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Patterns of individual change and program satisfaction in a positive parenting program for parents at psychosocial risk

Míriam Álvarez Professor[1] | Sonia Byrne Professor[2] | María José Rodrigo Professor[2]

[1] Department of Communication Sciences and Social Work, Universidad de La Laguna, San Cristóbal de La Laguna, Spain

[2] Department of Developmental Psychology and Education, Universidad de La Laguna, San Cristóbal de La Laguna, Spain

Correspondence
Míriam Álvarez Lorenzo, Professor, Universidad de La Laguna, Department of Communication Sciences and Social Work, Camino La Hornera, 37. San Cristóbal de La Laguna. La Laguna, S/C de Tenerife, ES 38200, Spain.
Email: malore@ull.edu.es

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Abstract

Despite the evidence of effectiveness of positive parenting programs, little is known about the typology of changes that parents at psychosocial risk undergo after an intervention. We compared individual patterns of change in three parenting outcomes in 256 at risk parents with young children attending the group-based Growing Up Happily in the Family program delivered in municipal social services. We identified four clusters of individual change: Cluster 1 (30.6%) had negative changes in parental child-rearing attitudes and parenting stress, Cluster 2 (27.7%) had positive changes in child-rearing attitudes and negative results in parental perceived competence, and Cluster 3 (24.1%) and Cluster 4 (17.6%) showed overall better results. Residential area, type of social support, and quality of implementation characterized cluster membership. Participants in clusters with better results were more satisfied with the program than those with worse results. Practical recommendations are provided for the successful implementation of group parenting programs in family preservation services.

KEYWORDS

at-risk parenting, patterns of individual change, program satisfaction, type of social support

1 | INTRODUCTION

In the area of child maltreatment prevention, group-based educational programs are offered in which parents at psychosocial risk learn strategies to improve their parenting skills and family life. Research into the efficacy of these programs has shown an increase in parents' positive beliefs, attitudes, and knowledge about child development; a decrease in negative discipline strategies; an increase in parents' confidence in their capacities as parents; and the development of skills to deal with stressors related to parenting (Barlow, Smailagic, Huband, Roloff, & Bennett, 2012; Lundahl, Nimer, & Parsons, 2006). However, studies determining these effects mostly assessed mean program changes (e.g., Bloomfield & Kendall, 2012), followed in some cases by analyses of the moderators of these overall changes (Gardner, Hutchings, Bywater, & Whitaker, 2010). Few have considered the possibility that the average statistical results may not be representative of the results at the individual level. Studying the individual process of change allows us to report more accurately on program effectiveness because this approach helps identify those groups of individuals for whom the program works in different ways. The identification of individual patterns of change across outcomes can also offer information about the existence of transitional states in the process of individual learning, thereby offering insight into how this process can be selectively improved. Searching for individual and implementation factors associated with the typology of changes is also critical to understanding which factors make a program work when applied in real-life conditions. This helps to gain relevant information to the program development.

The present study takes this analytic approach, providing evidence of the individual patterns of change after the application of the group-based *Growing Up Happily in the Family* program (Crecer felices en familia; Rodrigo et al., 2008), which targets parents at psychosocial risk. This program follows the Council of Europe's (2006) Recommendation 19 on positive parenting that focuses on the empowerment of vulnerable families in the context of family support services to prevent child maltreatment (Rodrigo, Almeida, & Reichle, 2015). The program

is based on the approaches of attachment, parental child-rearing practices, self-regulation, parental sense of competence, and family stress and social support. The program includes five modules: (1) Sensitive and Responsive Parenting, (2) Coming to Know Our Children, (3) Regulating Child Behavior, (4) First Family-School Relationships, and (5) Parenting: A Solitary Task? It is delivered through 1½-hr weekly group meetings in municipal social services and lasts 4 to 5 months. As part of their normal casework, social services personnel had to identify families for participation in the program with a minor declared to be at-risk. The program was offered as part of the family's case plan.

