

## Assessing the effects of an education program on mental health problems in separated parents

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### Abstract

**Background:** Parental separation is a stressful experience that can lead to parents suffering mental health problems (MHPs). Parental separation education programs for coping with post-separation adjustment have proven to be effective in reducing conflict and improving co-parenting. However, the effects of these programs on MHPs have not been assessed. A field study was carried out to assess the impact of a parental separation education program on parental MHPs. **Method:** A total of 116 separated parents who completed the program “Parental separation, not family breakdown” completed the Brief Symptom Inventory (BSI) pre- and post-intervention. **Results:** Separated parents had significantly higher pre-intervention scores on the nine symptom dimensions and the global indexes of distress in comparison to the normative population. The intervention yielded a significant improvement (i.e., reduction of clinical symptoms) in all MHPs, ranging from 19% in phobic anxiety to 36% in depression and general anxiety; and in the global indexes of distress (36% in the global severity index; 28% in the positive symptom distress index; and 33% in the positive symptom total). Approximately 45% of parents significantly improved through the intervention. **Conclusions:** The implications of the outcomes of the separation and intervention in parents’ MHPs and children wellbeing are discussed.

**Keywords:** Parental separation, mental health problems, education programs, negative outcomes, program evaluation.

### Resumen

**Evaluación de los efectos de un programa educativo en los problemas de salud mental en padres separados. Antecedentes:** la ruptura de pareja, como evento estresante, puede derivar en Problemas en la Salud Mental (PSM) de los progenitores. Para afrontar esta contingencia se han desarrollado programas educativos que han mostrado su eficacia en la reducción del conflicto y la mejora de la coparentalidad. Pero los efectos en los PSMs no han sido estudiados. Así, nos planteamos un estudio campo para conocer los efectos de un programa educativo para la ruptura de pareja en los PSMs. **Método:** 116 progenitores separados que cumplieron el programa “Ruptura de Pareja, no de Familia” respondieron, pre- y post-intervención, al Brief Symptom Inventory (BSI). **Resultados:** los resultados mostraron, en contraste con la población normativa, que los progenitores separados puntuaban significativamente más alto en los PSMs. La intervención implicó una mejora significativa en todos PSMs, oscilando desde el 19% en ansiedad fóbica al 36% en depresión y ansiedad generalizada, así como en los índices generales de malestar (36% en el Índice de Severidad Global; 28% en el Índice de Malestar referido a Síntomas Positivos; y el 33% en el Total de Síntomas Positivos). **Conclusiones:** se discuten las implicaciones de los resultados de la ruptura e intervención en los PSMs de los padres separados y el bienestar de los hijos.

**Palabras clave:** separación parental, problemas en la salud mental, programas educativos, resultados negativos, evaluación de programas.

The dissolution of unions (marriage or cohabitation) has become increasingly frequent in advanced societies, resulting in negative effects for parents and children (Amato, 2010). Thus, parental separation may have negative effects on social, occupational, physical and Mental Health Problems (MHPs), or other important areas of functioning for both parents and children (Amato, 2010; American Psychiatric Association, 2013; Herman et al., 2015; Hodgson et al., 2017; Martínón et al., 2017; Seijo, Fariña, Corras, Novo, & Arce, 2016; Willén, 2015). The relation between parental separation and MHPs has been well established in the literature (Afifi, Cox, & Enns, 2006; Idstad et al., 2015). Succinctly, parents

undergoing separation or divorce exhibited more depressive and anxiety symptomatology and diagnosis (Amato, 2010; Blanco, Otero, López, Torres, & Vázquez, 2017; Bourassa, Allen, Mehl, & Sbarra, 2017; Kalmijn, 2010; Kamp, 2013), regardless of whether the MHPs caused the parental breakup, the separation caused the MHPs, or both simultaneously (Amato, 2000; Polak & Saini, 2018).

Moreover, the MHPs of parents and deficient parenting skills may be further exacerbated by the breakup (Kreidl, Štípková, & Hubatková, 2017), leading in turn to the development of MHPs in children (Bourassa et al., 2017; Plass-Christl et al., 2017; Szymoens, Bastait, Mortelmans, & Bracke, 2013). In contrast, parental confidence and self-efficacy (Mandy, Morawska, & Filus, 2017), and sensitivity in distressing contexts (Zhou, Cao, & Leerkes, 2017) enhance the child’s adjustment and wellbeing. Hence the need to intervene in adults who are responsible for children living adverse processes such as parental separation (Wilson & Durbin, 2010).

