social sciences

MDPI

Article

Assessment of the Effectiveness of the Parenting Intervention Programme "Intelligent Families": A Randomised Controlled Study

Ana Martinez-Pampliega [1,*], Antonio Ortuño [2] and Estefania Mónaco [3]

[1] Department of Psychology, Faculty of Health Sciences, University of Deusto, 48007 Bilbao, Spain
[2] Adcom Madrid Center, Institute of Psychiatry and Mental Health of the Gregorio Marañón Hospital, 28009 Madrid, Spain; familiasinteligentes.com@gmail.com
[3] Department of Developmental and Educational Psychology, Faculty of Psychology, University of Valencia, 46010 Valencia, Spain; estefania.monaco@uv.es
* Correspondence: martinez.pampliega@deusto.es

Abstract: This study presents and analyses the effectiveness of the programme "Intelligent Families" aimed at promoting the development of parenting skills in parents within the framework of positive parenting. The popularity of attachment- and emotion-based interventions seems to have grown among clinicians, researchers and parents. However, in Spain, these programmes are practically non-existent or do not provide evidence of their effectiveness. A randomised experimental study with two groups (experimental and control) and a longitudinal design (pre, post and follow-up) was conducted to test the programme's impact on parenting skills. The sample comprised 637 Spanish parents. Two moderating variables were considered: the modality (face-to-face or online) and the length of the intervention (2 or 4 sessions). The experimental group significantly increased their empathic authority, established rules with confidence and sensitivity, and could negotiate in everyday family conflicts. There were no differences according to the parent's gender, the children's age, or the intervention's modality or duration. This study verified the effectiveness of the "Intelligent Families" intervention programme. The importance of developing and studying the effectiveness of preventive actions to promote families' emotional well-being is discussed.

Keywords: parenting skills; intervention; randomised controlled trial; family; well-being

Academic Editor: Nigel Parton

Received: 19 December 2024
Revised: 27 February 2025
Accepted: 2 March 2025
Published: 14 March 2025

Citation: Martinez-Pampliega, Ana, Antonio Ortuño, and Estefania Mónaco. 2025. Assessment of the Effectiveness of the Parenting Intervention Programme "Intelligent Families": A Randomised Controlled Study. *Social Sciences* 14: 175. https://doi.org/10.3390/socsci14030175

1. Introduction

There is considerable consensus about the relevance of parenting for children's well-being and development (Distefano and Meuwissen 2022; Jiang et al. 2023; Tanaka et al. 2023) However, parenting has been studied from different approaches and theoretical frameworks, representing specific ways of understanding, evaluating, and intervening in parenthood.

This study focuses on the intervention programme "Intelligent Families", aimed at supporting positive parenting and good treatment in childhood and adolescence. This intervention programme was developed by Ortuño (Ortuño 2012, 2015; Ortuño and Benedicto 2020), based on attachment theory (Bowlby 1969) and self-determination theory (Deci and Ryan 2013). This analysis aimed to verify the effectiveness of the intervention through an experimental study.

1.1. Attachment Theory and Self-Determination Theory

The attachment and self-determination theories provide an empirically supported framework for understanding the mechanisms that mediate children's socialisation and well-being.

First, the attachment theory (Bowlby 1969) shows the universal need for intimate relationships and conceives attachment as an innate system of motivational and behavioural control that promotes the child's security and the proximity between the child and the caregiver. This theory has helped understand how, through the first experiences with parents (Erozkan 2009), children develop mental models about themselves and their relationships, which will influence their subsequent relationships throughout their lives with friends, partners, etc. (Brennan et al. 2003; Erozkan 2009). When the parent–child relationship has generated a bond of secure attachment, children will show higher levels of trust and satisfaction and lower levels of contradictions in their interpersonal relationships, unlike those children with insecure attachment, either anxious-ambivalent or avoidant (Erozkan 2009; Jugovac et al. 2022).

The parents' availability and sensitivity are two fundamental conditions for developing secure attachment, with sensitivity being one of the greatest predictors of the kind of attachment the child will develop in the future (Brenning et al. 2012). A third condition is the parents' encouragement of autonomy throughout the children's upbringing (Bernier et al. 2014; Young and Tully 2022) Maintaining the balance between exploration and autonomy support and responding sensitively to the activation of attachment behaviour will help children develop security (Pitillas and Berástegui 2018).

Secondly, the self-determination theory allows us to delve into this last dimension, autonomy support (Deci and Ryan 2013, 2000). Beyond the simple control of performance, autonomy is all about volition (Deci and Ryan 2008), i.e., autonomy will be satisfied when actions are intentionally performed following one's internal values (Grolnick and Raftery-Helmer 2013). Parental support for autonomy (Verstuyf et al. 2013) involves issues such as considering children's and adolescents' perspectives, empathy or supporting the children's initiatives (Grolnick and Raftery-Helmer 2013), but it also involves a structure with clear and consistent rules (Aguirre-Dávila et al. 2023; Joussemet et al. 2014) to favour planning and anticipate consequences (Barber 1996); and other components such as the parents' attention, dedication, and emotional availability.

The theories of attachment and self-determination are coherent and constitute a relevant framework for studying parenting and describing, anticipating, or favouring parental actions that contribute to children's well-being or development (Allen et al. 2019; Joussemet et al. 2014).

1.2. Interventions to Promote Family Well-Being

To date, several parenting intervention programmes have been developed to protect children's mental health. However, most interventions are behaviourally oriented. A second kind of intervention programme was developed from theoretical frameworks focused on attachment and emotions. These programmes reinforce the emotional quality of the parent–child relationship, going beyond behaviour, by helping parents understand children's emotional needs expressed through their behaviour.

These interventions focused on emotional socialisation have been developed in recent decades (England-Mason et al. 2023; Havighurst et al. 2020). As examples, we can point out Tuning in to Kids (Havighurst et al. 2010), Parent Check-in, (Grolnick et al. 2021), the Circle of Safety (Cassidy et al. 2011) or attachment-based group intervention (Steele et al. 2019).

These programmes focus on the affective processes that condition the parent–child relationship, such as the caregiver's sensitivity or reflective functioning. And, due to the transdiagnostic nature of emotion regulation, these interventions are expected to have relevant clinical implications insofar as they affect the family climate and the children's adjustment in the family. In this sense, the meta-analyses developed have shown the efficacy

of the interventions both concerning perceived parental stress or competence (Yaholkoski et al. 2016) and the prevention of specific problems in children, such as bullying) (Chen et al. 2021) or externalising behaviour (Van Ijzendoorn et al. 2023). The popularity of attachment- and emotion-based interventions seems to have grown among clinicians, researchers and parents. Studies have found evidence of their efficacy (Jugovac et al. 2022). However, in Spain, programmes focused on these parenting skills are practically non-existent or do not provide evidence of their effectiveness.

