What Implementation Components Predict Positive Outcomes in a Parenting Program?

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Abstract

Objectives: To examine the components affecting the quality of the implementation and their impact on the outcomes of the "Growing Up Happily in the Family" program targeted at parents with children aged 0–5. **Method:** At-risk and non-at-risk parents (N = 196) participated in 26 groups in local social services. Adherence, adaptations, quality of delivery, group and participant responsiveness, and implementation barriers were examined as predictors of attendance rate and changes in parental child-rearing attitudes, parental sense of competence, and parenting stress using hierarchical linear regressions analyses. **Results:** Greater participant responsiveness and fewer implementation barriers predicted higher attendance rates. These implementation variables, as well as greater program adherence, fewer crucial adaptations, and better didactic functioning of the sessions, predicted positive parental changes. **Conclusions:** The level of implementation contributes to the program effectiveness, suggesting the need to provide a high-quality and well-coordinated implementation to achieve the intended program outcomes in child welfare populations.

Keywords

child maltreatment prevention, evidence-based parenting program, implementation components, attendance rate, positive parenting

In the area of child maltreatment prevention in Europe, there is an increasing use of evidence-based parenting programs based on the concept of positive parenting and aimed at strengthening and empowering at-risk families and children (Rodrigo, Almeida, & Reichle, 2015; Rodrigo, Byrne, & Álvarez, 2012). The positive parenting initiative launched by the Councils of Europe Recommendation Rec (2006) 19 on policy to support positive parenting focuses on the empowerment of parents and vulnerable families in the context of family support services (Rodrigo, 2010). Positive parenting has been defined in the Recommendation as parental behavior ensuring the fulfillment of the best interests of the child "that is nurturing, empowering, non-violent and provides recognition and guidance which involves the setting of boundaries to enable the full development of the child" (p. 6). Under this positive approach, it is recognized that the parenting task needs social and psychoeducational support to be adequately performed. Attending parenting programs is especially crucial for families raising young children and experiencing negative psychosocial conditions (e.g., marital violence, low educational background, poverty, lack of social support, and substance abuse).

Research into the efficacy of programs involving at-risk families has shown an increase in parents' beliefs and knowledge about healthy child development, a decrease in negative discipline strategies, an increase in parents' confidence in their capacities as parents, and the development of practical skills to deal with stressors related to parenting (Johnson et al., 2010; Kaminski, Vallew, Filene, & Boyle, 2008; Rodrigo, Almeida, Spiel, & Koops, 2012; Sandler, Schoenfelder, Wolchik, & MacKinnon, 2011; Webster-Stratton & Reid, 2010). Comparatively less is known about the conditions that assure the correct implementation of group-based parenting programs, leaving practice fields with "the paradox of non-evidence-based implementation of evidence-based programs" (Drake, Gorman, & Torrey, 2002, cited in Fixsen, Naoom, Blase, Friedman, & Wallace, 2005, p. 35). The present study tried to fill this gap by addressing two research questions: Which are the components affecting the quality of the implementation and what implementation components predict positive outcomes in a group-based parenting program for at-risk parents (Crecer Felices en Familia; Growing Up Happily in the Family).

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Evaluating the Quality of Implementation

The evaluation of the quality of implementation is critical to understanding which factors make a program work when applied in real-life conditions (Domitrovich & Greenberg, 2000; Durlak & Dupre, 2008; Dusenbury, Branningan, Falco, & Hansen, 2003). Without this evaluation one cannot be sure that the program has been applied as it was designed and, therefore, that it is indeed responsible for the changes observed (Fixsen et al., 2005; McCall, 2009). However, evaluating effective implementation is a complex undertaking that requires both practical expertise and the acquisition of cumulative knowledge over repeated trials or across multisite application of the program. Implementation studies in real-world settings usually require additional budgetary resources and the full participation of the organizational staff and group facilitators, which is not always possible.

Another possible factor behind the paucity of research on the quality of implementation is the lack of theoretical models. While it is recognized that the implementation of group-based programs in real-world settings involves many sources of influence arising from individual, group, and systemic–organizational factors, most studies have focused on single implementation components and single program outcomes (Carroll et al., 2007; Durlak & Dupre, 2008; Dusenbury et al., 2003; Kutash, Cross, Madias, Duchnowski, & Green, 2012). However, there is a growing interest in analyzing a variety of implementation components (i.e., fidelity, quality of delivery, and participant response to the program) that may affect outcome dimensions of prevention programs (Bagnato, Suen, & Fevola, 2011; Berkel, Mauricio, Schoenfelder, & Sandler, 2011; Gearing et al., 2011).

The Present Study

In this study, we first examined, for the first time, a broad variety of components that may affect the quality of the implementation. Second, we analyze what implementation components predict two program outcomes: attendance rate and positive changes in parenting dimensions. The "Growing Up Happily in the Family" program (Rodrigo et al., 2008), targeted at parents at psychosocial risk with children aged 0-5 years old, was used for this study. This program is widely implemented in local social services and nongovernmental organizations in several regions of Spain within the context of family preservation services for preventing unnecessary foster care placement of children from vulnerable families living in disadvantageous environments. Community families are also invited to participate as a way to normalize the use of these educational resources for all the families. To perform this evaluation study, we made use of a partnership, in place since 2009, to support the positive parenting initiative in Spain that has brought together the Spanish Ministry of Health, Social Services and Equality, the State Federation of Towns and Provinces, and a consortium of six Spanish universities. This collaboration has provided a fertile ground for a real-world multisite and sustained implementation of evidence-based parenting programs in Spain (Rodrigo, Byrne, & Álvarez, in press).