In order to protect children from the possible negative or harmful consequences of divorce, in the 80's of the previous century the United States of America and Canada implemented family support programs (Salem, 1995), which became widespread by the decade of the 90s (Blaisure & Geasler, 1996). Currently, they are legally mandatory in some states (Cronin, Becher, McCann, McGuire, & Powell, 2017; Grych, 2005; Pollet & Lombreglia, 2008). The vast majority of programs are focused on the effects of divorce on children and the benefits of parental cooperation (Braver, Salem, Pearson, & DeLusé, 1996), as well as on improvements in specific aspects of post-divorce parenting (Sigal, Sandler, Wolchik, & Braver, 2011).

The first intervention program for families undergoing parental separation in Spain was introduced as part of a university research program: in Spanish: "Ruptura de pareja, no de familia" "Parental separation, not family breakdown", including either voluntary or court mandated assistance (Fariña, Arce, Novo, & Seijo, 2012; Fariña, Novo, Arce, & Seijo, 2002). The aim of the program was to develop the general and specific objectives and content to enhance psychological adjustment as a means of fostering positive coparenting. Although the first program was implemented in Spain more than 15 years ago (Fariña, Seijo, Arce, & Vázquez, 2017), there are currently few implemented programs and none are legal or court mandatory (Martínez-Pampliega et al., 2015).

In general, the evaluation of these programs has not been a priority, possibly due the reports of positive effects such as changes in the attitude and behaviour of participants, and evaluations have mainly focused on user satisfaction (Babb, Danziger, Moran, & Englander, 2009; Martínez-Pampliega et al., 2015). This highlights the need for studies assessing program efficacy (Frackerll, Hawkins, & Kay, 2011; Goodman, Bonds, Sandler, & Braver, 2004), in the areas that have not or have been poorly researched (Babb et al., 2009; Cronin et al., 2017), such as the impact on the mental health of parents owing to maladaptive parenting (Goodman & Godlib, 1999; Wilson & Durbin, 2010), and on the MHPs of children (Middeldorp et al., 2016; van der Pol et al., 2016).

Bearing this context in mind, the aim of this field study was to assess the effects on MHPs (i.e., primary symptom dimensions and global indexes of distress) on parents undergoing parental separation, and the effects of a non-mandatory parental separation education program on the MHPs of parents.

## Method

### Participants

The sample consisted of 116 parents who participated in the 6<sup>th</sup> edition of the parental separation education program "Parental separation, not family breakdown", equalised in gender (61 women and 55 men),  $\chi^2(1, N = 116) = 0.31, ns$ , age range 22 to 59 years ( $M = 39.45, SD = 6.20$ ). As for child custody, 44.0% ( $n = 51$ ) were custodial parents ( $n = 51$ ), and 56.0% ( $n = 65$ ) non-custodial parents. All of the participants had underage children: 39.7% ( $n = 46$ ) had one child, 35.3% ( $n = 41$ ) two children, and 25% ( $n = 29$ ) three children or more. The mean length of the relationship between separating couples was 10.25 years ( $SD = 5.28$ ), with a mean of 2.61 years since the separation ( $SD = 3.03$ ).

### Instruments

The MHPs and the global indexes of distress were evaluated by the Brief Symptom Inventory [BSI] (Derogatis, 1993). This

instrument consists of 53 items, assessing 9 primary symptom dimensions: somatization ( $\alpha = .77$ , with the sample of this study), obsessive-compulsive ( $\alpha = .87$ ), interpersonal sensitivity ( $\alpha = .74$ ), depression ( $\alpha = .91$ ), anxiety ( $\alpha = .81$ ), hostility ( $\alpha = .70$ ), phobic anxiety ( $\alpha = .79$ ), paranoid ideation ( $\alpha = .86$ ), and psychoticism ( $\alpha = .71$ ); and 3 global indexes of distress: global severity index (GSI), positive symptom distress index (PSDI), and positive symptom total (PST).