We used the person-centred approach as opposed to variable-centred approaches to identify subgroups of individuals who share similar pattern of changes after the program (Bergman, Magnusson, & El-Khouri, 2003). Whereas variable-centred approaches describe the relative contributions that predictor variables make to an outcome, person-centred approaches identify subgroups of individuals who share particular relations among program outcomes. Cluster analysis has been applied to characterize families along multiple dimensions, such as parenting practices (Gorman-Smith, Tolan, Loeber, & Henry, 1998), family relationship dimensions (Gorman-Smith, Tolan, & Henry, 2000), parental sensitivity (Belsky & Fearon, 2004), and parental stress and coping strategies in mothers from at-risk families (Pérez-Padilla & Menéndez, 2014), to characterize multiproblem families according to several dimensions (Bodden & Deković, 2016) as well as to understanding service needs among caregivers at risk of involvement in the child welfare system (Lee & Logan-Greene, 2017). Much less is known about the use of cluster analyses to capture individual patterns of change when exploring the effectiveness of a parenting program. The present study tried to fill this gap by addressing three research questions: (1) What are the individual patterns of change from pretest to posttest after participating in the program? (2) Which individual and group variables identify which parents show each pattern of change? (3) What impact do these patterns of change have on program satisfaction?

With regard to the first question, three parental dimensions were selected to evaluate changes: child-rearing attitudes, parental sense of competence (self-efficacy and satisfaction), and parenting stress, based on previous reviews (Kaminski, Valle, Filene, & Boyle, 2008). We hypothesized the existence of individual patterns involving related (positive or negative) changes among dimensions that are not well captured in the evaluation of average changes. Previous evidence indicated that parental attitudes and parental stress showed similar changes in parent education programs (Almeida et al., 2012). The dimensions of stress and parental sense of competence showed similar changes in parenting programs (Bloomfield & Kendall, 2012). Parental attitudes and parental sense of competence have also shown parallel changes in parenting programs (Gross et al., 2009). However, a study exploring changes at the individual level through cluster analysis has shown that improvements in these two variables are not always achieved in all the clusters (Byrne, Rodrigo, & Máiquez, 2014).

A second research question examined a set of individual and implementation variables that are tested to help characterize membership in subgroups of parents. Results on individual factors are not conclusive. Some studies showed more benefits for younger parents (Beauchaine, Webster-Stratton, & Reid, 2005) and other studies did not (Menting, de Castro, & Matthys, 2013). Single families showed less benefits in one study (Gardner et al., 2009) but not in other studies (Gardner et al., 2010). Socioeconomic disadvantage, such as low family income, employment situation, and family size, has frequently been associated with poor outcomes in parent training (Lundahl, Risser, & Lovejoy, 2006; Reyno & McGrath, 2006). However, similar program effects were found for disadvantaged and advantaged families in the Incredible Years program (Gardner et al., 2010). Parents with low levels of education showed worse results after intervention in some studies (Barlow et al., 2012; Lundahl et al., 2006), but not in others (Gardner et al., 2010). Previous studies indicate that an ethnic minority status is associated with poorer outcomes (Lundahl et al., 2006), and other studies did not (Leijten, Raaijmakers, Orobio de Castro, van den Ban, & Matthys, 2017).

Social support is also a participant factor that may help characterize membership in subgroups in this study because it may buffer the effects of experiencing significant adversity on parenting (Thompson, Flood, & Goodvin, 2006). Among high-risk parents, social supports appear to contribute to greater parental self-efficacy (Corse, Schmid, & Trickett, 1990), reduce parenting stress (Ceballo & McLoyd, 2002), and reduce negative and punitive attitudes toward children (McCurdy, 2005). However, it is likely that the accumulation of formal supports in multiassisted families may have deleterious consequences on parenting (Matos & Sousa, 2004; Rodrigo & Byrne, 2011). In fact, evidence has shown that the quality of the support is a better predictor of well-being than the quantity (Sherbourne & Stewart, 1991). Instrumental support is associated with low levels of parental stress (Hobfoll & Lerman, 1989), although other studies found this relation with emotional support (Green & Rodgers, 2001). We predicted that participants with emotional or affective support would benefit more from the program that those relying on instrumental support to solve concrete problems.

Implementation characteristics, such as facilitator's characteristics, program adherence, and group characteristics, are another important source of outcome variability tested in this study (Garvey, Julion, Fogg, Kratovil, & Gross, 2006). Facilitators' skills and quality of program delivery were associated with improvements in parenting (Scott, Carby, & Rendu, 2008). Concerning program adherence, a complete dosage of the program has also been related to positive parenting practices in high-risk populations (Baydar, Reid, & Webster-Stratton, 2003). An appropriate duration from prescribed time in sessions has been associated with positive outcomes in parent training (Álvarez, Rodrigo, & Byrne, 2018). The number of group sessions attended was related to changes in parental investment in the family (Pantin et al., 2003), and in other studies did not (Byrne, Salmela-Aro, Read, & Rodrigo, 2013).