The present study aims to present the intervention programme "Intelligent Families" developed by Ortuño (Ortuño 2012, 2015; Ortuño and Benedicto 2020). It is a psychoeducational programme addressed to every parent motivated to improve their parenting abilities and to develop a secure attachment with their children. Such bonds promote their children's progress in self-control or the internalisation of values that will guide their behaviour. Some relevant features of the programme "Intelligent Families" are as follows: (1) universality, insofar as it targets families with children without distinction of risk; (2) brief, it could motivate families to change in a short period; (3) positive, prioritising their educational strengths, and facilitating changes to improve family coexistence; (4) preventive, it not only addresses daily conflicts but also helps to prevent future mental health problems.

The present analysis aims to verify the programme's effectiveness through a randomised experimental study, with two groups (experimental and control) and three measurement moments of parental skills (pre-intervention, post-intervention, and follow-up). Parenting is a complex and dynamic construct, difficult to evaluate in its entirety. In this study, changes in the three parental competencies linked to the objectives of the intervention programme (described in Table 1) will be analysed: empathic authority, negotiation and transfer of responsibility. We expect improved competencies after the intervention (post-intervention evaluation) compared to the control group. This improvement will be maintained or increased at the 6-month follow-up.

Table 1. Description of the sessions of the intervention programme.

Session	Objective	Contents
Session 1. "Intelligent family coexistence"	To present the intervention programme, introducing the concept of "intelligent family coexistence" and the intelligent traffic light technique.	- Presentation of the intelligent traffic light. - Parental functions: unconditional support and respectful control. - Parenting skills: saying "no", negotiating, and transferring responsibilities.
Session 2. "Red Traffic Light—Empathic Authority"	To address the ability to exercise authority empathetically in family decisions that are non-negotiable and that depend solely on the parents.	- Empathic authority. - The metaphor of the tortoise and the hare. - The use of explanations. - Assertive strategies to say "no". - Handling manipulations.
Session 3. "Yellow Traffic Light—Negotiation"	To address the ability to negotiate and reach agreements, seeking an adequate balance between the children's wishes and obligations in those areas where negotiation is possible.	- The negotiation process: common mistakes. - The art of structuring a commitment. - Connecting vs. giving orders. - The search for responsibility and distancing from obedience. - The emotional consequences of negotiation.
Session 4. "Green Traffic Light—Transfer of Responsibilities"	To address the ability to transfer responsibilities in those areas where the children can take care of themselves while remaining available and close.	- From dependence to independence. - Educating in risk management. - The balance of concern. - The staircase of accompaniment.

Based on Ortuño and Benedicto (2020).

Likewise, two moderating variables linked to the intervention methodology will be considered: (1) the intervention modality (face-to-face vs. online) and (2) the intervention's duration (two vs. four sessions). According to the results of the meta-analysis, we expect that: (1) both interventions—online and face-to-face—will be effective in maintaining synchronous personal contact, and (2) both durations (two vs. four sessions) will be effective, providing they are not so short as to affect the participants' involvement. The role of the parents (mother, father), gender (masculine, feminine) and children's age (2–19 years) will also be analysed to gain a better understanding of the impact of the programme.

2. Materials and Methods

2.1. Participants

A total of 637 parents (25% fathers, 73% mothers) aged between 18 and 60 years participated in the study (1.2% under 30 years, 28.6% between 30 and 40 years, 60.9% between 40 and 50 years, and 9.3% between 50 and 60 years). The inclusion criterion was having at least one child under 19 years (i.e., until adolescence, following the criteria of the World Health Organization 2024).

The sample of parents was accessed through their children's education centres (public, subsidised, and private) and other institutions such as City Councils and Associations of Mothers and Fathers of Students (AMPAs). A total of 15 centres from different geographical areas of Spain participated in the study. Regarding the participants' children, 48% were girls and 52% were boys, and their ages ranged between 2 and 19 years (M = 8.64, SD = 3.95). In 95.9% of the families, the children were the parents' biological children, and 4.1% had adopted and/or foster children.

Figure 1 shows a flow chart of the participants. Participants were divided into the Experimental Group (EG) and the Control Group (CG). Concerning the groups, 53.5% of participants were assigned to EG (nEG = 272; 27.98% fathers and 72.02% mothers), and 46.5% were assigned to CG (nCG = 236; 25.78% fathers and 74.22% mothers).

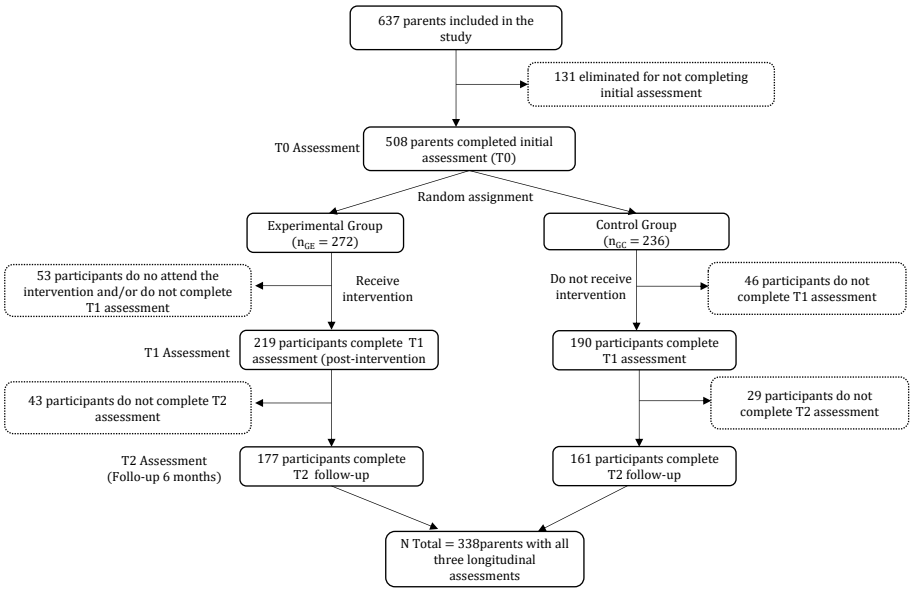

Figure 1. Flowchart of research participants.

2.2. Variables and Instruments

The following variables and instruments were used in this study:

Sociodemographic variables. The parents' personal variables were studied, such as gender, age, and the autonomous community of origin; family variables, such as family

type (biological, adoptive, foster, stepfamilies, mixed); and the children's variables, such as gender, age, and the type of school they attend.