### Procedure

Users were referred to the parental separation education program "Parental separation, not family breakdown" by different channels i.e., 58.9% of cases were referred by professionals, 30.8% by other users, and the remaining 10.3% were familiar with the program by reading the relevant literature. Parental inclusion criteria in the study were parental separation with child custody or coparenting, absence of psychopathology inhibiting performance in the sample group, no criminal offence for gender violence, and completion of all the sessions of the program "Parental separation, not family breakdown" (Fariña, Arce, Novo, & Seijo, 2012; Fariña, Novo, Arce, & Seijo, 2002). The program was applied from September 2016 to July 2017 (Spanish academic year). All participants freely volunteered to take part in the study and signed written consent where the schedule, sessions, and abilities and skills to be acquired were specified. Participants underwent pre- (September, 2016) and post-intervention (July, 2017) assessment by a research psychologist trained and experienced in management of clinical interview and psychometric instruments. A forensic screening (two or more malingering or defensiveness indexes were sufficient evidence to suspect either) for defensiveness (Arce, Fariña, Seijo, & Novo, 2015) and malingering (Vilariño, Fariña, & Arce, 2009) was performed to all the protocols. No systematic malingering or defensiveness responding ( $< 2$  indexes of malingering or defensiveness) was registered.

The data was stored and processed in accordance with the Spanish Data Protection Law (Ley Orgánica 15/1999, de 13 de diciembre, de Protección de Datos de Carácter Personal, 2011).

Participants were administered the Program 'Parental Separation, not Family Breakdown' (Fariña, Arce, Novo, & Seijo, 2012; Fariña, Novo, Arce, & Seijo, 2002). This parental separation education program was structured into 16 group sessions that were complemented with individual sessions according to the needs of each participant. The program addressed the following contents: 1) Presenting the program (introduction); 2) Raising awareness of the negative effects of separation on mental health; 3) Redefining the parental relationship and the benefits of parental collaboration; 4) The child's development and parenting styles; 5) Consequences and reactions to parental separation; 6) Parental communication and the negative consequences of conflict and toxic stress; 7) 8) and 9) Phenomena associated to the process of separation and divorce: Parental interference and parental alienation (7), Overburdened children (8), The illusion of reconciliation (9); 10) Positive coparenting; 11) Educational and communicative techniques for parents and children (I); 12) How to help children to adapt to the new family situation; 13) Educational and communicative techniques for parents and children (II), and the practical application of disciplinary methods; 14) Rights and Obligations of Children/Responsibilities of parents; 15) Post-intervention evaluation; and 16) Review of the contents and closing session of

the program. The acquisition of in each session was verified and participants did not proceed to the following session until all the participants had acquired all the skills and abilities. The manual and materials designed for the implementation of the program were used for the extensive training of the 5 trained psychologists with vast experience in program intervention applied the 6<sup>th</sup> edition of the program (Fariña, Arce, Vázquez, Novo, & Seijo, 2014).

A quasi-experimental design was employed for the comparison of means in repeated-measures. Sensitivity analysis performed on the data analysis design revealed that with a sample of 116 subjects, the probability of detecting (1- $\beta$ ) significant differences ( $\alpha < .05$ ) for a medium effect size ( $r = .30$ ) in the repeated-measures MANCOVA comparing two groups (evaluation pre-intervention vs. evaluation post-intervention) with 3 and 9 measurement variables (indexes of distress and primary symptom dimensions, with a mean correlation between repeated measures of .461 and .474, respectively), was 100%. Moreover, the probability of detecting significant differences for a medium effect size performing a one sample *t*-test with  $N = 116$  was 99.9%. Thus, the data analysis design was very sensitive to significant effects.

#### Data analysis

In order to assess the psychological adjustment of the experimental population prior to intervention, means were compared with a test value, one sample *t*-test, transforming the effect size Cohen's *d* to a correlation, *r*. The confidence interval was calculated for 95% of *r* for the sample distribution (not for the mean); thus, the interval encompassed 95% of the subjects of the sample. To calculate the intervals, given that *r* had no normal distribution, *Z* was transformed (Fisher *d* transformation), and the intervals calculated. Once the *Z* value intervals have been obtained, the inverse process was undertaken to transform them into *r* values. Thus, given that the sample was characteristic of the population of separated parents, one can sustain that other subjects or samples of the same population would have a 95% probability of scoring in the dimension corresponding to that interval (Amado, Arce, Fariña, & Vilarinho, 2016; Fariña, Redondo, Seijo, Novo, & Arce, 2017). With the Binomial Effect Size Display technique (Rosenthal & Rubin, 1982), the correlation was used for deriving the mean psychological (mis)adjustment for each primary symptom dimension and for the global indexes of distress in percentage terms in comparison to the normative population (baseline). The intervals were used to derive the lower and upper (mis)adjustment limits for each of the primary symptom dimensions and the global indexes of distress for each individual of the sample, and hence, other subjects of the same population.

