

## Examining the Impact of the Incredible Years Parenting Program: A Systematic Review of Randomized Controlled Trials in Early Childhood

Nilüfer KURU<sup>1</sup>

### Abstract

The Incredible Years (IY) parenting program is an intervention widely implemented to improve parenting practices and child development. This systematic review examined randomized controlled trials (RCTs) that assessed the effectiveness of IY programs for children aged 0–8 and their caregivers. A comprehensive literature search was conducted in the Web of Science, PsycINFO, and ERIC databases for studies published between 2021 and December 2024. Inclusion criteria required an RCT design and implementation of the IY parenting program with parents of children under eight. The review followed PRISMA guidelines. Eleven eligible studies were included. The findings showed consistent reductions in children's externalizing behaviors and improvements in parenting strategies. Several studies also reported positive changes in children's emotional regulation, developmental outcomes, and caregivers' psychological well-being. Some trials examined biological indicators, such as DNA methylation, which suggests preliminary evidence of physiological benefits. However, effects based on teacher reports and observational tools were less consistent. The Incredible Years program appears to be an effective intervention for enhancing behavioral and developmental outcomes in children and improving parental well-being. It is a promising intervention for promoting early childhood mental health, though further research is needed on its long-term and biological impacts.

**Keywords:** Incredible Years, parenting program, early childhood, randomized controlled trial, psychosocial outcomes

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# Siirt Eğitim Dergisi

Derleme Makalesi

Başvuru Tarihi: 24.05.2025

Kabul Tarihi: 20.06.2025

## Eşsiz Yıllar Ebeveynlik Programının Etkililiğinin İncelenmesi: Erken Çocuklukta Yürütülen Randomize Kontrollü Çalışmaların Sistemik Derlemesi

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### Özet

Eşsiz Yıllar (IY) ebeveynlik programı, ebeveynlik becerilerini geliştirmek ve çocuk gelişimini desteklemek amacıyla yaygın olarak uygulanan bir müdahaledir. Bu sistemik derleme, 0–8 yaş arası çocuklar ve onların bakım verenlerine uygulanan IY programlarının etkililiğini değerlendiren randomize kontrollü çalışmaları (RCT) incelemek amacıyla yürütülmüştür. 2021– Aralık 2024 yılları arasında yayımlanan çalışmalar, Web of Science, PsycINFO ve ERIC veri tabanlarında kapsamlı bir literatür taraması ile belirlenmiştir. Sistemik derleme, PRISMA yönergelerine uygun şekilde raporlanmıştır. İncelemeye uygun bulunan 11 çalışma değerlendirilmiştir. Bulgular, çocukların dışsallaştırma davranışlarında tutarlı azalmalar ve ebeveynlik stratejilerinde iyileşmeler olduğunu göstermiştir. Ayrıca bazı çalışmalarda, çocukların duygusal düzenleme becerilerinde, gelişimsel çıktılarında ve bakım verenlerin psikolojik iyi oluşlarında olumlu değişiklikler rapor edilmiştir. Bazı araştırmalar DNA metilasyonu gibi biyolojik göstergeleri de inceleyerek müdahalenin fizyolojik etkilerine dair ön kanıtlar sunmuştur. Ancak öğretmen raporlarına ve gözlemsel araçlara dayalı etkiler daha az tutarlılık göstermiştir. Eşsiz Yıllar programı, çocuklarda davranışsal ve gelişimsel çıktıları iyileştirmede ve ebeveynlerin iyilik halini artırmada etkili bir müdahale olarak görünmektedir. Erken çocukluk ruh sağlığını desteklemede umut verici bir müdahaledir; ancak uzun vadeli ve biyolojik etkileri üzerine daha fazla araştırmaya ihtiyaç vardır.

**Anahtar Sözcükler:** Eşsiz yıllar, ebeveynlik programı, erken çocukluk, randomize kontrollü deneysel desen, psikososyal sonuçlar

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**For citation:** Kuru, N. (2025). Eşsiz Yıllar Ebeveynlik Programının Etkililiğinin İncelenmesi: Erken Çocuklukta Yürütülen Randomize Kontrollü Çalışmaların Sistemik Derlemesi. *Siirt Eğitim Dergisi*, 5(1), 45-61. DOI: [10.58667/sedder.1570358](https://doi.org/10.58667/sedder.1570358)

## Giriş

Behavioral and emotional difficulties in early childhood are among the most important problems effecting lifelong mental health. These difficulties have long-term impacts on academic achievement, peer relationships, and socio-emotional functioning (Rutter et al., 2010; Scott et al., 2001). Such difficulties are often associated with adverse parent-child interactions, environmental stressors, and children's poor self-regulation skills (Lobo & Lunkenheimer, 2020; Shaw & Gross, 2008). Therefore, evidence-based parenting programs have been developed in response to these developmental risks to support positive developmental outcomes.