Parenting skills. The reduced version of the Intelligent Family Coexistence Scale was used IFCS; Ortuño and Benedicto 2020). This instrument comprises 22 items rated on a 9-point Likert scale (1 = Strongly disagree, 9 = Strongly agree), distributed in three factors: (1) "Red Traffic Light" or "Empathic Authority", defined as the ability to exercise authority empathetically concerning non-negotiable family decisions that depend solely on the parents (includes the ability to set limits, empathise with children's emotional reactions to limits, give adequate explanations about limits and hold them firmly); (2) "Yellow Traffic Light" or "Negotiation", understood as the ability to negotiate and reach agreements, seeking an adequate balance between the children's wishes and obligations in those areas where negotiation is possible (it includes the ability to establish a preliminary agreement, commit to the negotiation process, supervise compliance with the pact, and apply the necessary consequences, avoiding the use of punishments and threats); and (3) "Green Traffic Light" or "Transfer of Responsibility", defined as the ability to transfer responsibilities in those areas where the children can take care of themselves, while remaining available and close (it includes self-regulation to accompany the children's decisions, confidence in their independence, and autonomy and respect for the children's personal decisions). The instrument's psychometric properties have proven to be very good for the Spanish-speaking sample, with a high internal consistency ($\alpha = 0.93$ for the total scale, 0.87, 0.84, and 0.86 for the three factors, respectively). Furthermore, the indices of the confirmatory factor analysis (CFA) were adequate [$\chi^2(df) = 16453.33$ (1885), $p < 0.001$, CFI = 0.862, IFI = 0.856, TLI = 0.848, RMSEA = 0.047, 95% CI [0.046, 0.048], SRMR = 0.042]. In the present study, the internal consistency identified was similar ($\alpha = 0.93$ for the total scale, 0.87, 0.81, and 0.87 for the three factors, respectively).

Taking advantage of the intervention: an ad hoc questionnaire was designed to be rated on a 10-point Likert-type scale, comprising a series of questions about the intervention. Parents were asked about their level of satisfaction with the programme ("I feel satisfied with the programme received"), its usefulness ("I think this method will be useful for the future"), awareness ("The workshop has helped me to know how to improve as a mother or father"), and applicability ("Some educational strategies learned in the workshop are working for me").

2.3. Procedure

The study followed the Declaration of Helsinki and the Council of Europe Convention on Human Rights (World Medical Association 2013). The requirements established in Spanish legislation on biomedical research, personal data protection, and bioethics were also met. In addition, the confidentiality of all data collected was respected. All participants signed their consent to be evaluated and were informed of the possibility of revoking their consent at any time without prejudice. The people who participated in the experimental group also signed explicit consent to participate in the programme.

Firstly, the research was disseminated among many public, private, and subsidised schools in the Spanish territory, selected for convenience. Subsequently, those schools whose principals showed interest in participating were contacted, and an information session was organised with the parents in which they were explicitly informed of the objectives of the research and the procedure to be followed.

A list of the participating parents of each school was made, and participants were randomly assigned to the Experimental Group (EG) or the Control Group (CG). The distribution was carried out from the educational centre, giving participants a random number and distributing the two groups equally. Randomisation was not fulfilled in those

cases where both members of the couple wanted to attend the programme together, as their belonging to the same group was prioritised. Thus, both EG and CG completed the pre-evaluation (T0; pre-intervention). EG participants received the intervention programme, while those assigned to CG did not receive the intervention but were placed on a waiting list to receive it later (after completing the investigation). EG participants were randomly assigned to a specific intervention modality (online or face-to-face) and a specific number of sessions (two sessions or four sessions). The number of participants per group ranged between 15 and 25 people.

Participants in both groups completed the assessment battery again at a second time point (T1; post-intervention) and at a third time point six months later (T2; follow-up). The participants also completed an ad hoc evaluation at the end of the intervention, assessing their satisfaction and level of achievement. All evaluations were completed online through the Habilmind psycho-pedagogical evaluation platform, where the instruments are hosted, allowing the online administration of the evaluation instruments from any digital device. Finally, after receiving the intervention, the EG participants completed the ad hoc evaluation on taking advantage of the programme.

2.4. Description of the Intervention

The intervention consisted of implementing the programme "Intelligent Families", developed by Ortuño and Benedicto (2020), whose objective is to promote parents' development of parental skills. The specific objectives and contents of each session are summarised in Table 1. The intervention is theoretical–practical, combining training the families, proposing exercises that apply to everyday life, and using other training resources (e.g., group discussion, metaphors, examples, case studies).

The programme can be applied in its extended modality (four sessions of 1–1/2 h) or its short modality (two sessions of 1–1/2 h), in which the contents of Sessions 1 and 2 are summarised and grouped into a single session. The same process is applied for Sessions 3 and 4. Likewise, the programme can be applied in face-to-face or online format. The facilitator must be trained in Family Psychology, as well as in the management of groups and specifically in the programme itself. Finally, for the programme's application in the face-to-face format, there must be an adequate workspace to facilitate a collaborative learning climate between the parents and the facilitator.

2.5. Analysis Strategies

The study used a mixed experimental (quantitative and qualitative data) and longitudinal design (three time points). The statistical package IBM SPSS Statistics version 26.0 was used to analyse the data. After verifying the homogeneity between the two groups (CG and GE) in the sociodemographic variables and parental competencies at T0, the different analyses were conducted.

Mixed repeated-measures analysis of variance (ANOVA) was performed to evaluate differences in the three dimensions of the participants' parenting skills (dependent variables) throughout the three time points (T0, T1, and T2), considering the group (experimental or control) as a grouping factor. Likewise, the parent's gender was introduced as a covariate to determine significant differences in their programme use. Regarding the intervention modality (online or face-to-face) and its duration (two or four sessions), two mixed repeated-measures ANOVAs were conducted with the EG participants, where the dependent variable was parenting skills, and the grouping variables were the modality and duration.

In the mixed ANOVAs, the Mauchly test to evaluate the assumption of sphericity was considered in the intra-subject effects test: if the significance of the Mauchly test is less than

0.05, sphericity is not met, and the Greenhouse–Geisser correction is used or, failing that, the Huynh–Feldt correction (when the Greenhouse–Geisser shows an epsilon > 0.75) to adjust the degrees of freedom and *p*-values. *F*-values and their significance in the inter-subject effects test were also reported. In addition, partial eta square (ηp^2) values were reported to study the effect size (a value between 0.01 and 0.04 was considered a small effect, between 0.05 and 0.14 an average effect, and greater than 0.15 a large effect). Finally, the observed power values (1-β) were reported, which indicate the probability of the analysis detecting an effect if it exists (less than 0.50 is considered low, between 0.50 and 0.80 is moderate, and higher than 0.80 is high).