To assess the effects of the intervention on psychological (mis) adjustment in each of the primary symptom dimensions and in the global indexes of distress, a repeated-measures data analysis design was conducted with the time lapse since separation (the time lapse since the exposure to a traumatic event or a psychosocial stressor such as a couple breakups mediates effects on psychological adjustment; Wang & Amato, 2000), and the psychologist who implemented the program (McGuire, Mason, & O'Kane, 2000), with covariates that have been found to have effects on the efficacy of the intervention.

For data analysis two MANCOVA were performed, one for the primary dimensions and the other for the global indexes. The effect size (*r*), the confidence intervals, and the measures of the effects of

the intervention were calculated in accordance with the previously described procedure. Additionally, as suggested by Fritz Morris and Richler (2012) the Area under the Curve was estimated to complement the effect size (tables taken from Salgado, 2018).

As for clinical significant change, the reliable change index (RCI) was computed.

#### Results

Separated parents showed significant differences in all of the primary symptom dimensions of the BSI (see Table 1), in comparison to the normative sample. Concretely, separated parents presented higher somatization (i.e., distress arising from perceptions of bodily dysfunction); obsessive-compulsive (i.e., thoughts, impulses or actions self-experienced as unremitting or irresistible); interpersonal sensitivity (i.e., feelings of personal inadequacy or inferiority, mainly in comparison with others); depression (this comprises the broad range of clinical manifestations of depression such as the loss of energy, thoughts of suicide, and dysphoric mood); anxiety (clinical manifestations of anxiety, both generalized and acute); hostility (i.e., thoughts, feelings, or actions characteristic of aggression, irritability, rage or resentment); phobic anxiety (i.e., persistent response fear to a specific person, place, object or situation that is irrational and disproportionate, and which leads to avoidance or evasive behaviour); paranoid ideation (i.e., paranoid behaviour fundamentally as a disordered mode of thinking); and psychoticism (related to feelings of social alienation in non-clinical populations). Likewise, the results in the global indexes of distress (see Table 1) revealed significantly higher levels of global distress i.e., GSI, PSDI and PST, in separated parents in comparison to the general population.

As for the quantification of injury from MHPs in relation to the normative population (baseline), the results showed higher mean injury in the following primary symptom dimensions: 42% of more clinical symptoms in somatization, ranging for 95% of the sample from a minimum of 29.2% (lower limit) to a maximum of 58.4% (upper limit); 37% in obsessive-compulsive, ranging from 20.1% to 51.7%; 62% in interpersonal sensitivity, ranging from 49.4% to 72.1%; 61% in depression, ranging from 48.2% to 71.3%; 62% in anxiety, ranging from 49.4% to 72.1%; 44% in hostility, ranging from 28.0% to 57.6%; 37% in phobic anxiety, ranging from 20.1% to 51.7%; 63% in paranoid ideation, ranging from 50.6% to 72.8%; and 64% in psychoticism, ranging from 51.8% to 73.6%. As for the global indexes of distress, the results revealed a mean increase of 62% in the GSI, ranging from 49.4% to 72.1%; of 66% in the PSDI, ranging from 54.3% to 75.2%; and of 59% in the PST, ranging from 45.7% to 69.7%.

In contrast to the normative population (baseline; Amado, Arce & Herraiz, 2015), the results showed higher mean injury in primary symptom dimensions of 42% in somatization, ranging for 95% of the sample with a minimum 29.2% (lower limit) to a maximum 58.4% (upper limit); obsessive-compulsive 37%, ranging from 20.1% to 51.7%; interpersonal sensitivity 62%, ranging from 49.4% to 72.1%; depression 61%, ranging from 48.2% to 71.3%; anxiety 62%, ranging from 49.4% to 72.1%; hostility 44%, ranging from 28.0% to 57.6%; phobic anxiety 37%, ranging from 20.1% to 51.7%; paranoid ideation 63%, ranging from 50.6% to 72.8%; and psychoticism 64%, ranging from 51.8% to 73.6%. As for the global indexes of distress, the results revealed a higher mean injury of 62% on the GSI, ranging from 49.4% to 72.1%; of 66% on the

PSDI, ranging from 54.3% to 75.2%; and of 59% on the PST, ranging from 45.7% to 69.7%.