Concerning gender composition of the group, participation of fathers and mothers together has been related to better results in parenting programs (Lundahl, Tollefson, Risser, & Lovejoy, 2008). Concerning risk composition, high-risk parents with a history of involvement in welfare services showed higher levels of negative parenting practices and lower levels of positive parenting practices

than non-at-risk parents (Webster-Stratton & Reid, 2010). Yet when combined in groups as in the Personal and Family Support program for at-risk families, low at-risk groups and mixed (at-risk and non at-risk) groups did better than medium-/high-risk groups in increasing positive parenting practices and decreasing negative ones (Byrne et al., 2013).

Finally, the third research question examined whether participants in different subgroups of changes were satisfied with the program. Parent satisfaction with a parenting program is an important outcome that can be related with the actual changes in parental dimensions (Benzies & Barker, 2016). Participants with worse results also reported lower satisfaction with the program and assessed the experience more negatively than those with better results (Garvey et al., 2006). In the present study, we expected that those subgroups with better results would be more satisfied with the program that those with less positive results.

2 | METHOD

2.1 | Participants

Participants were 256 parents who attended the group-based Growing Up Happily program in local social services in the Spanish autonomous communities of Castile and Leon, Canary Islands, and Catalonia. Other 164 parents were allocated to the control group that was waiting to start the program.

Written consent was obtained from all the participants according to the protocol approved by the University of La Laguna's ethics committee. All parents had children aged 5 years or less. Of the participants, 87.2% were at-risk families referred by the municipal social services and 12.8 % were not at-risk families. Referred families were mandated to participate as part of the family's case plan. Nonreferred parents were from the same communities and attended the program on a more voluntary basis. Social services personnel also interviewed the nonreferred parents to clarify their motivations for participation and to make sure that they did not have any problematic situation that put their children at risk.

Individual characteristics of the parents who participated in this study and implementation factors are presented in Table 1. Full attendance was seen in 70% of the participants, and the results of Chi-square analyses of variance (ANOVAs) showed that participants who dropped out did not differ on any sociodemographic and pretest measures from those who completed the program. Likewise, the results of Chi-square analyses and ANOVAs showed that control (waiting list) group (n = 164) and intervention group did not statistically differ on any sociodemographic variable.

Participants were distributed among 49 groups. All facilitators had attended the initial training program about the core principles, methodology, and evaluation of the program, and 48.8% followed the ongoing training throughout the program to ensure the supervision of the facilitators. The majority of the groups implemented the full dosage of the program. The groups varied in gender and risk composition this was decided at random (Table 1).

2.2 | Instruments and evaluation design

2.2.1 | Initial measures

Sociodemographic profile

This instrument included continuous variables: age, age of partner, and number of children, and categorical variables: parental sex, sex of children, immigrant status, family structure, residential area, socioeconomic area level, education level, financial situation, employment situation, and at psychosocial risk.

Professionals' profile

Included professional age and graduation studies

Medical Outcomes Study Social Support Survey The Medical Outcomes Study Social Support Survey (MOS-SS; Sherbourne & Stewart, 1991; Spanish version by Revilla, Luna, Bailón, & Medina, 2005) is a 20-item instrument that asked individuals to indicate how often they can count on people to support them in different situations. Response options range from *none of the time* (1) to *all the time* (5). In the Spanish version, the items are grouped into three subscales related to (a) instrumental support (α = .87), (b) emotional/informational support (α = .94), and (c) affectionate support (α = .85). Mean scores were calculated in each factor.