The Incredible Years (IY) program is one of the most extensively studied and widely implemented programs, a series of interventions targeting parents, teachers, and children aged from 0 to 12, and it is tailored for different age groups (Webster-Stratton, 2005). The IY Parent Programs are grounded in social learning theory and attachment-based frameworks and aim to reduce harsh parenting, enhance warmth and sensitivity, and foster children's self-regulation through skill building and model learning (Webster-Stratton, 2011). Multiple meta-analyses and randomized controlled trials (RCTs) have demonstrated the effectiveness of IY in mitigating child conduct problems and enhancing parenting abilities. For example, Menting et al. (2013) examined 50 IY trials and found significant effects on children's externalizing behaviors. More recently, Gardner et al. (2019) conducted a meta-analysis from 14 independent trials across Europe. This analysis confirmed a mean effect size for parent-reported conduct problems along with consistent results across countries and service contexts. Importantly, IY outcomes appear robust across settings, including high-risk families, ethnic minority groups, and parents with mental health challenges (Danbolt, 2020; Leijten et al., 2017; Weeland et al., 2023).

Nevertheless, substantial heterogeneity remains in IY outcomes. While some families benefit considerably, others show minimal or no gains (Leijten et al., 2018). Moderator analyses have revealed that baseline severity of child behavioral problems, parental mental health, and contextual adversity may influence outcomes (Menting et al., 2013). For instance, children with more severe behavioral difficulties tend to improve more, suggesting that the intervention may be better suited for treatment than universal prevention. Similarly, families experiencing economic hardship or minority status may require adaptations in delivery. However, existing evidence suggests that program fidelity and facilitator skill may mitigate these risks (Arruabarrena et al., 2022; Furlong & McGilloway, 2015).

There is a myriad of studies focusing on the effects of IY on developmental and physiological outcomes. For example, Creasey et al. (2024b) discovered that participating in IY was linked to decreased epigenetic aging and altered DNA methylation patterns in children. This suggests that the program may provide biological benefits by reducing stress. Meanwhile, observational studies using tools such as the Dyadic Parent-Child Interaction Coding System (DPICS-R) and Coding Interactive Behavior (CIB) provide insight into the quality of parent-child interactions in real time and reveal changes in sensitivity, emotional regulation, and attunement (Pontoppidan et al., 2022; Weeland et al., 2022). Furthermore, recent studies have expanded the application of the Incredible Years (IY) program to include children under the age of three and those with neurodevelopmental conditions. For example, Serrano et al. (2024) and Valencia et al. (2021) adapted the program for families of children with autism spectrum disorder and reported promising improvements in communication and adaptive functioning. Similarly, trials including infants and toddlers have begun evaluating the IY Babies and Toddlers programs within universal and targeted prevention models (Blower et al., 2021; Pontoppidan et al., 2022). Though such a great amount of research has touched upon the effectiveness of the Incredible Years (IY) program, a majority of studies have mainly focused on behavioral symptoms and parenting practices (Edwards et al., 2016; Pidano & Allen, 2015) with limited attention given to integrated findings across behavioral, emotional, developmental, relational, and physiological domains within a developmental framework focused on early childhood.

By combining the results of 11 randomized controlled trials that assessed the Incredible Years Parent Programs for families with children ages 0-8, this systematic review fills a vacuum in the literature. In addition to parenting-related outcomes, this study identified patterns in children's

behavioral, emotional, developmental, and biological domains. The review offers a current, thorough assessment of the effectiveness, workings, and range of application of the Incredible Years parenting intervention in early childhood settings using this analytical method, which combines developmental and clinical research.

## Method

This study is in compliance with the Preferred Reporting Items for Systematic Review and Meta-analyses Statement (PRISMA) (Moher et al, 2009).

### Search Strategy and Information Sources

Literature search was conducted using the Web of Science, Educational Resources Information Center (ERIC) and PsycINFO covering peer-reviewed interventional studies published between 2021 and December 2024. A search strategy was developed for each database by considering Incredible years parenting program and free terms which covered the following: (Incredible years AND (parenting\* OR parenting program \*)) AND (child\* OR early childhood\* OR Preschool \* OR pre-K\* OR kindergarten\* OR toddler\* OR infant\* OR infancy\*) AND (intervention OR support\* OR treatment\*). In order to find possibly pertinent papers, the author and an independent researcher went over the titles and abstracts using the search method outlined. They acquired the abstracts and, if required, the whole texts of the research in order to determine eligibility for inclusion.