For the analysis of the effects of the intervention a repeated-measures MANCOVA was conducted on the factor intervention (pre- vs. post-intervention) on the primary symptom dimensions of the BSI, with the covariates being the time lapse since separation,  $F(9, 98) = 1.32, ns$ , and the type of psychologist who implemented the program  $F(9, 98) = 0.69, ns$ . The results reveal a significant multivariate effect of the intervention factor on the primary symptom dimensions,  $F(9, 98) = 2.55, p < .05, \eta^2 = .190$ , explaining 19% of the variance. The result is highly powerful,  $1-\beta = .921$ . The univariate effects (see Table 2) show that post-intervention clinical symptomatology had fallen significantly in all of the primary symptom dimensions (i.e., somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism). In other words, the separation education program improved the psychological adjustment of separated parents in all of the dimensions (MHPs).

Likewise, a repeated-measures MANCOVA was performed with the factor intervention (pre- vs. post-intervention) on the global indexes of distress of the BSI with the covariates of time lapse since separation,  $F(3, 104) = 4.87, p < .01$ , and the type of psychologist who implemented the program,  $F(3, 104) = 0.93, ns$ . The results exhibited a significant multivariate effect on the global indexes of distress moderated by the intervention factor,  $F(3, 104) = 5.42, p < .05, \eta^2 = .135$ , explaining 13.5% of the variance. This result is highly powerful,  $1-\beta = .929$ . The univariate effects (see Table 2) revealed the intervention had a therapeutic effect, particularly in significantly reducing severity on the global indexes of distress i.e., the GSI, PSDI, and PST.

As regards the effects of treatment for MHPs, the results of the intervention outcome (post-intervention) showed a therapeutic improvement in the primary symptom dimensions: somatization 32% (mean symptom reduction for the separated parents' population), ranging for 95% of the sample from a minimum of 14.7% (lower limit) to a maximum of 47.5% (upper limit); obsessive-compulsive 28%, ranging from 10.4%

Table 1

One sample *t* test for the intervention sample on the primary symptom dimensions and global indexes of distress. Test value: mean of the normative group

Variable	$M_{ps}$	$M_{np}(+1SD)$	<i>t</i>	<i>p</i>	<i>r</i> [95% CI]
<b>Primary symptom dimensions</b>					
Somatization	0.68	0.29(0.69)	5.00	.000	.42[.292, .584]
Obsessive-Compulsive	1.11	0.43(0.91)	7.92	.000	.37[.201, .517]
Interpersonal sensitivity	0.99	0.32(0.80)	8.63	.000	.62[.494, .721]
Depression	0.95	0.28(0.74)	8.28	.000	.61[.482, .713]
Anxiety	0.86	0.35(0.80)	8.63	.000	.62[.494, .721]
Hostility	0.73	0.35(0.77)	5.28	.000	.44[.280, .576]
Phobic Anxiety	0.42	0.17(0.53)	4.35	.000	.37[.201, .517]
Paranoid Ideation	1.01	0.34(0.79)	8.75	.000	.63[.506, .728]
Psychoticism	0.72	0.15(0.46)	8.97	.000	.64[.518, .736]
<b>Global indexes of distress</b>					
Global severity index (GSI)	0.83	0.30(0.61)	8.62	.000	.62[.494, .721]
Positive symptom distress index (PSDI)	1.72	1.29(1.70)	7.88	.000	.59[.457, .697]
Positive symptom total (PST)	23.21	11.45(20.74)	9.52	.000	.66[.543, .752]

Note: *df*(115);  $M_{ps}$ : Mean of the parental separation group;  $M_{np}$ : Test value from the normative population (Derogatis, 1983)

Table 2

Univariate effects of the intervention factor (pre- vs. post-intervention) on the symptom dimensions and the global indexes of distress. Within effects

