of the psychological support program, on comparing the scores of the experimental group with the control group at the 6-month follow-up, statistically significant differences with considerable effect sizes were seen in all subscales of the SCL-90-R. Thus, whereas at the pretreatment assessment scores for subjects of both groups are positioned in the 90th percentile of scale scores in the general population, at the 6-month follow-up assessment subjects of the experimental group were in the 30th percentile in most measures (range between 5 and 40) and those of the control group were in the same situation as at the pretreatment assessment.

In psychopathological variables (BDI, STAI-S, and Maladjustment), improvement in treated subjects compared to control group subjects was statistically significant with large effect sizes in all measures. Therefore, the control group subjects at the 6-month follow-up assessment were in the same situation as at the pretreatment evaluation. However, the depressive symptoms of treated subjects reduced from mild depression to sickness absence; likewise, their anxiety level was reduced from the 85th to the fifth percentile (indicating absence of anxiety), and their levels of maladjustment improved at levels below the cutoff point.

Most control group subjects did not show significant changes with respect to coping strategies. However, treated subjects increased strategies more focused on finding solutions more proactively (FSP) and showed a decrease of negative self-targeting (NST), as well as more adaptive reevaluating situations (PR) and an increase in their social support network (SSS). They also reduced the level of open emotional expression (OEE), as well as the levels of anger and criticism. Finally, there was evidence of an increase in self-esteem. Almost all measures showed moderate–large effect size (Table 4).

Discussion

The results reported in this study on the sociodemographic data from a sample of families taking care of relatives with mental disorders or addiction show a much higher prevalence of women seeking help than men (80%). This finding may reflect, as in other studies, the burden of caregiving falling primarily on women if a family member is ill (Goodman & Tully, 2006; Kuipers et al., 2010), but it could also mean that women are more active in seeking treatment.

High levels of distress were observed in our sample, consistent with previous studies (Barrowclough & Tarrier, 1992; Dixon & Lehman, 1995; Kuipers et al., 2010). Thus, considering the cutoff points established for various assessment tools, the participants in this study demonstrated high levels of both overall discomfort symptoms (such as depression and anxiety) and maladjustment. Regarding self-esteem, relatives showed low scores and maladaptive strategies to cope with stress, which were higher than the

general population in negative self-targeting (self-blame, self-criticism, etc.) and lower in positive reappraisal levels. In addition, 36% of the families have suffered episodes of violence at the hands of the mentally ill family member, indicating that caregivers are at a risk of such violence. The results of this study are according to the new NICE guidelines for psychosis and schizophrenia (2014), which specifically recommend supportive interventions targeted at caregivers themselves. In a detailed review by Lobban et al. (2013), only 10 studies on specific individualized treatment for family members of persons with severe mental disorders are described. Generally, most treatments available for relatives of patients with mental disorders are in group format and mainly employ psychoeducational approaches. Moreover, most of them are focused on reducing the level of expressed emotion in caregivers/relatives/parents towards the person with mental disorder and not on developing strategies that will help decrease the burden and stress of caregivers (Dixon et al., 2011), but some studies have focused on

Table 3
Results of treatment: descriptive statistics.