For the first research question, which are the components affecting the quality of the implementation, we examined a variety of implementation components based on the model by Berkel, Mauricio, Schoenfelder, and Sandler (2011): adherence (dosage and duration of the sessions), adaptations (number and type), quality of delivery (material resources, goal-related activities, clear guidelines, and objectives reached), implementation barriers, and group and participant responsiveness (participation and interest, group cohesion and positive climate, and participant satisfaction with the program). Reports from program facilitators, service coordinators, and participants were collected to assess the components of the implementation. As a novelty, we included the type of barriers that had threatened or hindered the implementation process as a factor that may influence the quality of delivery (Koerting et al., 2013; Marcynyszyn, Maher, & Corwin, 2011) and, therefore, may have some influence on the program outcomes (August, Bloomquist, Lee, Realmuto, & Hektner, 2006; Sanders, Prinz, & Shapiro, 2009). Shapiro, Prinz, and Sanders (2012) pointed out the importance of addressing implementation work from a contextual-systemic approach, analyzing the existence of organizational barriers (e.g., lack of connections with service coordinators and lack of integration of the program into the professionals' work plan), barriers related to the facilitators (e.g., difficulties to adapt the program contents), and barriers related to the participants (e.g., difficulties to engage the families in the program activities). Another barrier could be the facilitators' negative attitudes toward the space and material resources used to run the sessions (Stern, Alaggia, Watson, & Morton, 2008), which has been associated with low levels of fidelity (Mancini et al., 2009). The existence of these barriers, as appraised by the facilitators and coordinators, would contribute to explaining variations in the program outcomes, along with the other implementation components already described.

For the second research question, what implementation components predict positive outcomes, we examined the impact of the implementation components on two types of program outcomes: attendance rate and positive changes in parenting dimensions. We selected attendance rate because dropout rates are usually high in at-risk families, at 40-60%, in spite of the economic support and the facilities provided during the sessions (i.e., refreshments, transport, and child care; Baker, Arnold, & Meagher, 2011). It is very important to maximize the recruitment of vulnerable families traditionally considered to be "hard to reach" and to reduce the dropout rates to ensure that parenting programs are socially inclusive (Davis, McDonald, & Axford, 2012). However, little is known about the impact of implementation components on attendance rates in these at-risk contexts. Among the components studied are program adherence (Breitenstein et al., 2010) and quality of delivery (Baker et al., 2011), which may facilitate attendance by helping to diminish the barriers to participation (Whittaker & Cowley, 2012). Participant responsiveness (Dumas,

Nissley-Tsiopinis, & Moreland, 2007), level of group cohesion (Prado, Pantin, Schwartz, Lupei, & Szapocznik, 2006), and quality of group participation (Nix, Bierman, & McMahon, 2009; Ogrodniczuk & Piper, 2003) also affected the level of attendance. In this study, we measured the attendance rate by participant and across sessions, as reported by the group facilitator.

The second type of outcome examined in this study was related to positive changes in parenting dimensions. We examined a variety of program outcomes relevant for at-risk families, related to changes in parental child-rearing attitudes, parental sense of competence, and parenting stress, all as reported by parents. Previous studies have shown that high ratings of adherence predicted low levels of inconsistent discipline and high levels of appropriate discipline and positive parenting (Forgatch, Patterson, & DeGarmo, 2005; Kjøbli, Bjørknes, & Askeland, 2012). A complete dosage of the program has also been related to positive parenting practices in high-risk populations (Baydar, Reid, & Webster-Stratton, 2003). Changes in parental investment in the family were related to the number of parent-group sessions attended (Pantin et al., 2003). Cultural adaptations of the program also improved the program results (Durlak & Dupre, 2008; Kumpfer, Alvarado, Smith, & Bellamy, 2002), in the form of reduction in parenting stress and improvements in positive parenting practices (Bjørkness & Manger, 2013; Matos, Torres, Santiago, Jurado, & Rodríguez, 2006; McCabe & Yeh, 2009). However, other adaptations, such as the elimination of critical core content, can change the nature of the intervention, reducing positive parenting outcomes (Castro, Barrera, & Martínez, 2004; Durlak & DuPre, 2008; Elliott & Mihalic, 2004; Kumpfer et al., 2002).

Higher quality of program delivery has been related to better program results (Durlak & Dupre, 2008). Positive leadership skills predicted positive changes in parenting skills (Eames et al., 2009) and in parental praise and reflective behaviors (Eames et al., 2010), and high levels of parental satisfaction (Byrnes, Miller, Aalborg, Plasencia, & Keagy, 2010). Participant and group responsiveness have also been associated with program outcomes. Active participation and satisfaction with the program were related to improvements in parents and children, such as decreased levels of depression (Garvey, Julion, Fogg, Kratovil, & Gross, 2006) and improvements in maternal and child behavior (Reid, Webster-Stratton, & Baydar, 2004). The use of a group discourse centered in reflecting on the others' ideas was positive for promoting new child-rearing ideas and practices, whereas a self-centered discourse in the group was positive for improving parental sense of competence and for reporting less use of permissive practices (Rodrigo, Correa, Máiquez, Martín, & Rodríguez, 2006). Participating in heterogeneous groups that mixed at-risk and non-at-risk families produced more positive changes in parental discipline than participating in homogeneous groups (Byrne, Salmela-Aro, Read, & Rodrigo, 2013).

In sum, this study explored a variety of implementation components: adherence (dosage and duration of the sessions), adaptations (number and type), quality of delivery (material resources, goal-related activities, clear guidelines, and objectives reached), implementation barriers, and participant and group responsiveness, and tested their influence on attendance rate and positive parenting outcomes. Including multiple aspects of implementation in a single model may help to disentangle the relative contribution of each implementation component to the outcomes. Moreover, including multiple outcomes may help reveal the extent to which some components are more relevant for certain outcomes than for others. Based on incomplete evidence, we expected that attendance rate would be mainly predicted by implementation components related to program adherence and group and participant responsiveness, whereas changes in parenting outcomes would also be predicted by components related to the functioning of the session, such as adaptations, quality of delivery, and barriers.

Method

Participants and Procedure

The participants were 196 parents who attended the Growing Up Happily program in 10 local social services in the Autonomous Communities of Castile and Leon, Canary Islands, and Catalonia in Spain; at all sites, the program was operational for at least 1 year (n = 26 groups). All parents had children aged between 0 and 5 years old. Of the participants, 76.8% were atrisk families referred by the municipal social services and 23.2% were nonreferred. Referred parents were particularly invited to participate as part of the family's case plan, whereas nonreferred parents 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.