Subsequently, the reliable change index (RCI) was calculated between T1 (post) and T0 (pre), as well as between T2 (follow-up at six months) and T1 (post). The RCI evaluates the reliable change by varying the standard error of the measurement that considers the two evaluations performed. Reliable change refers to the extent to which the change shown by an individual is outside the range that could be attributed to the variability inherent in the measurement itself (Evans et al. 1998). Chi-square tests were performed to compare the percentage of participants in both groups who showed a reliable change in all three assessments.

Finally, the results in the ad hoc questions related to satisfaction and use of the programme were studied. For this purpose, descriptive statistics were performed.

3. Results

3.1. Efficacy of the Intervention Programme

Table 2 presents the descriptive statistics as a function of the group and the measurement time, where the variables evaluated tend to increase in the EG in all three measurements. Subsequently, we studied whether this increase as a function of time was significant considering the interaction with the group.

Table 2. Means and standard deviations of the target variables at the three time points.

Variable	Group	T0		T1		T2	
		M	*SD*	*M*	*SD*	*M*	*SD*
Empathic authority	Experimental	5.72	1.40	6.48	1.13	6.61	1.26
	Control	5.82	1.38	6.07	1.31	6.13	1.37
Negotiation	Experimental	6.14	1.13	6.57	1.11	6.65	1.15
	Control	6.16	1.17	6.43	1.21	6.39	1.22
Transfer of responsibility	Experimental	6.31	1.42	6.46	1.40	6.64	1.39
	Control	6.43	1.39	6.41	1.32	6.49	1.40
Total Parenting skills	Experimental	6.03	1.15	6.50	1.06	6.63	1.13
	Control	6.10	1.15	6.29	1.12	6.32	1.20

Note. T0 = Time 0 (pre); T1 = Time 1 (post); T2 = Time 2 (follow-up).

Mauchly's sphericity test was significant in all four variables studied, so the sphericity hypothesis was not met. Therefore, the Huynh–Feldt correction was applied to adjust the degrees of freedom and significance.

As shown in Table 3, the results of the repeated-measures mixed ANOVA indicate that the intervention with the parents showed significant multivariate interaction effects for the total variable of parenting skills, $F(df) = 9.13(1.92)$, $p < 0.001$, $\eta^2 = 0.027$. According to the dimensions of the construct, significant differences were found for the variable empathic authority, $F(df) = 14.33(1.91)$, $p < 0.001$, $\eta^2 = 0.041$, and for negotiation, $F(df) = 3.43(1.96)$, $p = 0.034$, $\eta^2 = 0.010$. The effect size was moderate for empathic authority and low for negotiation and total parenting skills. There were no significant differences concerning the variable transfer of responsibility ($F(df) = 2.12(1.94)$, $p = 0.123$, $\eta^2 = 0.006$).

Table 3. Repeated measures of intrasubject (time), intersubject (group), and interaction effects.

Variable	Main Intrasubject Effect				Main Intersubject Effect				Group x Time Interaction			
	F(*df*)	*p*	η_p^2	1-β	*F*(*df*)	*p*	η_p^2	1-β	*F*(*df*)	*p*	η_p^2	1-β
Empathic authority	60.95 (1.91)	<0.001	0.154	1.00	4.30 (1)	<0.039	0.013	0.54	14.33 (1.91)	<0.001	0.041	0.99
Negotiation	30.84 (1.96)	<0.001	0.084	1.00	1.30 (1)	0.256	0.004	0.21	3.43 (1.96)	<0.034	0.010	0.64
Transfer of responsibility	5.08 (1.94)	<0.007	0.015	0.81	0.04 (1)	0.836	0.000	0.06	2.12 (1.94)	0.123	0.006	0.43
Total Parenting skills	43.23 (1.92)	<0.001	0.115	1.00	1.79 (1)	0.182	0.005	0.27	9.13 (1.92)	<0.001	0.027	0.97

Therefore, the EG parents significantly increased their score on the mentioned variables, and this significant increase occurred only in the EG and not in the CG.

Figure 2 graphically shows the progression in the scores of each variable (empathic authority, negotiation, transfer of responsibility, and total parenting skills, respectively) depending on the group and the time point of evaluation.