Variable	<i>F</i>	<i>p</i>	1- $\beta$	$M_{pre}$	$M_{post}$	<i>r</i> [95% CI]	AUC
<b>Primary symptom dimensions</b>							
Somatization	11.86	.000	.927	.927	0.34	.32[.147, .475]	.684
Obsessive-Compulsive	9.34	.003	.857	1.11	0.80	.28[.104, .440]	.660
Interpersonal sensitivity	9.08	.003	.848	0.99	0.65	.28[.104, .440]	.660
Depression	15.39	.000	.973	0.95	0.60	.36[.191, .509]	.708
Anxiety	15.50	.000	.974	0.86	0.51	.36[.191, .509]	.708
Hostility	6.49	.012	.714	0.73	0.49	.24[.060, .404]	.637
Phobic Anxiety	4.16	.044	.525	0.42	0.20	.19[.008, .359]	.608
Paranoid Ideation	10.23	.002	.887	1.01	0.71	.30[.125, .457]	.672
Psychoticism	13.75	.000	.957	0.72	0.45	.33[.158, .483]	.690
<b>Global indexes of distress</b>							
Global severity index (GSI)	16.41	.000	.986	0.83	0.52	.36[.191, .509]	.708
Positive symptom distress index (PSDI)	10.10	.002	.883	1.72	1.41	.28[.104, .440]	.660
Positive symptom total (PST)	13.19	.000	.949	23.21	19.15	.33[.158, .483]	.690

Note: *df*(1, 107);  $M_{pre}$ : pre-intervention mean;  $M_{post}$ : post-intervention mean; AUC: Area Under the Curve

to 44.0%; interpersonal sensitivity 28%, ranging from 10.4% to 44.0%; depression 36%, ranging from 19.1% to 50.9%; anxiety 36%, ranging from 19.1% to 50.9%; hostility 24%, ranging from 6.0% to 40.4%; phobic anxiety 19%, ranging from 0.8% to 35.9%; paranoid ideation 30%, ranging from 12.5% to 45.7%; and psychoticism 33%, ranging from 15.8% to 48.3%. Likewise, the results of the global indexes of distress revealed a mean improvement of 36% on the GSI, ranging from 19.1% to 50.9%; 28% on the PSDI, ranging from 10.4% to 44%; and 33% on the PST, ranging from 15.8% to 48.3%. Following the intervention, the probability of improvement on the MHPs (see AUC in Table 2), the rate was 68.4% (50% = no effect; and < 50% = negative effects) in somatization, 66% in obsessive-compulsive and interpersonal sensitivity, 70.8% in depression, and anxiety, 67.3% in hostility, 60.8% in phobic anxiety, 67.2% in paranoid ideation, and 69% in psychoticism. Similarly, the probability of improvement on MHPs after the intervention in the general distress indexes was: 70.8% in the GSI, 66% in the PSDI, and 69% in the PST. Moreover, the sample of participants fell within the limits of normality after the intervention on MHPs: the post-intervention means in all measures of the MHPs (see Table 2) were below the upper limit for normality in the normative population ( $M+1SD$ ; see Table 1 for contrastive data).

Regarding significant clinical changes, the results (see Table 3) revealed a significant improvement in all of the clinical dimensions, ranging from 24.1% in depression (upper rate) to 11.2% in somatization (lower rate). Accumulatively (along the clinical dimensions), 44% of participants benefited from significant improvements. Similarly, 26.7% of the participants improved significantly in the global severity index, 29.3% in the positive symptom distress index, and 19.8% diminished significantly the total symptoms reported. Accumulatively, 36.2% of the participants improved in the global indexes of distress. In contrast, one participant deteriorated clinically in several dimensions and global distress indexes. Comparatively, the improvement rate was significantly higher than the deterioration rate in all dimensions and global distress indexes.

## Discussion

In line with the previous literature (Amato, 2000, 2010; Bourassa et al., 2017; Willén, 2015), the results corroborated the finding that couple separation has negative effects on parents; which were exhibited in this study as MHPs. Besides being significant, the size of the injury ranged from moderate ( $r = .30$ ; somatization, obsessive-compulsive, hostility and phobic anxiety) to large ( $r = .50$ ; interpersonal sensitivity, depression, anxiety, paranoid ideation, psychoticism, GSI, PSDI, and PST). In short, the negative effects were twofold: parental separation not only led to injury in MHPs, but this injury was also clinically severe. These negative effects with higher MHPs i.e., primary symptom dimensions and global indexes of distress, underscore the need for intervention to target both the direct effects on parents, and the secondary negative effects encountered in parenting and in coping with the development of MHPs of their own children (Connell & Goodman 2002; Goodman & Godlib, 1999; Matteja & Remschmidt, 2008; Middeldorp et al., 2016; Plass-Christl et al., 2017; Wilson & Durbin, 2010).