Sociodemographic characteristics of the parents who participated in this study are presented in Table 1. The participants were mainly young mothers; half lived in a two-parent family structure; and most had no studies or primary schooling only, were unemployed and on welfare, and lived in urban areas. Of the participants, 76.8% were at-risk families referred by the social services and 23.2% were nonreferred, community families who lived in the same neighborhoods and attended the program on a voluntary basis. There were 30 facilitators (four groups had two facilitators), all women, with an average age of 34.33. All had graduate degrees; just over one third (34.8%)were social educators, 21.7% were social workers, 21.7% were psychologists, and 21.6% had degrees in pedagogy (teaching). All facilitators had attended the initial training, and 48.8% received ongoing training throughout the program. In every institution there was a program coordinator. The average size of the 26 groups was 8.1 participants (SD =4.7), 51% was composed of fathers and mothers, while the rest was composed of only mothers. Of the total, 68% of the groups were only formed by at-risk parents, while the rest were formed by a mixed composition of non-at-risk and at-risk parents.

Characteristic	M (SD), %
Sex	
Father	9.7
Mother	90.3
Age	32.85 (8.36)
Family structure	
One parent	46.3
Two parents	53.7
Area	
Rural	40.25
Urban	61.25
Educational level	
No schooling or primary level only	76.5
Secondary or high school studies	23.5
Financial situation	
On welfare	60
Employment situation	
Unemployed	81.3
Employed	18.7
Psychosocial risk status	
Not at risk	23.2
At risk	76.8

Table 1. Sociodemographic Characteristics and Psychosocial RiskStatus of the Participants Who Completed the Program.

Note. n = 133.

For the assessment of attendance rate, we included all those participants (N = 196) who had attended at least the first three sessions, which corresponded to the initial steps of group formation and overview of program contents, thus avoiding the inclusion of naive participants. Parents who completed the program did not differ significantly from noncompleters on all the sociodemographic and pretest measures in Table 1. For the assessment of changes in positive parenting, we employed a subsample of the 133 participants who completed the program and had pretest and posttest scores in all the parenting dimensions. These participants did not differ from the total sample in any sociodemographic or pretest measures. The flow of participants through the stages of the study is depicted in Figure 1.

The Intervention

The Growing Up Happily program is a community-based, multisite program that is delivered through 1½-hr weekly group meetings in municipal social services and lasts 4–5 months (22 sessions, 4 per module plus 2 for evaluation). As part of their normal casework, social services personnel had to identify families with a minor who was at risk; a minor is declared to be at risk when he or she is in a situation that could be potentially harmful to his or her healthy development according to several psychosocial family and personal factors (e.g., marital violence, low educational background, poverty, substance abuse, and school dropout). The program was offered as part of the family's case plan.

The content of this program is based on the approaches of attachment (Bowlby, 1969; De Wolff & van IJzendoorn, 1997),

parental child-rearing practices (Grusec & Goodnow, 1994), self-regulation (Shonkoff & Phillips, 2000), parental sense of competence (Coleman & Karraker, 2003; Jones & Prinz, 2005), and family stress and social support (Ceballo & McLoyd, 2002). The program involves five modules: Module 1: sensitive and responsive parenting; Module 2: coming to know our children; Module 3: regulating child behavior; Module 4: first family-school relationships; and Module 5: parenting: a solitary task? Given the participants' low educational level and diverse cultural backgrounds, materials include vignettes, videos, case studies, guided fantasies, puzzles, games, and group discussions. An experiential methodology was designed, already validated in other parenting programs, that helps at-risk parents to verbalize their interpretations of a variety of family situations, enrich their interpretations with others' parental views, reflect upon the consequences of their actions on family life, and reach compromises of change (Byrne, Rodrigo, & Máiquez, 2014; Rodrigo et al., 2006; Rodrigo, Byrne et al., 2012). To facilitate participants' attendance, a nondirective and participative process of coconstruction with emotional involvement is promoted, instead of a unidirectional transmission of expert knowledge.

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 to better integrate the program within the service. 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 social workers' existing casework plan. There was also one training session conducted halfway through the program, to ensure the supervision of the facilitators. Once the program had started, two warm-up sessions were necessary to create a group feeling and to establish the group roles. Part of the first session was also used to complete the questionnaires. The posttest questionnaires were completed within a week of the program completion in the last session. Special care was taken in establishing online connections with the group facilitators and coordinators to ensure that the collection of such a variety of implementation data was correctly done. Written consent was obtained from all the participants according to the protocol approved by the ethics committee of the University of La Laguna.

Measures and Instruments

To organize this section, we first describe implementation measures followed by parenting outcomes measures.

Implementation measures. Table 2 summarizes the components of the implementation process, the indicators, measures, and informants. A variety of qualitative and quantitative measures and informants were used according to the type of component.

1. *Adherence to the program.* (a) *Dosage.* This refers to the number of sessions performed by the group. The complete dose includes 22 sessions (initial evaluation



Figure 1. Flowchart of participants.

Table 2. Components of the Im	plementation Process and Their	Indicators, Measures, and Informants
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(intervention group) (n = 133)

Components	Indicators	Measures	Informants		
Adherence	 Dosage Duration of session 	At initial session Session checklist	Coordinator Facilitator		
Adaptations	 Number and type of modifications 	Session checklist	Facilitator		
Quality of delivery	 Material resources Goal-related activities Clear guidelines Objectives reached 	Session checklist	Facilitator		
Group and participant responsiveness	 Group participation and interest Group cohesion and positive climate 	Session checklist	Facilitator		
Appraised obstacles	Participant satisfactionImplementation barriers	Satisfaction scale Final interview	Participants Facilitator		

session and group norms; Module 1: four sessions; Module 2: four sessions; Module 3: four sessions; Module 4: four sessions; Module 5: four sessions; and final evaluation session). The partial dose includes 14 sessions (initial evaluation session and group norms; Module 1: three sessions; Module 2: two sessions; Module 3: three sessions; Module 4: two sessions; Module 5: two sessions; and final evaluation session). The coordinators decided, according to the suitability of the service, the dose applied to the groups, before starting the program; (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 and 100 min were coded as having an adequate timing (coded as 1), whereas sessions with durations above or below these intervals were coded as having inadequate timing (coded as 0).