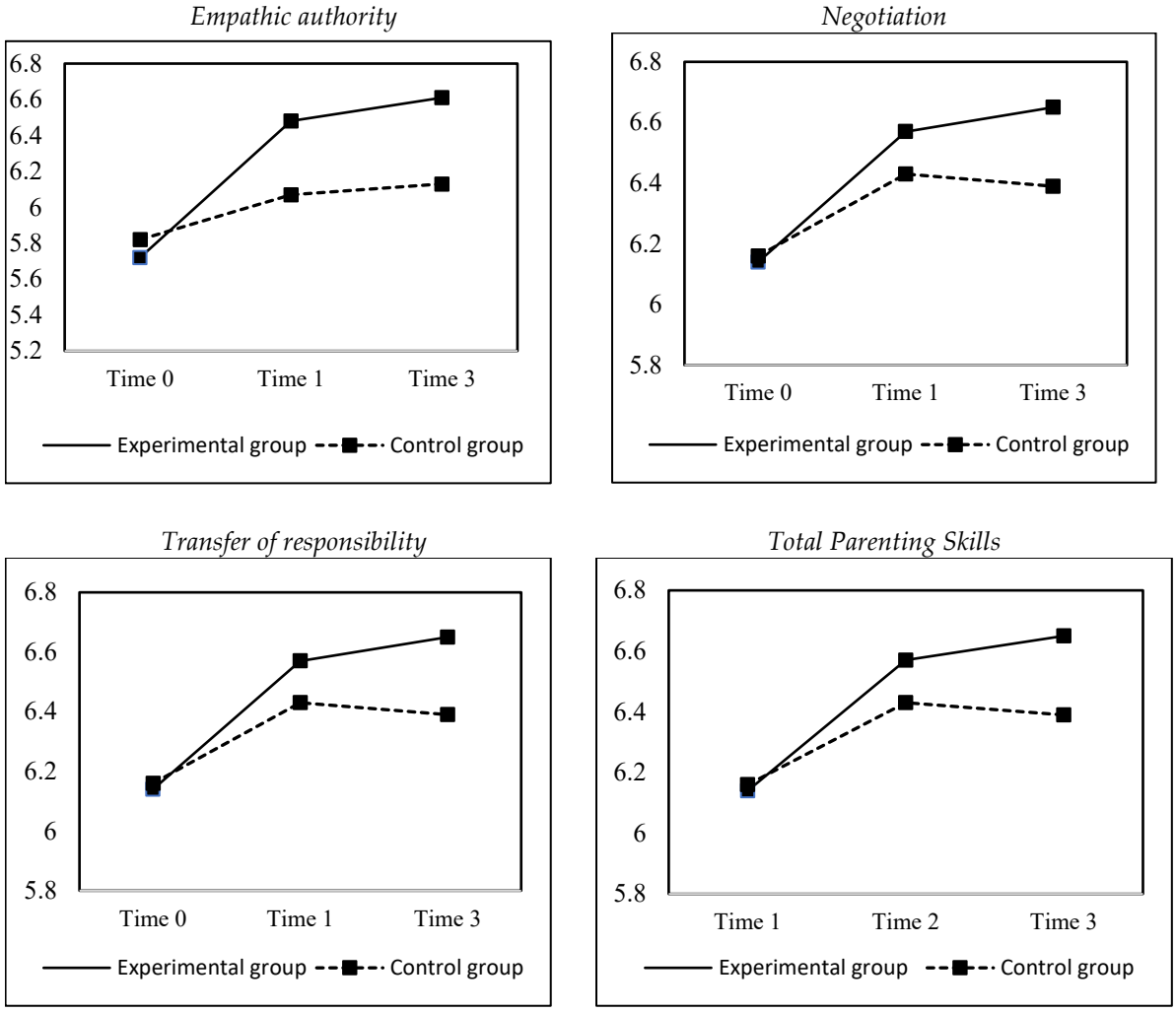

Figure 2. Evolution of the groups as a function of time.

Finally, upon including the parents' gender as a covariate, we observed that being a father or a mother did not produce differences in the impact of the intervention, Wilks' $\gamma = 0.99$, $F(2, 332) = 1.26$, $p = 0.286$, $\eta^2 = 0.008$. Similarly, the age of the child of the

participating parent was not a relevant factor in the change that occurred due to the intervention and was not significant, Wilks' $\gamma = 0.99$, $F(2, 322) = 1.47$, $p = 0.232$, $\eta^2 = 0.009$.

3.2. Effect of the Modality and Duration of the Intervention

On the one hand, no significant differences were observed in the interaction between the moment (pre, post, and follow-up) and the intervention modality (online or face-to-face), Wilks' $\gamma = 0.98$, $F(2, 165) = 1.09$, $p = 0.340$, $\eta^2 = 0.013$. Thus, the intervention's application modality did not seem to influence the change in parenting skills. On the other hand, no significant differences were observed in the interaction between moment (pre, post, and follow-up) and duration (number of sessions), Wilks' $\gamma = 0.98$, $F(2, 165) = 1.69$, $p = 0.188$, $\eta^2 = 0.020$. The effect sizes in both cases were moderate (below < 0.04), so it is not foreseeable that increasing the sample size would make the effects of the modality and/or duration significant.

3.3. Reliable Change Index (RCI)

Table 4 shows the results of the reliable change index, with the number of participants who presented a positive change, those who presented a negative change, and those who presented no change.

Table 4. Results of Reliable Change Index (RCI).

		Experimental Group			Control Group		
	χ^2	Positive Change *n* (%)	No Change *n* (%)	Negative Change *n* (%)	Positive Change *n* (%)	No Change *n* (%)	Negative Change *n* (%)
Changes between T0 and T1							
Empathic authority	14.26 **	47 (26.7%)	127 (72.2%)	2 (1.1%)	19 (11.8%)	135 (83.9%)	7 (4.3%)
Negotiation	1.87	24 (13.6%)	151 (85.8%)	1 (0.5%)	17 (10.6%)	141 (87.6%)	3 (1.9%)
Transfer of responsibility	2.48	23 (13.1%)	142 (80.7%)	11 (6.3%)	15 (9.3%)	130 (80.7%)	27 (8%)
Parenting skills	5.32	27 (15.3%)	146 (83%)	3 (1.7%)	12 (7.5%)	147 (91.3%)	2 (1.2%)
Changes between T1 and T2							
Empathic authority	2.21	23 (13.1%)	140 (79.5%)	13 (7.4%)	13 (8.1%)	276 (81.9%)	25 (7.4%)
Negotiation	0.63	11 (6.3%)	154 (87.5%)	11 (6.3%)	7 (4.3%)	297 (88.1%)	22 (6.5%)
Transfer of responsibility	0.61	16 (9.1%)	146 (83%)	14 (8%)	11 (6.8%)	136 (84.5%)	14 (8.7%)
Parenting skills	0.02	25 (14.2%)	134 (76.1%)	17 (9.7%)	22 (13.7%)	255 (75.5%)	35 (10.4%)
Changes between T0 and T2							
Empathic authority	25.10 **	61 (34.7%)	110 (62.5%)	5 (2.8%)	19 (11.8%)	132 (82.0%)	10 (6.2%)
Negotiation	14.85 **	41 (23.3%)	129 (73.3%)	6 (3.4%)	13 (8.1%)	139 (86.3%)	9 (5.6%)
Transfer of responsibility	3.60	32 (18.3%)	128 (73.1%)	15 (8.6%)	18 (11.3%)	130 (81.3%)	12 (7.5%)
Parenting skills	14.39 **	36 (20.6%)	136 (77.7%)	3 (1.7%)	12 (7.5%)	139 (86.9%)	9 (5.6%)

Note: T0 = Pre-intervention assessment, T1 = Post-intervention assessment, T2 = 6-month Follow-up ** $p < 0.001$.

The results indicate that the EG systematically presented higher percentages of real change than the CG in all variables and at all time points. The χ^2 statistic was significant only in the change of the variable empathic authority between T0 and T1, which means that the real positive change in this variable was significant in the EG.

In the EG, we also observed that, after the intervention and compared with its baseline, there was a positive real change for 47 people (26.7%) in empathic authority, for 24 participants (13.6%) in negotiation, and for 23 people (13.1%) in transfer of responsibility. Regarding total parenting skills, 27 parents (15.3%) increased their score in this variable after the programme.

Concerning the comparison between the post (T1) and the 6-month follow-up (T2), 23 parents (13.1%) showed a positive change in their empathic authority, 11 (6.3%) in negotiation, 16 (9.1%) in transfer of responsibility, and 25 (14.2%) in total parenting skills. We observed that the negative exchange indices were somewhat higher in T2–T1 than the negative change indices in T1–T0, while the non-change indices remained similar. In the long term, 20.6% of the parents increased their parenting skills. Specifically, 34.7% increased their empathic authority in the long term, 23.3% increased their negotiation capacity, and 18.3% increased their transfer of responsibility skills. All these increases were significant when comparing T0 and T2, except for the dimension transfer of responsibility.

3.4. Taking Advantage of the Intervention

Finally, the EG parents appraised the workshop very positively. On a scoring scale of 1 to 10, we observed that the majority of participants (84.80%) scored around 8, 9, or 10 on the four variables studied: satisfaction, usefulness, awareness, and applicability of the workshop (Figure 3).