2.2.2 | Pretest–posttest measures

Adult-Adolescent Parenting Inventory-2

The Adult-Adolescent Parenting Inventory-2 (AAPI-2; Bavolek & Keene, 2001; ad hoc Spanish version, using a back translation procedure) measures parental attitudes and behaviour using two forms pzarallel (Form A at initial session and Form B at completion). Each form includes 40 items. Response options are presented on a 5-point Likert scale ranging from *strongly agree* (1) to *strongly disagree* (5). The AAPI-2 provides five subscales: inappropriate expectations (Form A α =.80; Form B α =.77), parental lack of empathy towards the child's needs (Form A α = .69; Form B α =.72), support of the use of corporal punishment (Form A α = .70; Form B α = .63), parent–child role reversal (Form A α =.65; Form B α =.77), and oppressing the child's autonomy (Form A α =.74; Form B α =.76). Higher mean scores for the AAPI-2 subscales indicate lower positive outcomes.

Parental Sense of Competence

The Parental Sense of Competence (PSOC; Johnston & Mash, 1989; Spanish version by Menéndez, Jiménez, & Hidalgo, 2011) is a self-report scale of perceived self-efficacy and satisfaction in the parental role. It is a 16-item self-report questionnaire, with response options ranging from *strongly disagree* (1) to *strongly agree* (6). The PSOC provides two subscales: parents' self-efficacy (7 items), (α = .77) and satisfaction in the parenting role (9 items), (α = .78). Higher mean scores for the subscales indicate more self-efficacy and satisfaction with the parental role.

TABLE 1 Individual and implementation variables

Individual (*n* = 256)				Implementation (*n* = 49)			
Variable	**%**	***M***	***SD***	**Variable**	**%**	***M***	***SD***
Female	90.6			Age of facilitator		34.3	10.7
Age of participant		31.3	7.5	Facilitator attending ongoing training	48.8		
Age of partner		34.3	9.2	Dosage			
Family structure				Full (22 sessions)	71.4		
One-parent	44.5			Partial (14 sessions)	28,6		
Two-parent	55.5			Length of sessions			
Number of children		2.2	1.2	<80 min	37.4		
Sex of children				80-100 min (recommended length)	50.7		
Male only	34.8			> 100 minutes	11.9		
Female only	21.5			Included opening/closing event	69.4		
Both sexes	43.6			Group size		12.1	4.4
On welfare	68.6			Gender composition			
Unemployed	84.7			Mothers and fathers	51.0		
Educational level				Only mothers	49.0		
None or primary only	79.2			Risk composition			
Secondary or higher	20.8			At-risk only	68.0		
Immigrant status	30.8			Both at-risk and non-risk	32.0		
At psychosocial risk	87.2						
Sourced from another program	39.0						
Residential area							
Urban	72.2						
Rural	27.8						
Low socioeconomic area	42.9						
Type of social support							
Instrumental		3.2	1.3				
Emotional/informational		3.5	1.0				
Affective		4.1	1.0				

Parenting Stress Index-Short Form

The Parenting Stress Index-Short Form (PSI-SF; Abidin, 1995; Spanish version by Díaz-Herrero, Brito, López, Pérez-López, & Martínez-Fuentes, 2010) uses 36 items to measure parenting stress. Five response options are anchored by *strongly disagree* (1) to *strongly agree* (5). The PSI-SF provides three subscales, each with 12 items: parental distress (α = .81), dysfunctional parent–child interaction (α = .83), and difficult child (α = .80). Higher mean scores for the subscales indicate more parenting stress.

2.2.3 | Process measure

Program adherence and groups' profile

Included in the session checklist are as follows: (a) Dosage. This refers to the number of sessions performed by group. (b) Duration of session. This was recorded in minutes at the end of each session by the facilitator. As the recommended duration was 90 min, sessions lasting between 80 to 100 min were coded as having an adequate timing (1), whereas sessions with durations above or below these intervals were coded as having inadequate timing (0). (c) Information about group. This refers to the number and participants' characteristics (sex and risk status) in each session.

2.2.4 | Final measure

Program satisfaction

This 44-item measure (Almeida et al., 2008, translated ad hoc into Spanish) assesses participants' satisfaction in the intervention programs in the following dimensions: logistics, program structure, contents, group dynamics, facilitator behaviour, and parental changes observed. Four response options range from *strongly disagree* (1) to *strongly agree* (4). A higher mean total score indicates higher satisfaction.

A quasi-experimental design with an intervention group was used given that we were mainly interested in the patterns of change undergone by the intervention group and that effectiveness of this program

with a control group was already tested in previous trials (Álvarez, Padilla, & Máiquez, 2016; Álvarez et al., 2018).