2. *Adaptations*. This recorded in detail the modifications performed during the program activities. Facilitators should report on the session checklist if there were any changes made. If yes, they were asked to describe the modifications made. Afterward, members of the

program staff computed for each group the number of crucial modifications performed in each session, that is, those that involved critical changes affecting the program fidelity, such as changes in the methodology, con-

gram fidelity, such as changes in the methodology, contents, and objective of the activities (coded as 1). Modifications affecting the order of the activities, language adaptations, or the use of other group dynamics were not considered to affect the program fidelity (coded as 0). A higher percentage indicates a higher number of crucial modifications.

- Quality of delivery. This recorded the facilitators' scores on the session checklist using a 0-5 Likert-type scale: (a) The didactic quality of the material resources provided in the sessions, (b) the extent to which the activities were related to the session goal, (c) whether clear guidelines were provided for the facilitators and the group, and (d) whether the objectives were reached. A higher score indicates better didactic quality.
- 4. Group and participant responsiveness. This recorded the facilitators' scores on the session checklist, using a 0-5 Likert-type scale: (a) Group participation and interest and (b) Group cohesion and positive climate. A higher score indicates better group dynamics. It was also measured through the satisfaction of participants: (c) Participant satisfaction was assessed by means of a scale (Almeida et al., 2008) translated ad hoc into Spanish. Consists of 44 items with a 0-4 Likert-type scale, involving self-reports of participant's satisfaction in the following dimensions: logistics, program structure, contents, group dynamics, facilitator behavior, and parental changes observed. A higher average total score indicates higher satisfaction.
- 5. Appraised obstacles. At the end of the program, facilitators and coordinators were interviewed by the program staff to identify any barriers that had threatened or hindered the implementation process (see Data Analysis section). The facilitators were asked, what difficulties have you encountered during the program implementation? For each barrier reported by the facilitators/coordinators, the percentages were computed with respect to the total number of barriers reported, taking into account the fact that more than one barrier could be reported by each participant.

Parental attendance outcome measure. This was recorded on an individual basis by the facilitator on the session checklist. At the end of the program each participant's rate of attendance was computed as a percentage of the total sessions. An average attendance rate was computed per module and by all modules.

Parenting outcome measures. The following instruments were used reported by parents.

Adult-Adolescent Parenting Inventory (AAPI-2). This measures parental attitudes and behavior using two forms (Form A at initial session and Form B at completion), each including 40 items presented on a 5-point Likert-type scale (1 = agree and 5 = strongly disagree; Bavolek & Keene, 2001; ad hoc Spanish version, using a back translation procedure). The AAPI-2 provides five subscales: inappropriate expectations (Form A: $\alpha = .80$; Form B: $\alpha = .77$), parental lack of empathy toward the child's needs (Form A: $\alpha = .69$; Form B: $\alpha = .72$), strong support of the use of corporal punishment (Form A: $\alpha = .70$; Form B: $\alpha = .63$), parent–child role reversal (Form A: $\alpha = .65$; Form B: $\alpha = .77$), and oppressing the child's independence (Form A: $\alpha = .74$; Form B: $\alpha = .76$). As the scale is reversed, higher mean scores for the AAPI-2 subscales indicate less negative outcomes.

Parental sense of competence (PSOC). This is a self-report scale of perceived self-efficacy and satisfaction in the parental role (Johnston & Mash, 1989; Spanish version by Menéndez, Jiménez, & Hidalgo, 2011). It is a 16-item self-report questionnaire rated on a 6-point Likert-type scale (1 = strongly disagree and 6 = strongly agree). The PSOC provides two subscales: parents' self-efficacy ($\alpha = .77$) and satisfaction in the parenting role ($\alpha = .78$). Higher mean scores for the subscales indicate more selfefficacy and satisfaction with the parental role.

Parenting Stress Index–Short Form (PSI-SF). This is a 36-item self-report questionnaire using a 5-point Likert-type scale (1 = strongly disagree and 5 = strongly agree; Abidin, 1995; Spanish version by Díaz-Herrero, Brito, López, Pérez-López, & Martínez-Fuentes, 2010). The PSI-SF provides three subscales scores: parental distress ($\alpha = .81$), dysfunctional parent–child interaction ($\alpha = .83$), and difficult child ($\alpha = .80$). Higher mean scores for the subscales indicate more parenting stress.

Data Analysis

For the first research question, we examined the changes across modules in the following implementation components: dosage and duration of the sessions, number and type of adaptations, material resources, goal-related activities, clear guidelines, and objectives reached and participant and group responsiveness, measuring changes in these variables, using t tests. For the appraised obstacles, we conducted a qualitative analysis using the ATLAS.ti (6.5 version) software to identify categories of implementation barriers or obstacles reported by the group facilitators and coordinators (n = 30) in the final interview. After a literal transcription of the interviews, and based on categories drawn from the literature, several barriers were identified and coded as: motivational (e.g., participants do not show interest in the program, participants get bored during the sessions), engagement (e.g., irregular participant attendance, lack of punctuality), adaptation (e.g., participants do not understand the activity, abstract contents difficult to grasp), organizational (e.g., lack of organization at the start of the program, timetable or location changes), and coordination with the agency (e.g., lack of coordination with the professionals in charge of the

	M (SD), %												
Implementation Components	Module I	Module 2	Module 3	Module 4	Module 5	Total							
Duration of sessions (min)	89.83 (17.68)	88.58 (18.74)	84.82 (19.59)	84.46 (18.38)	83.07 (15.24)	86.15 (17.92)							
Crucial modifications	0.08 (0.26)	0.13 (0.34)	0.20 (0.40)	0.23 (0.42)	0.19 (0.40)	0.17 (0.36)							
Material resources	4.21 (0.68)	4.03 (0.79)	4.02 (0.79)	4.05 (0.78)	3.86 (0.85)	4.03 (0.78)							
Goal-related activities	4.22 (0.74)	4.04 (1.18)	4.19 (0.82)	4.16 (0.89)	4.38 (0.76)	4.19 (0.88)							
Clear guidelines	4.13 (0.84)	4.12 (0.85)	3.84 (1.09)	3.90 (0.86)	4.08 (1.13)	4.01 (0.96)							
Objective reached	3.8 (0.78)	3.1 (0.40)	4.2 (0.89)	4.6 (0.78)	4.5 (0.98)	3.84 (0.77)							
Participation and interest	3.8 (0.63)	4.1 (0.74)	4.4 (0.89)	4.3 (0.78)	4.2 (0.96)	4.16 (0.80)							
Cohesion and positive climate	3.1 (0.78)	3.9 (0.87)	4.I (0.73)	4.4 (0.92)	4.3 (0.85)	3.96 (0.83)							
Attendance rate (%)	75	70	65	63	62	68							

Table 3. Descriptive Data of Implementation Components Extracted From the Session Checklist by Program Module.

families, lack of communication with the agency). Open-ended responses were coded by two independent judges, yielding an interrater agreement of 90–95%, and a κ index of .80 for motivational barriers, .82 for engagement barriers, .79 for adaptation barriers, .78 for organizational barriers, and .81 for coordination barriers.