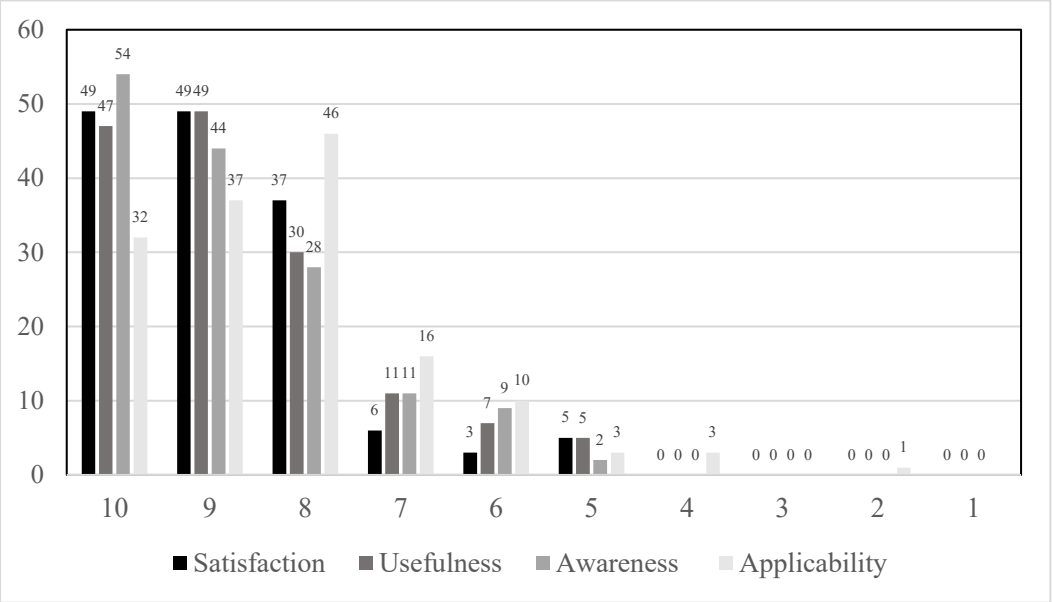

Figure 3. Frequency of participants' ratings (from 1 to 10) according to the degree of usage of the intervention.

4. Discussion

This study aimed to develop and verify the effectiveness of the "Intelligent Families" intervention programme. The results support the initial hypothesis: Compared to the CG members, the programme's EG participants effectively increased their parenting skills. These results were maintained regardless of the parents' gender, the children's age, the modality (online vs. face-to-face), and the duration (two vs. four sessions). Likewise, these results remained stable and even increased at the follow-up. The results are presented below.

As the most noteworthy result, the programme effectively increased parents' global parenting skills. Thus, 15.3% of the families increased their parenting skills after receiving the programme, and 14.2% continued improving at the 6-month follow-up. At the end of the follow-up, 20.6% of the participants had benefited from the intervention The programme's effectiveness can be observed in different dimensions.

First, the most remarkable aspect was the increase in parents' ability to exercise authority empathetically in those areas of parenting that require it, for example, household chores, care of space and belongings, image, economy, technology, health habits, etc. Specifically, 26.7% of the EG parents showed a greater ability than the CG parents to take control of coexistence while attending to their children's emotions, providing a sense of protection and security, and sensitivity toward the children's emotional experiences. Moreover, the results remained stable at the 6-month follow-up, so the learning of competencies can be considered long-lasting and does not decline after the intervention. In fact, 13.1% of the parents continued to increase their ability to establish empathic authority after completing the intervention. After six months, 34.7% of the participants experienced a positive change in this variable.

Secondly, the participating parents also increased their ability to negotiate. After the intervention, 13.6% of the EG participants increased their skills to negotiate with their children and respected the agreements and decisions reached. This type of negotiation implies trust in the child and the active participation of both parties, bearing in mind the children's needs and preferences and the consequences of the decisions reached. In the present study, we observed that 6.3% of the participants continued to increase their negotiation skills after the end of the programme, with higher scores at the 6-month follow-up. In this dimension, 23.3% experienced positive changes.

Thirdly, we observed that the EG parents did not increase their parenting skills significantly more than the CG parents in the transfer of responsibilities; that is, their ability to accompany and respect their children's decisions in those areas where the children can take on full responsibility. We observed that the EG parents already had high scores in this variable before starting the intervention, so there was a lower margin of improvement compared to the other dimensions of parenting skills. Although the increase was nonsignificant, scores in the transfer of responsibility tended to rise both at the end of the intervention and at the 6-month follow-up. However, the difficulty of transferring responsibility has also been linked to overprotection, the desire for perfectionism or the fear of the children's failure (Casale et al. 2023), as well as to the parents' lack of security (Costa et al. 2019), variables that were not considered in the present study, and that could be the subject of future studies.

Likewise, no differences were observed in the skills acquired after the programme depending on the parent's gender or the children's age. This means that both mothers and fathers who attended the programme could benefit equally, regardless of their children's age range. However, it is interesting to note that most participants (77.2%) in the programme were mothers. The greater involvement of women in those activities related to care and upbringing is a pattern repeated consistently, probably because of gender socialisation and social and/or cultural expectations (Dean et al. 2022). The existence of psychoeducational training on positive parenting that benefits both mothers and fathers, as is the case in this research, is a way of promoting co-responsibility, which is so necessary in many households (Woodward et al. 2018).

Regarding the intervention modality, the families that received the programme online obtained the same positive results as those that received it in person. These results are consistent with the literature (see the meta-analysis of Spencer et al. 2020 and Harris et al. 2020), suggesting that the virtual training format can be just as valid as the face-to-face format as long as a personal connection is maintained. In the online mode of this programme, personal connection occurs through synchronous videoconferencing. Additionally, being able to implement the programme with the support of technology allows one to benefit from the advantages of online training, such as greater flexibility, the potential to access more families, and fewer barriers to accessing resources for those

parents with availability difficulties, among others. As highlighted, these advantages are also maintained in the socially disadvantaged population (Harris et al. 2020).

Next, we determined whether the programme's success was related to its duration. The results showed no differences between the families that received the short version of the programme (two sessions, three hours in total) and the extended version (four sessions, six hours in total), although both versions are considered brief. However, both versions significantly modified parental skills, which is consistent with the results of Harris et al. (2020), who supported the brevity of the online interventions. In terms of efficiency, the shorter version was supported, although with a single study, this is somewhat premature.

In addition, as we included a longitudinal evaluation at three time points, we could observe that the learnings tended to be sufficiently consolidated and maintained in the follow-up evaluation. These results align with previous studies highlighting the ability of psychoeducational programmes to generate long-term positive effects in families, provided that their natural environment helps to strengthen the effects achieved (Halford and Bodenmann 2013; Grolnick et al. 2021), which could also be related to the possible cascade effect that occurs after an intervention (Patterson et al. 2010). To this result, it is important to add the high level of satisfaction expressed by the participants about the programme and its usefulness and applicability.