2.3 | Procedure

At the start, an intensive training program of 25 hr was given to the group facilitators and also to the coordinators responsible for each of the local social services. This training program covered the core principles, methodology, and evaluation of the program, as well as guidance on how to implement it successfully and integrate it into the professionals' casework plan. There was also online follow-up throughout the program to ensure the supervision of the facilitators and the quality of data collection. Once the program had started, two warm-up sessions were necessary to create a group identity and to establish the group roles. Part of the first session was also used to complete the questionnaires by the participants. The posttest questionnaires in the intervention group were completed within a week of the program completion in the last session.

3 | RESULTS

3.1 | Individual patterns of prepost changes

First, we performed ANOVAs to test prepost mean differences in parents' self-reports of parental attitudes and behaviour, parental sense of competence, and parenting stress (Table 2). Results showed significant improvements in parental attitudes and behaviour with medium to large effect sizes (partial R^2) in role reversal (.09) and lack of empathy (.56). In relation to parental sense of competence, results showed a small statistical increase in parental satisfaction (.04) and a small statistical decrease in parental self-efficacy (.02). Finally, results showed less parenting stress with medium to large effect sizes.

Secondly, we performed a hierarchical cluster analysis on the changing scores in all the factors to distinguish different subgroups according to the results of the program using Ward's (1963) method. All the variables were standardized as *z* scores. Before performing the cluster analysis, we conducted an outlier analysis. Based on this analysis, we excluded 11 participants because of extreme scores. A four-cluster solution including 245 participants was chosen, taking into account the visual analysis of the dendrogram, the size and differentiation of clusters, and the parsimony of the cluster solution (Milligan & Cooper, 1985). The hierarchical four-cluster solution was replicated using the *k* means clustering as a nonhierarchical method. A multivariate ANOVA found four-cluster statistical differences in the program outcome measures (Wilks' Lambda = .118, F [10,235] = 23.96, $p \leq .001$), with a large effect size (η^2 = .51). The mean standardized scores on the clustering variables of the four clusters are shown in Table 3. Then, one-way ANOVAs by cluster membership with Tukey post hoc comparisons, a test used to determine which means amongst a set of means differ from the rest, were conducted to verify statistical mean differences for the variables included in the clusters. All analyses were conducted using SPSS 18.0.

To label each cluster, we followed two criteria. The first criterion was the *extent of change* (total or partial). A total change involved significant changes in all dimensions, whereas a partial change means changes in some dimensions but not in others (at

TABLE 2 Mean differences in outcome measures in the control (n = 164) and the intervention (n = 256) groups and the 95% CIs of the change scores in the intervention group

	Intervention pretest		Intervention posttest				Effect size	Change scores 95% CI	
Dimensions	*M*	*SD*	*M*	*SD*	*F*(1,256)	*p*	(partial R^2)	Lower	Upper
Parental attitudes									
Inappropriate expectations	2.58	0.72	2.68	0.76	4.80	.029*	.02	0.01	0.20
Lack of empathy	3.07	0.65	3.89	0.66	323.20	< .001***	.56	0.73	0.92
Belief in corporal punishment	3.67	0.66	3.83	0.62	12.04	.001***	.05	0.06	0.25
Parent–child role reversal	2.91	0.73	3.16	0.82	26.36	< .001***	.09	0.18	0.38
Oppressing child's independence	3.73	0.68	3.65	0.65	2.12	1.47	.01	-0.22	-0.01
Parental competence									
Satisfaction	3.85	0.75	4.01	0.81	10.22	.002**	.04	0.04	0.24
Efficacy	4.16	0.86	4.01	0.83	6.53	.011*	.02	-0.26	-0.03
Parenting stress									
Parental distress	2.86	0.75	2.64	0.73	23.07	< .001***	.08	-0.29	-0.11
Dysfunctional interaction	2.14	0.87	1.91	0.68	14.45	< .001***	.06	-0.34	-0.12
Difficult child	2.63	0.81	2.40	0.73	19.36	< .001***	.07	-0.34	-0.13

Note. Statistically significant when p-value $\leq .05$.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

TABLE 3 Centre of the final clusters and univariate contrast of variance between the clusters according to the changing dimensions (n = 245)