For our second research question, we followed a two-step procedure to examine what components predict the program outcomes. First, pre–post comparisons for the outcome variables were performed using repeated measures analysis of variance. Change scores for each factor were calculated by subtracting the pretest score from the posttest score, so that a higher score indicated an increase in the factor and a low score reflected a reduction in the factor. The effect size was explored using the *R* statistic; the clinical relevance of this statistic was classified as negligible when $R^2 < .01$, small when $R^2 > .01$ and $R^2 < .09$, medium when $R^2 > .09$ and $R^2 < .25$, and large when $R^2 > .25$ (Cohen, 1988).

Second, hierarchical linear regression analyses were run separately for attendance rate and for each of the change scores in parental attitudes and behavior (5), parental sense of competence (2) and parenting stress (3), as predicted by the measures of implementation. All the variables included in the regression models were standardized (Tabachnick & Fidell, 2007). To examine the respective influence of the implementation components on the program outcomes, a three-step procedure was used in the regression models: in Step 1, we introduced the variables related to the structure of the program: adherence (dosage and duration of the sessions) and number and type of adaptations. In Step 2, we included the process variables related to the functioning of the session: quality of delivery (material resources, goal-related activities, clear guidelines, objectives reached) and group and participant responsiveness (group participation and interest, group cohesion and positive climate). In Step 3, we included the variables involving the final appraisals of the implementation barriers (related to motivation, engagement, adaptation, organization, and coordination) and participant satisfaction. Participant satisfaction was not included in the model for attendance rate, given that not all participants finished the program. We checked for collinearity, normality of residuals, linear relationship between

variables, and homoscedasticity of variances. To interpret the global significance of the model, at each step we examined the statistic *F*, the values for the adjusted R^2 (Adj. R^2), and the change in R (ΔR^2), as well as the specific contribution of each variable to the total variance explained by the model through the significance and the value of the squared semipartial correlation (rs^2). All analyses were conducted using the SPSS 18.0 statistical software, assuming a confidence level of 95% for Type I error.

Results

Components Affecting the Quality of Implementation

For the first research question, we examined a variety of components that may affect the quality of the implementation. Table 3 shows the results of the implementation measures included in the session checklist grouped by modules, with the exception of the program dose. The percentage of groups submitted to the complete dose was 57.7% (15 groups), whereas 42.3% of groups (11 groups) were submitted to the partial dose. The mean duration of sessions in Modules 1 and 2 was significantly higher than that of Module 5 (t = 3.56, p = .05; t = 4.146, p = .05) but was kept within the recommended limits on average. There were no significant differences in the mean number of crucial modifications by module (only 17% of the total modifications). The quality of material resources was rated as very high on average and was significantly higher in Module 1 than in Module 5 (t = 7.27, p = .014). The mean for objectives reached was significantly higher in Module 4 than in Modules 1 and 2 (t = 3.03, p = .009; t = 3.43, p = .006), and higher in Module 5 than in Module 2 (t = 2.55, p = .02), showing an increase of objectives reached as the program progressed. The scores for group cohesion and positive climate were significantly higher in Module 4 than in Module 1 (t = 3.11, p = .009), showing that the group improved their positive climate as the program progressed. No significant differences by module were found for goal-related activities, the presence of clear guidelines, and participation and interest (all rated as high across the modules).

Results on the implementation barriers showed that 59.5% of the responses in the interviews with professionals

Measure	Pretest M (SD)	Posttest M (SD)	F(1, 132)	Effect Size (Partial R^2)
Parental attitudes				
Inappropriate expectations	2.58 (0.73)	2.68 (0.69)	2.62*	.02
Lack of empathy	3.09 (0.65)	3.89 (0.67)	206.35***	.58
Belief in corporal punishment	3.71 (0.64)	3.79 (0.63)	2.01*	.01
Parent-child role reversal	2.92 (0.73)	3.12 (0.85)	9.61***	.09
Oppressing child's independence	3.76 (0.68)	3.62 (0.68)	2.71	.02
Parental sense of competence	()			
, Satisfaction	3.82 (0.75)	3.93 (0.77)	3.53*	.02
Efficacy	4.17 (0.82)	3.97 (0.79)	6.53**	.05
Parenting stress	()			
Parental distress	2.87 (0.74)	2.67 (0.67)	11.89***	.09
Dysfunctional interaction	2.29 (0.87)	1.89 (0.68)	14.45***	.15
Difficult child	2.67 (0.83)	2.42 (0.73)́	II.29***	.94

Table 4. Mean Differences in Outcome Measures Before and After Participation in the Growing Up Happily Program.^a

Note. n = 133.

^aHigher mean scores for the parental attitudes indicate fewer negative outcomes (i.e., less role reversal).

*p < .05. **p < .01. ***p < .001.

corresponded to barriers or obstacles in the adaptation to the characteristics of the participants, 32.4% were engagement barriers, 21.6% motivational barriers, 21.6% organizational barriers, and 19.5% coordination with the agency barriers.

Total participant satisfaction with the program was very high (M = 4.38, SD = .46). Satisfaction with facilitator behavior (M = 4.73, SD = .41) was significantly higher than the remaining dimensions: logistics (M = 4.42, SD = .57), t(133) = 7.634, p < .001, program structure (M = 4.39, SD = .48), t(133) = 11.27, p < .001), contents (M = 4.46, SD = .42), t(133) = 7.584, p = .00, group dynamics (M = 4.33, SD = .64), t(133) = 10.210, p < .001, and parental changes observed (M = 4.19, SD = .81), t(133) = 10.524, p < .001.