Scale SCL-90-R	PRE M (SD) Experim N = 30 Control N = 20	Post M (SD) Experim N = 29	6 months M (SD) Experim N = 29 Control N = 20
SCL-SOM			
EXP	1.55 (0.62)	0.28 (0.31)	0.18 (0.30)
CON	1.21 (0.85)	–	1.20 (0.84)
SCL-OBS			
EXP.	1.65 (0.82)	0.46 (0.39)	0.28 (0.35)
CON.	1.53 (0.83)	–	1.49 (0.86)
SCL-INT			
EXP.	1.51 (0.92)	0.29 (0.29)	0.24 (0.35)
CON.	1.41 (0.87)	–	1.32 (0.84)
SCL-DEP			
EXP.	2.07 (0.77)	0.42 (0.45)	0.33 (0.38)
CON.	1.78 (0.75)	–	1.83 (0.78)
SCL-ANS			
EXP.	1.58 (0.66)	0.30 (0.29)	0.24 (0.25)
CON.	1.28 (0.60)	–	1.37 (0.72)
SCL-HOS			
EXP.	0.95 (0.67)	0.29 (0.38)	0.19 (0.30)
CON.	0.87 (0.64)	–	0.98 (0.65)
SCL-FOB			
EXP.	0.87 (0.62)	0.16 (0.19)	0.09 (0.18)
CON.	0.60 (0.68)	–	0.54 (0.62)
SCL-PAR			
EXP.	1.20 (0.76)	0.29 (0.36)	0.15 (0.27)
CON.	0.93 (0.65)	–	0.95 (0.58)
SCL-PSI			
EXP.	0.75 (0.60)	0.10 (0.19)	0.05 (0.16)
CON.	0.58 (0.48)	–	0.54 (0.53)
SCL-GSI			
EXP.	1.46 (0.48)	0.30 (0.26)	0.21 (0.25)
CON.	1.22 (0.50)	–	1.23 (0.53)
SCL-PST			
EXP.	52.33 (13.98)	24.03 (17.35)	15.97 (15.40)
CON.	47.25 (14.35)	–	48.75 (11.89)
SCL-PSDI			
EXP.	2.53 (0.60)	1.01 (0.26)	1.08 (0.23)
CON.	2.21 (0.55)	–	2.14 (0.66)
BDI (0–63)			
EXP	21.17 (10.29)	1.79 (3.02)	1.34 (2.94)
CON	18.95 (10.63)	–	21.05 (9.92)
STAI S (0–60)			
EXP.	33.70 (9.84)	10.72 (8.74)	9.72 (8.62)
CON.	33.05 (10.14)	–	33.40 (10.29)
Maladj. (6–36)			
EXP.	24.47 (5.87)	11.48 (4.44)	9.93 (4.27)
CON.	23.15 (5.40)	–	23.80 (5.28)
SCQ-FSP (0–24)			
EXP.	13.47 (4.10)	19.66 (3.93)	20.24 (2.96)
CON.	12.75 (5.03)	–	11.75 (4.37)

Table 3 (*continued*)

Scale SCL-90-R	PRE M (SD) Experim N = 30 Control N = 20	Post M (SD) Experim N = 29 Control N = 20	6 months M (SD) Experim N = 29 Control N = 20
SCQ-NST (0−24)			
EXP.	10.57 (4.14)	4.41 (3.58)	3.83 (3.24)
CON.	11.00 (4.55)	−	11.55 (4.51)
SCQ-PR (0−24)			
EXP.	11.63 (3.30)	17.03 (3.78)	18.66 (3.01)
CON.	11.05 (5.90)	−	10.50 (4.68)
SCQ-OEE (0−24)			
EXP.	7.83 (2.65)	4.93 (2.54)	4.00 (2.08)
CON.	7.45 (5.44)	−	7.10 (4.81)
SCQ-AVD (0−24)			
EXP.	10.80 (3.80)	11.90 (4.23)	12.00 (4.10)
CON.	10.60 (4.57)	−	10.45 (3.90)
SCQ-SSS (0−24)			
EXP.	10.53 (6.07)	13.62 (5.61)	14.59 (6.55)
CON.	9.30 (4.67)	−	8.45 (4.24)
SCQ-RLG (0−24)			
EXP.	3.23 (3.61)	1.45 (2.58)	1.03 (1.84)
CON.	3.80 (6.18)	−	4.30 (6.25)
Selfst. (10−40)			
EXP.	27.93 (5.70)	35.79 (3.34)	36.52 (3.70)
CON.	26.80 (3.07)	−	26.80 (3.15)

NOTE: SCL-90-R = Symptom Checklist-90-Revised; GSI = Global Severity Index; PST = Positive Symptom Total; PSDI = Positive Symptom Distress Index; BDI = Beck Depression Inventory; STAI S = State-Trait Anxiety Inventory; Maladj. = Maladjustment; SCQ = Stress Coping Questionnaire; SCQ-FSP = SCQ-focused on the solution of the problem; SCQ-NST = SCQ-negative self-targeting; SCQ-PR = SCQ-positive reappraisal; SCQ-OEE = SCQ-open emotional expression; SCQ-AVD = SCQ-avoidance; SCQ-SSS = SCQ-seeking social support; SCQ-RLG = SCQ-religion.

Table 4
Comparison between experimental and control group at pretreatment and 6-month follow-up assessments.