	Cluster				F (2/			Post hoc tests											
								1 vs. 2		1 vs. 3		1 vs. 4		2 vs. 3		2 vs. 4		3 vs. 4	
Dimensions	1 (n = 75)	2 (n = 68)	3 (n = 59)	4 (n = 43)	243)	p	R^2	p	d	p	d	p	d	p	d	p	d	p	d
Inappropriate expectations	-0.46	0.52	-0.47	0.75	34.26	<.001	.30	<.001	-.75	1.00	.01	<.001	-.92	<.001	.75	.576	-.17	<.001	-.93
Lack of empathy	-0.66	0.68	-0.01	0.06	29.90	<.01	.27	<.01	-.99	<.01	-.48	<.001	-.53	<.001	.51	.003	.46	.986	-.05
Belief in corporal punishment	-0.25	0.52	0.29	-0.08	21.57	<.001	.23	<.001	-.58	.006	-.42	.040	-.40	.555	.17	<.001	.99	<.001	.83
Parent–child role reversal	-0.56	0.87	-0.24	0.11	38.77	<.001	.32	<.001	-1.14	.174	-.26	.001	-.53	<.001	.89	<.001	.61	.222	-.28
Oppressing child's independence	-0.05	0.23	0.47	-1.02	27.42	<.001	.25	.287	-.26	.008	-.48	<.001	.89	.482	-.22	<.001	1.15	<.001	1.37
Satisfaction	-0.32	-0.13	0.04	0.59	9.04	<.001	.10	.700	-.15	.186	-.29	<.001	-.75	.787	-.14	.002	-.60	.037	-.45
Efficacy	-0.01	-0.47	0.29	0.41	11.22	<.001	.12	.024	.45	.316	-.28	.042	-.40	<.001	-.73	<.001	-.85	.935	-.11
Parental distress	0.65	0.21	-0.73	-0.41	33.51	<.001	.29	.026	.32	<.001	.99	<.001	.77	<.001	.68	.004	.45	.320	-.23
Dysfunctional interaction	0.45	0.17	-0.79	-0.02	27.06	<.001	.25	.231	.27	<.001	1.17	.028	.45	<.001	.90	.695	.18	<.001	-.72
Difficult child	0.62	0.06	-0.81	-0.08	30.07	<.001	.27	.002	.48	<.001	1.23	.001	.61	<.001	.75	.858	.12	.001	-.62

Note. Negative scores in child-rearing attitudes and sense of competence represent a negative change (i.e., less endorsement of child-rearing and lower levels of competence), whereas negative scores in parenting stress represent a positive change (i.e., lower levels of parenting stress).

d = mean differences.

Statistically significant when p-value $\leq .05$.

least one factor for each dimension should show changes). The second criterion was the *direction of changes* at the dimension level, defined as positive, negative, or mixed (positive in one dimension and negative in other). However, when mixed changes occurred within a given dimension (some factors are positive and other negative), a second-level criterion was applied that consisted of identifying the factor(s) that obtained negative changes within a given dimension.

Overall, clusters 2, 3, and 4 showed participants with better results than those in cluster 1. *Cluster 1: Partial Negative Changes* (n = 75) was characterized by negative results in parental attitudes (i.e., increased inappropriate expectations, lack of empathy, belief in corporal punishment, and role reversal) and parenting stress (i.e., increased parental distress, dysfunctional interaction, and difficult child). *Cluster 2: Partial Mixed Changes* (n = 68) was characterized by positive results in parental attitudes (i.e., decreased inappropriate expectations, lack of empathy, attitudes towards corporal punishment, and role reversal) and negative results in parental sense of competence (i.e., decreased parental efficacy). *Cluster 3: Total Positive Changes with Negative Result in Inappropriate Expectations* (n = 59) was characterized by mixed changes in parental attitudes (i.e., moderate decreased attitudes towards corporal punishment and oppressing child's independence but increases in inappropriate expectations), paired with positive results in parental competence (i.e., increased parental efficacy) and parenting stress (i.e., decreased parental distress, dysfunctional interaction, and difficult child). *Cluster 4: Total Positive Changes with Negative Result in Oppressing Child's Independence* (n = 43) was characterized by mixed changes in parental attitudes (i.e., decreased inappropriate expectations but increased attitudes towards oppressing child's independence), paired with positive results in parental competence (i.e., increased parental satisfaction and efficacy) and parenting stress (i.e., decreased parental distress).