Despite the positive results noted, it is important to mention the limitations and further lines of research that arise from this work. One of the main limitations is that it was not a double-blind study, as both the person who facilitated the programme and the attendees knew the purpose of the study. This could bias the results, generating the participants' social and family desirability.

In addition, we note that the effect sizes found in our research are small. This is a frequent result in psychoeducational programmes, as it is rare to obtain large effects for psychological variables (Grolnick et al. 2021; Simpson et al. 2018; Jugovac et al. 2022; Van Ijzendoorn et al. 2023).

Moreover, although the results were positive, the percentage of people who achieved positive changes was around 20%. Therefore, although the results are promising, it is important to interpret them cautiously and continue working to maximise the programme's positive effects and contribute additional evidence of its effectiveness. For this purpose, it would be interesting to continue expanding and diversifying the sample on which the programme is implemented, taking into account diverse sociodemographic, personal, family, and even cultural characteristics. It would also be relevant to extend the longitudinal evaluation to see whether the results obtained are maintained or change over time and evaluate the families' progress. At the methodological level, other substantial aspects to consider in the future would be controlling the participation of both parents in the study, incorporating different instruments and methods of evaluation, and checking the impact of the programme facilitator on the study's effectiveness.

Despite the aforementioned limitations, we think the present research has considerable strengths, such as using an experimental group and a control group, the random assignment to both groups, the long-term follow-up evaluation, and the comparison of different intervention modalities. Likewise, this work has interesting practical implications for research and the development of preventive actions that promote the emotional well-being of families and their members in different areas (educational, social, or psychotherapeutic).

Author Contributions: Conceptualization, A.M.-P. and A.O.; methodology, A.M.-P.; formal analysis, E.M.; investigation, A.M.-P. and A.O.; resources, A.M.-P. and A.O.; data curation, E.M.; writing—original draft preparation, A.M.-P. and E.M.; writing, A.M.-P. and E.M.; review, A.M.-P., A.O. and E.M.; editing, A.M.-P. and E.M.; project administration and funding acquisition, A.O. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted following the Declaration of Helsinki and approved by the Ethics Committee of Institution (Refs: ETK-17/24-25; 17 December 2024).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Research data can be found at the following link: https://doi.org/10.17632/w7bpvsctx5.1.

Acknowledgments: We acknowledge the technical support provided by Habilmind, facilitating the platform that allowed the development of the online intervention and data collection.

Conflicts of Interest: The authors declare no conflicts of interest.

References

Aguirre-Dávila, Eduardo, Miguel Morales-Castillo, and Manuel Moreno-Vásquez. 2023. Parenting, autonomy and academic achievement in adolescence. *Journal of Family Studies* 29: 63–76. [CrossRef]

Allen, Elizabeth S., Wendy S. Grolnick, and James V. Córdova. 2019. Evaluating a self-determination theory-based preventive parenting consultation: The Parent Check-In. *Journal of Child and Family Studies* 28: 732–43. [CrossRef]

Barber, Brian K. 1996. Parental psychological control: Revisiting a neglected construct. *Child Development* 67: 3296–319. [CrossRef]

Bernier, Annie, Célia Matte-Gagné, Marie-Ève Bélanger, and Natasha Whipple. 2014. Taking stock of two decades of attachment transmission gap: Broadening the assessment of maternal behavior. *Child Development* 85: 1852–65. [CrossRef] [PubMed]

Bowlby, John. 1969. *Attachment and Loss: Vol. 1. Attachment*. London: The Hogarth Press and Institute of Psycho-Analysis. [CrossRef]

Brennan, Patricia A., Robyne L. E. Brocque, and Constance Hammen. 2003. Maternal depression, parent-child relationships and resilient outcomes in adolescence. *Journal of the American Academy of Chile and Adolescent Psychiatry* 42: 1469–77. [CrossRef]

Brenning, Katrijn, Bart Soenens, Caroline Braet, and Sarah Bal. 2012. The role of parenting and mother-adolescent attachment in the intergenerational similarity of internalizing symptoms. *Journal of Youth and Adolescence* 41: 802–16. [CrossRef]

Casale, Silvia, Giulia Fioravanti, and Simon Ghinassi. 2023. Applying the Self-Determination Theory to explain the link between perceived parental overprotection and perfectionism dimensions. *Personality and Individual Differences* 204: 112044. [CrossRef]

Cassidy, Jude, Susan S. Woodhouse, Laura J. Sherman, Brandi Stupica, and Carl W. Lejuez. 2011. Enhancing infant attachment security: An examination of treatment efficacy and differential susceptibility. *Development and Psychopathology* 23: 131–48. [CrossRef]

Chen, Qiqi, Yuhong Zhu, and Wing Hong Chui. 2021. A meta-analysis on effects of parenting programs on bullying prevention. *Trauma, Violence, and Abuse* 22: 1209–20. [CrossRef]

Costa, Sebastiano, Maria C. Gugliandolo, Nadia Barberis, Francesca Cuzzocrea, and Francesca Liga. 2019. Antecedents and consequences of parental psychological control and autonomy support: The role of psychological basic needs. *Journal of Social and Personal Relationships* 36: 1168–89. [CrossRef]

Dean, Liz, Brendan Churchill, and Leah Ruppanner. 2022. The mental load: Building a deeper theoretical understanding of how cognitive and emotional labor overload women and mothers. *Community, Work and Family* 25: 13–29. [CrossRef]

Deci, Edward L., and Richard M. Ryan. 2000. The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 11: 227–68. [CrossRef]

Deci, Edward L., and Richard M. Ryan. 2008. Self-determination theory: A macro-theory of human motivation, development, and health. *Canadian Psychology* 49: 182–85. [CrossRef]

Deci, Edward L., and Richard M. Ryan. 2013. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Springer Science & Business Media.