SCL-90-R	Experim.−control pretreatment		Experimental−control 6-month follow-up		
	t	p	F	p	Partial η^2
Somatization	−1.66	0.10	102.19	0.000	0.69
Obsession	−0.51	0.60	105.51	0.000	0.69
Interp. Sens.	−0.36	0.71	78.49	0.000	0.63
Depression	−1.30	0.19	109.04	0.000	0.70
Anxiety	−1.65	0.10	106.61	0.000	0.70
Hostility	−0.41	0.67	61.01	0.000	0.57
Phobic anxiety	−1.39	0.17	41.86	0.000	0.47
Paranoid ideation	−1.28	0.20	73.83	0.000	0.62
Psychoticism	−1.05	0.29	43.03	0.000	0.48
GSI	−1.67	0.10	174.49	0.000	0.79
PST	−1.24	0.21	118.87	0.000	0.72
PSDI	−1.87	0.06	84.17	0.000	0.65
BDI (0−63)	−0.73	0.46	156.27	0.000	0.77
STAI-S (0−60)	−0.22	0.82	122.02	0.000	0.73
Maladjust. (6−36)	−0.80	0.42	150.32	0.000	0.76
SCQ-FSP (0−24)	−0.55	0.58	115.30	0.000	0.71
SCQ-NST (0−24)	0.34	0.72	75.05	0.000	0.62
SCQ-PR (0−24)	−0.44	0.65	81.79	0.000	0.64
SCQ-OEE (0−24)	−0.29	0.74	26.64	0.000	0.36
SCQ-AVD (0−24)	−0.16	0.86	1.93	0.17	0.04
SCQ-SSS (0−24)	−0.76	0.44	19.71	0.000	0.30
SCQ-RLG (0−24)	0.40	0.68	16.08	0.000	0.26
Self-este. (10−40)	−0.90	0.36	116.87	0.000	0.72

NOTE: SCL-90-R = Symptom Checklist-90-Revised; GSI = Global Severity Index; PST = Positive Symptom Total; PSDI = Positive Symptom Distress Index; BDI = Beck Depression Inventory; STAI = State-Trait Anxiety Inventory; Maladjust. = Maladjustment; SCQ = Stress Coping Questionnaire; SCQ-FSP = SCQ-focused on the solution of the problem; SCQ-NST = SCQ-negative self-targeting; SCQ-PR = SCQ-positive reappraisal; SCQ-OEE = SCQ-open emotional expression; SCQ-AVD = SCQ-avoidance; SCQ-SSS = SCQ-seeking social support; SCQ-RLG = SCQ-religion.

the positive and negative appraisal of caregiving (Gleeson et al., 2010).

Therefore, this intervention on an individual basis has included nine of the 11 components identified as being most effective in a theoretical review conducted by Lobban et al. (2013) (psycho-education, problem behavior management, generation of realistic expectations, training in problem solving, communication skills, stress management in family, managing maladaptive beliefs, relapse prevention, and emotional support). Two components ("Maintaining social networks" and "Vocational rehabilitation") were excluded from our program because they were not appropriate for the emotional needs of the relatives.

In addition, this study includes additional components of potential therapeutic value, such as a specific family history regarding the emotional impact related to living with a relative affected by a mental disorder, relaxation techniques and diaphragmatic breathing, modification of cognitions and negative emotions (guilt, shame, anger, and sadness), increase of self-esteem through identifying strengths, and assertiveness training.

The program tested in this study has been clearly associated with a significant reduction of psychopathological symptoms, levels of maladjustment, and maladaptive coping strategies (except in the case of avoidant coping because the avoidance scale may be ambiguous). According to the literature on the revised programs available (Lobban et al., 2013; Polo-López et al. 2014), the treatment evaluated in this study has proven to be effective.

Nevertheless, this study has some limitations. More extensive research, with an increase in sample size and a longer follow-up time, would be required to obtain more conclusive results. In addition, more than a half of the relatives had a university education, given the volunteer nature of the sample, but in further research it would be appropriate to study relatives belonging to all educational levels. Another limitation is that the study does not carry out blind ratings of outcomes. Likewise, it would be interesting for further research to distinguish the type of patients' relatives (e.g., father/mother, sister/brother, partner, or son/daughter) who come to ask for help and the specific type of mental illness (psychotic disorder, bipolar disorders, addiction, etc.) that affects patients in order to tailor the support programs to the specific needs and interests of the individual. In conclusion, although positive, the results of this study should be verified in future research.

Conflict of interest

There is no conflict of interest.

Ethics number

CEISH/25/2010/SALABERRIA IRIZAR.

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