Components Predicting the Program Outcomes

With respect to the second research question, we first examined the outcomes measures: attendance rate and pre-post changes in parenting outcomes, and then we analyzed what implementation components predict the outcome measures.

Outcome measures. With regard to participants' attendance, the overall mean attendance rate was 68%, ranging from 75% in Module 1 to 62% in Module 5, an interval that corresponds to almost 5 months of program duration. Results showed no significant differences in attendance rate by module.

With regard to parenting outcomes, differences were examined between pre- and posttests of parents' self-report of parental attitudes and behavior, parental sense of competence, and parenting stress. These results are presented in Table 4. In terms of parental attitudes and behavior, parents who completed the program were significantly less likely to have inappropriate expectations toward the child, to respond less empathetically to their children, to increase their support of the use of corporal punishment, and to increase parent–child role reversal following the program than at the program's start, with medium to high effect sizes in lack of empathy and role reversal. In relation to parental sense of competence, results showed a significant increase in parental satisfaction and a decrease in parental efficacy, with small effect sizes. With regard to parenting stress, parents reported significantly fewer difficulties at posttest for the three subscales of parenting stress, with medium to high effect sizes. Specifically, parents who completed the intervention reported significantly less distress, fewer dysfunctional parent-child interactions, and less perception of their child as difficult.

Implementation predictors of outcome measures. To study the predictive capacity of the implementation variables on the level of participant attendance and on parental changes, we carried out hierarchical regression analyses in three steps: in Step 1, we introduced the variables of adherence (dosage, appropriate duration, and adaptations). In Step 2, we included the variables related to the assessment of sessions by the facilitators (material resources, goal-related activities, clear guidelines, objectives reached, participation and interest, group cohesion and positive climate). In Step 3, we included the variables involving the final appraisals of the implementation barriers (motivational barriers, engagement barriers, adaptation barriers, organizational barriers, coordination barriers) and the level of participant satisfaction with the program (this variable was only included in the regression models on parental change because it corresponds to the intervention group). After checking for collinearity, normality of residuals, linear relationship between variables, and homoscedasticity of variances it was decided not to include the variables "group cohesion and positive climate" and "clear guidelines," for failure to comply with cases of noncollinearity. Also, a general measure of satisfaction with the program was estimated due to the high positive correlation between the components of this measure.

Regression models of implementation variables on participant attendance. The model for participant attendance was not significant in Step 1, F(3, 192) = 1.15, p = .33, or Step 2,

•			
Predictor	β	Adjusted R^2	ΔR^2
Step I		.03	.03
Full dosage	0.09		
Appropriate duration	-0.07		
Crucial modifications	-0.14		
Step 2		.08	.06
Full dosage	-0.02		
Appropriate duration	0.05		
Crucial modifications	-0.07		
Material resources	0.06		
Participation and interest	0.26*		
Objectives reached	-0.19		
Step 3		.15*	.07*
Full dosage	-0.16		
Appropriate duration	0.25		
Crucial modifications	-0.14		
Material resources	0.09		
Participation and interest	0.67*		
Objectives reached	-0.24		
Motivational barriers	-0.04		
Engagement barriers	0.10		
Adaptation barriers	-1.31**		
Organizational barriers	- 0.87 *		
Coordination barriers	- 0.88 *		

Table 5. Regression Models of Implementation Variables on

 Participant Attendance.

 $p \le .05. p \le .01. p \le .01. p \le .001.$

F(6, 189) = 1.92, p = .081, but was significant in Step 3, F(11, 184) = 1.92, p = .043, explaining 15% of the variance. The variable that contributed most to the model was that of adaptation barriers ($rs^2 = .09$; see Table 5). Also, higher participation and interest in group sessions, and a lower presence of barriers to adaptation to participants' characteristics, organizational barriers, and barriers to coordination with the organization contributed to predicting higher participant attendance.

Regression models of implementation variables on parental changes. Concerning parenting dimensions (Table 6), the regression model for the change scores in inappropriate expectations was not significant in Step 1, F(3, 129 = 1.16, p = .33,or Step 2, F(6, 126) = 1.86, p = .093, but was significant in Step 3, F(12, 120) = 2.15, p = .019, explaining 18% of the variance. As the scale is reversed, higher mean scores for the subscales indicate less negative outcomes. Increased participation and interest ($rs^2 = .02$) and satisfaction with the program $(rs^2 = .02)$ predicted fewer inappropriate expectations. The model for lack of empathy was not significant in Step 1, F(3, 129) = .42, p = .73, but was significant in Step 2, F(6, 126) = 2.31, p = .038, and Step 3, F(12, 120) = 2.07, p = .023, explaining 17% of the variance. Better evaluation of material resources ($rs^2 = .03$) as well as fewer problems with engagement barriers predicted less lack of empathy. The regression model for role reversal was significant in Step 1, F(3, 129) = 4.87, p = .003, Step 2, F(6, 126) = 3.43, p = .004,and Step 3, F(12, 120) = 2.75, p = .002, explaining 21% of the variance. Fewer motivational barriers ($rs^2 = .05$), full dosage,

lower number of adaptations, better evaluation of material resources, and fewer organizational barriers predicted less parent-child role reversal. The regression model for the change scores in oppressing the child's independence was significant in Step 1, F(3, 129) = 3.25, p = .024, Step 2, F(6, 126) = 2.21, p = .046, and Step 3 F(12, 120) = 2.35, p = .009, explaining 19% of the variance. The appropriate duration of the sessions $(rs^2 = .04)$ as well as program satisfaction predicted less oppression of the child's independence. With respect to the factors of parental sense of competence, parental satisfaction, and efficacy, the proposed models were not significant.

Concerning parenting stress (see Table 6), the model for dysfunctional parent-child interaction was significant in Step 1, F(3, 129) = 5.12, p = .002, Step 2, F(6, 126) = 6.45, p = 6.45, p.001, and Step 3, F(12, 120) = 7.86, p = .001, explaining 44% of the variance. More barriers for adaptation to participants' characteristics ($rs^2 = .18$), as well as a less than full dosage, less appropriate duration of the sessions, worse material resources, more goal-related activities, less participation and interest, and more motivational, organizational, and coordination barriers all predicted more dysfunctional parent-child interactions. The regression model for the change scores in perception of the child as difficult was significant in Step 1, F(3, 129) = 3.98, p = .009, Step 2, F(6, 126) = 2.44, p = .029, and Step 3 F(12, 120) = 2.70, p = .003, explaining 21% of the variance. The barriers for adaptation to participants' characteristics $(rs^2 = .09)$ as well as less appropriate duration of the sessions, less participation and interest, and more coordination barriers predicted an increased perception of the child as difficult.