3.2 | Variables that characterize each pattern of change

All results in this section were significant at $p \leq .05$. Table 4 summarizes the results of the variables associated to cluster membership. With regard to individual characteristics, participants living in low socioeconomic areas were overrepresented in Cluster 1 with partial negative changes, whereas participants living in high socioeconomic areas were more likely to be in Cluster 2 with partial mixed changes, χ^2 (3, n = 231) = 7.06. Residential area also differed by cluster, χ^2 (3, n = 232) = 7.49, with participants living in urban areas overrepresented in Cluster 1. Type of social support differed by cluster. Participants in Cluster 1 showed less instrumental support than participants in Cluster 4 (F[3, 235] = 3.52, DFS = 1.12), and less emotional social support than participants in Cluster 2, F (3, 235)

TABLE 4 Summary of characteristics significantly associated with the typology of individual changes ($p \leq .05$)

	Cluster 1: Partial negative changes (n = 75)	Cluster 2: Partial mixed changes (n = 68)	Cluster 3: Total positive changes/Inappropriate expectations (n = 59)	Cluster 4: Total positive changes/ Oppressing child's independence (n = 43)
Individual characteristics	- Lower socioeconomic areas - Urban area - Lower instrumental support - Lower emotional support - Attending other parent education programs	- Higher socioeconomic areas - High emotional support	- Not attending other parent education programs	- Higher instrumental support
Implementation factors	- Incomplete dosage - Sessions with a shorter time than recommended - Mother-only groups	- Bigger groups	- Older facilitators - Complete dosage - Adequate time sessions	- Younger facilitators - Facilitator attending ongoing training - Smaller groups - Mother-father groups
Program satisfaction	- Lower program satisfaction	- Higher program satisfaction		- Higher program satisfaction

= 7.11, DFS = 0.84. Participants attending another parenting program were overrepresented in Cluster 1, whereas participants who did not attend another parenting program were mainly in Cluster 3, χ^2 (3, n = 230) = 10.82.

With regard to implementation factors, younger facilitators were overrepresented in Cluster 4, whereas older facilitators were overrepresented in Cluster 3, χ^2 (3, n = 230) = 10.06. Participants with the facilitator attending ongoing training were overrepresented in Cluster 4, χ^2 (3, n = 245) = 8.80. Participants submitted to incomplete dosage groups were overrepresented in Cluster 1, whereas those submitted to complete dosage groups were more likely to be in Cluster 3, χ^2 (3, n = 245) = 6.96. Participants in Cluster 4 attended smaller groups than participants in Cluster 2, F (3,241) = 3.17, DFS = 2.51. Participants attending sessions with a shorter time than recommended were overrepresented in Cluster 1, whereas those attending adequate time sessions were more likely to be in Cluster 3, χ^2 (6, n = 245) = 14.16. Finally, mother-only groups were overrepresented in Cluster 1, whereas mixed groups with mothers and fathers were more likely to be in Cluster 4, χ^2 (6, n = 240) = 11.48.

3.3 | Impact of the patterns of change on program satisfaction

The overall score of program satisfaction was high (M = 4.38; SD = 0.46) and the results of ANOVAs showed that degree of satisfaction was differentially distributed among the clusters, F (3,235) = 4.69. Participants in Cluster 1 showed less program satisfaction than participants in Cluster 2 (DFS= 0.30) and Cluster 4 (DFS = 0.35) and showed no statistically differences with Cluster 3.

4 | DISCUSSION

On average, the program seems to work well, because positive changes were obtained in some parental child-rearing attitudes (medium to large effect sizes), parental satisfaction (small effect sizes), and parenting stress (medium to large effect sizes). However, as expected participants did not progress in the same way, because four profiles of individual change were identified. Participants in Cluster 1 (30.6%) exhibit initial states of knowledge building in which negative results tend to cooccur, given that neither child-rearing attitudes nor parental stress have been improved (Almeida et al., 2012). Participants in Cluster 2 (27.7%) reached a transitional knowledge state in which participants' improvements in attitudes and parental stress are not reflected in their own perception of parental competences, a trend similar to that found in a study of individual changes (Byrne et al., 2014). Finally, participants in Clusters 3 and 4 (41%) achieved a quite consolidated knowledge state in which perceived sense of competence tend to be in accordance with positive changes in parental attitudes and stress (Bloomfield & Kendall, 2012). In sum, a cross cluster inspection revealed that program results are related to one another and changes occurred progressively and not in an "all or none" fashion.