Furthermore, the results have corroborated previous findings (Cutrín, Gómez-Fraguela, Maneiro, & Sobral, 2017; Martínez-Pampliega et al., 2015; Pruett & Cornett, 2017) regarding that separation education programs (e.g., the program “Parental separation, not family breakdown”) can control the negative effects of parental practices on children’s behaviour, and particularly those on MHPs (Fackrell et al., 2011). Succinctly, the intervention led to a significant therapeutic improvement in all the MHPs assessed. Moreover, the magnitude (effect size) of the therapeutic effect was moderate ( $r = .30$ ), allowing the population of separated parents to return to the limits of clinical normality. In relation to cases, approximately 45% of parents significantly improved with the intervention. The improvement in parents and the relation between parents’ MHPs and the wellbeing and mental health of children (Connell & Goodman 2002; Middeldorp et al., 2016) are expected to indirectly buffer the effects of MHPs in children. Thus, the positive effects of the intervention on parental MHPs is expected to contribute to minimize the intergenerational transmission of MHPs, due to the parental emotional socialization, together with maladaptive parenting (Goodman & Godlib, 1999; Wilson & Durbin, 2010), acts as a mediator in the relation between parental psychopathological symptoms and child outcomes (van der Pol et al., 2016). Additionally, the intervention has indirect positive effects on the child’s physical health, particularly if it is considered that the American Academy of Pediatrics (2012), states that non-normalised parental relations are conducive to negative health styles.

The scientific evidence underpinning the efficacy of separation education programs has prompted Fackrell et al. (2011) to demand they should be a matter of public policy. Additionally, the positive effects of the intervention on users also include a substantial reduction in socioeconomic costs (e.g., use of social service, health care service, criminal justice system costs). Thus, a cost-benefit study of a preventive intervention program for divorced families found would return doubled the initial investment i.e., a cost of \$1630 per family, for an investment of \$633 per family (Herman et al., 2015). Likewise, in line with the paradigm de Therapeutic Jurisprudence (Wexler, 2015), the rules and legal proceedings for parental separation, as well as the legal experts themselves should aim to promote intervention programs for divorced families (Babb, 1997; Fariña, Novo, Arce, & Vázquez, 2017; Wexler, 2015).

Table 3

Statistics and results for significant clinical improvements and deteriorations

Variable	SD	$r_{tt}$	% <sub>improved</sub>	% <sub>deteriorated</sub>
<b>Primary symptom dimensions</b>				
Somatization	0.85	.68	11.2	0
Obsessive-Compulsive	0.93	.85	20.7	0.009
Interpersonal sensitivity	0.84	.85	19.8	0.009
Depression	0.88	.84	24.1	0.009
Anxiety	0.88	.79	16.4	0.009
Hostility	0.77	.81	13.8	0.009
Phobic Anxiety	0.61	.91	16.4	0.009
Paranoid Ideation	0.84	.79	16.4	0.009
Psychoticism	0.68	.78	14.7	0
<b>Global indexes of distress</b>				
Global severity index (GSI)	0.67	.90	26.7	0.009
Positive symptom distress index (PSDI)	0.59	.87	29.3	0.009
Positive symptom total (PST)	13.3	.80	19.8	0
Note: SD: standard deviation; $r_{tt}$ : test-retest reliability; % <sub>improved</sub> : percentage of participant with significant clinical improvement; % <sub>deteriorated</sub> : percentage of participant with significant clinical deterioration				

This field study has five main limitations that should be borne in mind when generalizing the results. First, the participants freely volunteered to take part in the study, but were not randomly selected, so the results may be biased owing to this peculiarity of the sample, and underscores any generalization to the population of separated parents should be undertaken with caution. Second, of all the MHPs, only the primary symptom dimensions of the BSI and the distress indexes were measured. Even although the BSI is in line with the DSM, many MHPs cannot be measured with this instrument. Moreover, we neither know the effects of separation on other MHPs, nor have any estimates on the therapeutic improvements resulting from the intervention. Third, though the intervention program of this study “Parental separation, not family breakdown” falls into the category of “parental separation education programs”, it retains distinctive characteristics that may

alter the efficacy of the intervention on MHPs. Fourth, the study design establishes neither cause nor effect, that is, no inferences can be drawn on whether MHPs predict separation, or conversely separation predicts MHPs. Fifth, further research is required to elucidate the variables moderating the effects of the intervention on MHPs, and how these effects translate into the health and wellbeing of the child, and to positive parenting following separation (coparenting). Sixth, the same program was applied to all the participants when differences in parent in terms of deficits in skills’ and abilities’ were expected.

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