Discussion and Applications to Practice

The present study evaluates the process of implementing the Growing Up Happily in the Family program in child welfare settings and the impact of implementation components on program outcomes such as attendance rate and changes to several parenting dimensions. Based on the comprehensive model by Berkel et al. (2011), a variety of implementation components were examined with a view to increasing our knowledge of the key factors that make this program work better.

For the first research question, we used qualitative and quantitative methods to examine the components of the program that may affect the quality of implementation. With respect to adherence to the program, it was found that a majority of groups (57.7%) opted for the complete dose, even though the program was quite long (almost 5 months); also the duration of the sessions was kept within the recommended limits on average, since the sessions lasted about 1 hr and a half each (including time for refreshments). The program was delivered with fidelity to the main principles, as indicated by the fact that crucial modifications to adapt to the participants' requirements—that is, those that involved important changes to the methodology, contents, and objective of the activities—were kept at minimum across modules (17% on average). The quality of program delivery—as indicated by the material resources

	Inappropriate Expectations			Lack of Empathy Role Reversal			1	Oppressing Independence			Dysfunctional Interaction			Difficult Child				
Predictor	β	Adjusted R ²	ΔR^2	β	Adjusted R ²	ΔR^2	β	Adjusted R ²	ΔR^2	β	Adjusted R ²	ΔR^2	β	Adjusted R ²	ΔR^2	β	Adjusted R ²	ΔR^2
Step		.03			.03			.10**	.10		.07*	.07		.11**	.11		.09***	.09
Full dosage	.13			05			.23**			.01			07			.01		
Appropriate duration	07			.00			.10			.23**			30***			−.28 ****		
Crucial modifications	.04			08			24**			.15			12			.06		
Step 2		.08	.06		.10*	.09*		.14**	.04**		.10*	.03*		.24***	.13***		.10*	.02*
Full dosage	.02			09			.20*			.09			.03			.09		
Appropriate duration	.11			.02			.13			.11			43 ***			—. 39 ∞∞		
Crucial modifications	0I			.03			18			.16			.02			.10		
Material resources	12			.29**			.15			.04			 9 *			.07		
Participation and	.26			.12			.08			18			20			18		
interest																		
Objectives reached	.17			.06			.10			12			22*			02		
Step 3		.18*	.10*		.17*	.07*		.21**	.08**		.19**	.10**		.44***	.21***		.21**	.11**
Full dosage	.04			15			.17			.04			21*			.15		
Appropriate duration	10			23			09			.35*			38**			42**		
Crucial modifications	.00			.13			29 *			.07			07			.01		
Material resources	2I			.26*			.22*			.04			.03			.06		
Participation and	.24*			.12			.03			06			37 ****			3I*		
interest																		
Objectives reached	.14			.09			.21			16			.03			07		
Motivational barriers	15			06			47**			.06			.44**			.24		
Engagement barriers	I6			30 *			.16			.32			04			.07		
Adaptation barriers	04			11			20			.06			.80***			.55***		
Organizational barriers	12			29			34*			.13			.60***			.20		
Coordination barriers	.16			.04			02			.11			.40***			.26*		
Program satisfaction	.17*			.10			.01			.17*			07			15		

 Table 6. Regression Models of Implementation Variables on Parental Changes.

 $p \le .05. p \le .01. p \le .01. p \le .001.$

available, the use of goal-related activities, the existence of clear guidelines, and reaching learning objectives—was also high, and either increased across the modules (as in the case of the learning objectives) or remained stable, suggesting the group facilitators' positive appraisal of the didactic quality of the materials presented (Stern et al., 2008). Finally, the quality of the group's and participants' responsiveness to the program, that is, their participation and interest in it, was also high, while the group cohesion and positive climate increased from the first module onward, as could be expected as the program progressed. Likewise, the level of individual satisfaction with the program, as reported by the parents at the program end, was very high, in particular with regard to the facilitator's behavior.

Another interesting aspect relates to the types of barriers threatening or hindering the implementation process reported by the group facilitators and coordinators, which were reliably identified by means of a judge system (Koerting et al., 2013; Marcynyszyn et al., 2011). The majority of the barriers (59.6%)were related to difficulties with tailoring the program to participants; this was followed by barriers to participants remaining in the program (Whittaker & Cowley, 2012), such as those related to engagement (32.4%) and motivation (21.6%). This might be expected with at-risk populations, where it is crucial to display a variety of strategies (e.g., reminding phone calls, transportation, and child care) to keep the participants in the program. Another type of barrier is more systemic, involving organizational matters (21.6%) and coordination with the agency (19.5%), pointing out the importance of addressing the implementation process from a contextual-systemic approach (Shapiro, Prinz, & Sanders, 2012).

For the second research questions, two program outcomes (attendance rate and positive parenting) were selected to examine the impact of implementation components on those outcomes. The attendance rate was quite satisfactory (68%), interestingly, attendance levels were not influenced by individual sociodemographic factors as in other studies (Dumas et al., 2007; Garvey et al., 2006; Nix et al., 2009), and any dropouts were due to unexpected life events such as moving to a new home, finding a job, and so on. These are signs of a good adherence to the program, taking into account the fact that this is a typical hard to reach population, which ensured that the parenting program was socially inclusive (Davis et al., 2012).

Results of the parenting outcomes were quite positive. Parents who completed the program reported having fewer inappropriate parental expectations and more empathetic responses to their children as well as a decrease in their support of the use of corporal punishment and parent-child role reversal. They also reported significantly less distress and fewer dysfunctional parent-child interactions and perceived their child as being less difficult. Changes in these parenting dimensions are crucial for positive parenting in at-risk psychosocial contexts (Barlow, Smailagic, Huband, Roloff, & Bennett, 2012; Barth, 2009; Johnson et al., 2010; Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). However, at-risk parents reported a significant increase in parental satisfaction but a decrease in parental efficacy, suggesting that they learnt from the program that the parenting task is more difficult and demanding than expected and that they are still far from reaching adequate standards (Byrne et al., 2010; Jones & Prinz, 2005).