Distefano, Rebecca, and Alyssa S. Meuwissen. 2022. Parenting in context: A systematic review of the correlates of autonomy support. *Journal of Family Theory and Review* 14: 571–92. [CrossRef]

England-Mason, Gillian, Krysta Andrews, Leslie Atkinson, and Andrea Gonzalez. 2023. Emotion socialization parenting interventions targeting emotional competence in young children: A systematic review and meta-analysis of randomized controlled trials. *Clinical Psychology Review* 100: 102252. [CrossRef]

Erozkan, Atilgan. 2009. The relationship between attachment styles and social anxiety: An investigation with Turkish university students. *Social Behaviour and Personality* 37: 835–44. [CrossRef]

Evans, Chris, Frank Margison, and Michael Barkham. 1998. The contribution of reliable and clinically significant change methods to evidence-based mental health. *Evidence-Based Mental Health* 1: 70–72. [CrossRef]

Grolnick, Wendy S., and Jacquelyn N. Raftery-Helmer. 2013. The importance of autonomy for development and well-being. In *Self-Regulation and Autonomy: Social and Developmental Dimensions of Human Conduct*. Edited by Bryan W. Sokol, Frederick M. E. Grouzet and Ulrich Muller. Cambridge: Cambridge University Press, pp. 141–64. [CrossRef]

Grolnick, Wendy S., Madeline R. Levitt, Alessandra J. Caruso, and Rachel E. Lerner. 2021. Effectiveness of a brief preventive parenting intervention based in self-determination theory. *Journal of Child and Family Studies* 30: 905–20. [CrossRef]

Halford, W. Kim, and Guy Bodenmann. 2013. Effects of relationship education on maintenance of couple relationship satisfaction. *Clinical Psychology Review* 33: 512–25. [CrossRef]

Harris, Madeleine, Krysta Andrews, Andrea Gonzalez, Heather Prime, and Leslie Atkinson. 2020. Technology-assisted parenting interventions for families experiencing social disadvantage: A meta-analysis. *Prevention Science* 21: 714–27. [CrossRef]

Havighurst, Sophie S., Alessandra Radovini, Brandon Hao, and Christiane E. Kehoe. 2020. Emotion-focused parenting interventions for prevention and treatment of child and adolescent mental health problems: A review of recent literature. *Current Opinion in Psychiatry* 33: 586–601. [CrossRef]

Havighurst, Sophie S., Katherine R. Wilson, Ann E. Harley, Margot R. Prior, and Christiane Kehoe. 2010. Tuning in to kids: Improving emotion socialization practices in parents of preschool children—Findings from a community trial. *Journal of Child Psychology and Psychiatry* 51: 1342–50. [CrossRef] [PubMed]

Jiang, Zixin, Xi Liang, Zhengyan Wang, Yige Lin, and Linlin Zhang. 2023. Intrusive parenting in early childhood: A review and meta-analysis. *PsyCh Journal* 12: 335–54. [CrossRef] [PubMed]

Joussemet, Mireille, Geneviève A. Mageau, and Richard Koestner. 2014. Promoting optimal parenting and children's mental health: A preliminary evaluation of the how-to parenting program. *Journal of Child and Family Studies* 23: 949–64. [CrossRef]

Jugovac, Samantha, Richard O'Kearney, David J. Hawes, and Dave S. Pasalich. 2022. Attachment- and emotion-focused parenting interventions for child and adolescent externalizing and internalizing behaviors: A meta-analysis. *Clinical Child and Family Psychology Review* 25: 754–73. [CrossRef]

Ortuño, Antonio. 2012. *Familias Inteligentes. Claves Prácticas para la Educación [Intelligent Families. Key Practices for Education]*. Madrid: El Rincón del Quijote.

Ortuño, Antonio. 2015. *¿Quién Cuenta Cuentos a Mis Padres? [Who Tells Stories to My Parents?]*. Madrid: Letras de Autor.

Ortuño, Antonio, and Luis Benedicto. 2020. *Guía Ilustrada para una Convivencia Familiar Inteligente: Utiliza tu Inteligencia Emocional para Poner Límites Educativos [Illustrated Guide for Intelligent Family Coexistence: Use Your Emotional Intelligence to Set Educational Limits]*. Andalusia: Toromítico.

Patterson, Gerald R., Marion S. Forgatch, and David S. DeGarmo. 2010. Cascading effects following intervention. *Development and Psychopathology* 22: 949–70. [CrossRef]

Pitillas, Carlos, and Ana Berástegui. 2018. *Primera Alianza. Fortalecer y Reparar los Vínculos Tempranos [First Alliance: Strengthen and Repair Early Attachments]*. Barcelona: Gedisa Editorial.

Simpson, David M., Nathan D. Leonhardt, and Alan J. Hawkins. 2018. Learning about love: A meta-analytic study of individually-oriented relationship education programs for adolescents and emerging adults. *Journal of Youth and Adolescence* 47: 477–89. [CrossRef]

Spencer, Chelsea M., Glade L. Topham, and Erika L. King. 2020. Do online parenting programs create change? A meta-analysis. *Journal of Family Psychology* 34: 364–74. [CrossRef]

Steele, Howard, Anne Murphy, Karen Bonuck, Paul Meissner, and Miriam Steele. 2019. Randomized control trial report on the effectiveness of Group Attachment-Based Intervention (GABI©): Improvements in the parent-child relationship not seen in the control group. *Development and Psychopathology* 31: 203–17. [CrossRef]

Tanaka, Ayumi, Ayame Tamura, Ryo Ishii, Shin-Ichi Ishikawa, Naoki Nakazato, Kazuhiro Ohtani, Michiko Sakaki, Takashi Suzuki, and Kou Murayama. 2023. Longitudinal association between maternal autonomy support and controlling parenting and adolescents' depressive symptoms. *Journal of Youth and Adolescence* 52: 1058–73. [CrossRef]

Van Ijzendoorn, Marinus H., Carlo Schuengel, Qiang Wang, and Marian J. Bakermans-Kranenburg. 2023. Improving parenting, child attachment, and externalizing behaviors: Meta-analysis of the first 25 randomized controlled trials on the effects of video-feedback intervention to promote positive parenting and sensitive discipline. *Development and Psychopathology* 35: 241–56. [CrossRef] [PubMed]

Verstuyf, Joke, Maarten Vansteenkiste, Bart Soenens, Liesbet Boone, and Athanasios Mouratidis. 2013. Daily ups and downs in women's binge eating symptoms: The role of basic psychological needs, general self-control, and emotion eating. *Journal of Social and Clinical Psychology* 32: 335–61. [CrossRef]

Woodward, Kerri E., Debra L. Boeldt, Robin P. Corley, Lisabeth DiLalla, Naomi P. Friedman, John K. Hewitt, Paula Y. Mullineaux, JoAnn Robinson, and Soo Hyun Rhee. 2018. Correlates of positive parenting behaviors. *Behavior Genetics* 48: 283–97. [CrossRef] [PubMed]

World Health Organization. 2024. *Adolescent Health*. Geneva: World Health Organization. Available online: https://www.who.int/health-topics/adolescent-health/#tab=tab_1 (accessed on 25 January 2025).

World Medical Association. 2013. World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA* 310: 2191–94.

Yaholkoski, Amber, Kylee Hurl, and Jennifer Theule. 2016. Efficacy of the Circle of Security intervention: A meta-analysis. *Journal of Infant, Child, and Adolescent Psychotherapy* 15: 95–103. [CrossRef]

Young, Rachel, and Melissa Tully. 2022. Autonomy vs. control: Associations among parental mediation, perceived parenting styles, and U. S. adolescents' risky online experiences. *Cyberpsychology* 16: 5. [CrossRef]