Both individual and group characteristics were important sources of variation in the typology of changes revealing which factors make the program work when applied in real-life conditions. As shown in Table 4, participants in Cluster 1 with negative results (30.6%) tended to live in low socioeconomic and urban areas and perceived low instrumental and emotional social support. This cluster makes conceptual sense because participants' characteristics are typical of the families at psychosocial risk (Hidalgo, Lorence, Pérez, & Menéndez, 2012; Rodrigo, Máiquez, Martín, & Byrne, 2008), who usually obtain

worse results in parenting programs (Reyno & McGrath, 2006). Participants in Cluster 1 were more likely to attend other parenting programs, which may indicate that they were multi-assisted families, who are characterized by low levels of responsibility and control in the parental role and family functioning (Matos & Sousa, 2004; Rodrigo & Byrne, 2011). They also attended groups receiving a partial dosage, with a session time that was shorter than recommended, and composed of only mothers, three variables related to a poor program implementation (Álvarez et al., 2018; Baydar et al., 2003). Finally, participants in this cluster were less satisfied with the program, suggesting that this perception accurately reflects their poor performance in the program (Garvey et al., 2006).

Participants with comparatively better trajectories than those in Cluster 1 were characterized by living in higher socioeconomic areas (Cluster 2), showing higher instrumental (Cluster 4) and emotional social support (Cluster 2), and not attending other parenting programs (Cluster 3). The implementation process was of higher quality, given that the facilitators received ongoing training throughout the program (Cluster 4), participants attended groups with a full dosage and with the adequate session time (Cluster 3) and composed of fathers and mothers and with small size (Cluster 4), all factors that are indicative of a good implementation by the facilitators (Shapiro, Prinz, & Sanders, 2012). Finally, participants with better trajectories were more satisfied with the program (Clusters 2 and 4), in keeping with previous studies (Garvey et al., 2006).

This study has some limitations that should be addressed in future studies. First, the lack of follow-up measures prevented us from checking whether these typologies of change were maintained over time or were modified. Second, there is a lack of behavioural measures of actual change. However, whether or not true behaviour change occurred, the improved perception in the parenting dimensions may be considered a meaningful and valuable program effect.

In conclusion, this study has illustrated how variability in the process of change at the individual level can be identified. It also provides useful information that complements the average information collected, helping to report more accurately on program effectiveness and to ensure the continuous improvement of the program. This is relevant because we have identified 30.6% of participants for whom the program did not work well and, therefore, there is room for improvement.

In this line, we provide the following practical recommendations for the successful implementation of group parenting programs in family preservation services. First, leaving apart the influence of socioeconomic habitats, it is remarkable the lack of impact of other sociodemographic and family variables (e.g., risk or immigrant status) on the cluster membership. Therefore, early intervention may be beneficial for most of the parents, because there is no specific personal profile for whom the program worked better or worse.

Second, it is important to improve the quality of implementation, which is in the hands of the professionals, to increase program effectiveness for at-risk participants. For instance, it is important to allow for the adequate time sessions and full dosage in at-risk groups who are in more need of receiving an intensive intervention. Also, more should be done to enrol fathers in the groups, because this is a sensitive variable that affects program results. In the same vein, smaller groups and trained facilitators are very important factors to create an appropriate learning and supportive atmosphere in the groups. There is a great amount of knowledge and skills to be acquired by the professionals while working with families during the program. For this reason, it is important to provide professionals with initial and follow-up training not only on the core principles, methodology, and evaluation of the program but also on how to implement it successfully and how to integrate it into their existing work plan.

Third, the quality of the parents' social network should be assessed and enhanced as a preventive factor for at-risk families, as we have shown that this promotes better program results. This is critical, because many social services mainly emphasize the provision of instrumental support to the families, but underestimated the importance of emotional supports. Finally, facilitator and group participation are important implementation factors to provide participants with a positive feedback on their acquisition of competences. All these recommendations are important to continue promoting quality standards and good practices at the level of the local delivery system.

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ORCID

Míriam Álvarez https://orcid.org/0000-0001-7603-4686
Sonia Byrne https://orcid.org/0000-0002-9267-3354
María José Rodrigo https://orcid.org/0000-0001-5504-886X

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