The crucial part of this study was to examine the extent to which variations in the quality of implementation predict program outcomes such as attendance rate and changes in the parenting dimensions evaluated. Regression models showed that this was the case for the attendance rate (explaining 15%of the variance), for four factors of parental attitudes (explaining 18%, 17%, 21%, and 19% of the variance, respectively), and for two factors of parenting stress (explaining 44% and 21% of the variance, respectively). No significant results were found for parental sense of competence. A trivial interpretation is that parental changes in this measure were less evident than in other measures. However, changes in oppressing the child's independence were not significant and yet this variable was influenced by implementation factors. Another possible interpretation relates to the findings of a previous study that the pattern of individual change of parental sense of competence diverged from those of parental beliefs on child development and child-rearing practices, which usually go together (Byrne et al., 2014). This divergence may imply that changes in parental sense of competence could be based on different learning experiences, which could be affected by different implementation factors or not affected at all; more research is needed in this respect.

Concerning the model for participant attendance, as expected, higher rates of attendance were predicted by group and participant responsiveness (increased participation and interest in group sessions), as reported in previous studies (Dumas et al., 2007; Nix et al., 2009). We are referring here to the dynamics of group participation and motivation, not to individual satisfaction, given that this latter variable was not included, as it was recorded only at the end of the program. A good experience within the group positively influenced the participants' decision to remain in the program. The number of barriers experienced by the group facilitators and coordinators also affected participant attendance. More difficulties with tailoring content to participants, more organizational barriers arising at the beginning of the program, and more barriers to coordination with the organization predicted lower attendance, suggesting the importance of taking into account systemic implementation components to keep participants attending the program (August et al., 2006; Marcynyszyn et al., 2011; Shapiro et al., 2012; Whittaker & Cowley, 2012).

Concerning the models of change to parenting dimensions, as expected, almost all the implementation components affected the outcomes. High ratings of adherence (full dosage and adequate duration of the sessions) predicted less role reversal, less oppression of the child's independence, fewer dysfunctional parent-child interactions, and less perception of the child as difficult (Baydar et al., 2003; Forgatch et al., 2005; Kjøbli et al., 2012). Few crucial modifications to the program contents predicted less role reversal (Durlak & Dupre, 2008; Kumpfer et al., 2002). The facilitators' positive appraisal of the material resources used to run the sessions predicted less lack of empathy, less role reversal, and fewer dysfunctional parent– child interactions (Stern et al., 2008). Therefore, the structural aspects of the program, the content adaptations, and the didactic functioning of the sessions, which are related to the participants' learning process, while not relevant for attendance, were very relevant for changing parenting dimensions.

Group participation and interest as well as the existence of barriers were also predictors of the changes in parenting outcomes. As the program was delivered through group meetings, we looked for some clues from the interactive milieu that might help promote the participants' cognitive and behavioral changes. Increased group participation predicted fewer inappropriate expectations, fewer dysfunctional parent-child interactions, and less perception of the child as difficult, and individual satisfaction with the program predicted fewer inappropriate expectations and less oppression of the child's independence, suggesting the importance of group responsiveness to the program (Reid et al., 2004). Even when the structure, timing, and material for the sessions are adequate, it is crucial that the group environment is stimulating. When people are motivated to participate in the group, verbal exchanges increase facilitation of the process of knowledge acquisition and reflection upon views, skills, and practices (Rodrigo et al., 2006).

Finally, the identification of barriers as perceived by the facilitators and coordinators highlighted five implementation challenges—related to motivation, engagement, adaptation to participants' characteristics, organization, and coordination— as predictors of parenting dimensions. As these barriers increased, the lack of empathy, role reversal, dysfunctional parent—child interactions, and perception of the child as difficult increased as well (Koerting et al., 2013; Marcynyszyn et al., 2011). These results provide an empirical demonstration of the importance of addressing implementation from a contextual—systemic approach, taking into account the influences observed at the individual, group, and macro-organizational levels (Shapiro et al., 2012).

At this point, several limitations of this study should be mentioned. Due to the extra cost involved, it was not possible for us to obtain observational data allowing us to get closer to the internal group dynamics in order to support our measures of participant responsiveness. It is also a limitation that we had no data on the participants' motivations to abandon the program to compare with the facilitators' point of view. Finally, the effects of implementation factors on long-term outcomes are unknown.

As for the applications to practice, our study showed that the parents of young children who remained in the program (almost 70%) reported more appropriate parental attitudes and less parental distress, were less likely to report dysfunctional parent– child interactions, perceived the child as less difficult, and felt more satisfied with their parenting role, though they were aware that they still needed to improve their competence. This prevention work was effectively done across different levels of psychosocial risk, thanks to the existence of basic and specialized teams of practitioners that are well coordinated at the local level and the fact that the assistance is provided free of charge. However, our results also showed that there was a substantial variability in the attendance rate and in the patterns of change in parenting dimensions that were partially explained by the quality of several implementation components reported by the facilitators and coordinators. Therefore, in addition to the intervention itself the level of implementation contributed to explain the improvement. It is important to perform implementation work taking into account that this requires that the program is delivered in various real-world settings, as a stable and well-integrated resource in the local communities, the use of sound implementation measures, as well as the full participation of the group facilitators and service coordinators.

We also found that the attendance rate was affected by fewer implementation components than the changes observed in parenting dimensions. Particularly, positive group and participant responses to the program and a lower number of implementation barriers were factors that facilitated both attendance and changes in parenting outcomes, by helping participants to remain engaged with the program. In addition to those factors, greater program adherence, fewer crucial content adaptations, and better didactic functioning of the sessions facilitated changes in parenting capacities by providing parents with enough opportunities to learn as well as the proper adjustment of the program to their learning needs. Therefore, the sustained engagement to the program and productive learning during the sessions are not only the result of participants' factors but also depends on the quality of the implementation process. Finally, we have demonstrated that a contextual-systemic approach to the implementation process, involving individual, group, and organizational capacity and resources, is very useful in the context of a child welfare population, suggesting the need to provide a high-quality and well-coordinated implementation to achieve the intended program outcomes.

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