### Inclusion and Exclusion Criteria

Studies were included in the review based on the fact that they meet the following four criteria: (1) Studies were selected only if the Incredible years parenting program was implemented (2) the participants were up to 8 years aged children; (3) the study was published in English-language journals. Studies were excluded from the review if they employed a non-randomized controlled experimental design.

### Study Selection

The research results were imported into the Rayyan screening platform (Ouzzani et al., 2016), which automatically detected and removed duplicate records. The author and two additional reviewers conducted title and abstract screening independently to exclude studies that failed to meet the inclusion criteria. Any disagreements were resolved through discussion until consensus was reached. Subsequently, the full texts of the articles were retrieved and reviewed to determine final eligibility.

### Quality Appraisal

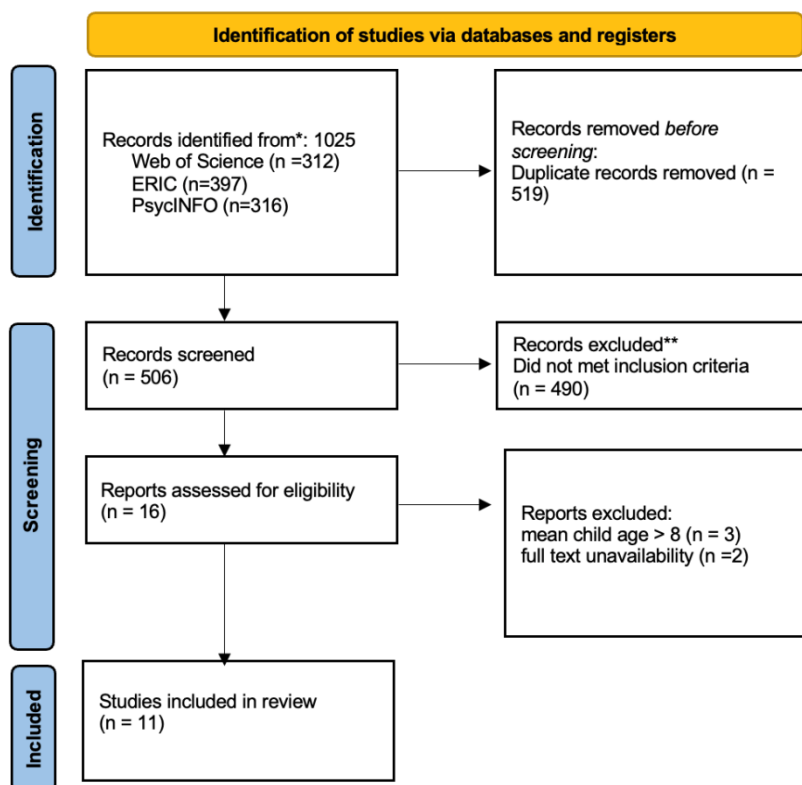
Cohen's kappa statistic was calculated to assess inter-rater agreement during both the title/abstract and full-text screening phases. The kappa value was 0.86, which indicates a high level of agreement among reviewers. According to commonly accepted thresholds, values above 0.80 are considered to be indicative of excellent agreement (Pérez et al., 2020).

### Data Extraction

The studies that met the inclusion criteria were reviewed and synthesized using a standardized table organized by thematic categories. This table presents key information including the year of publication, characteristic of participants, country of origin, duration of intervention implemented, and the effectiveness of the programs based on the measures used (see Table 1 and Table 2).

## Results

The research included eleven studies published from 2001 to December 2024 from three databases (see Figure 1). RTC designs were used in all studies with participants including parents (caregiver) of children aged 8 and under. The study findings are listed below, along with examples showing how each study met particular criteria.



**Figure 1:** Outline of the Study Selection Process for the Systematic Review

### Study Design

All 11 studies were RCTs. Three studies used an Observational RTC design (Creasey et al., 2024b; Huijzer-Engbrengthof et al. 2023; Weeland et al. 2022) and two studies (Blower et al., 2021; Pontoppidan et al., 2022) included a pilot RCT (Table 1).

### Participants

Across included studies the total sample size was 2928 (1863 children and 1065 parents) with individual studies ranging from 20 (Safarpour & Ashori, 2023) to 387 parent-child dyads (Weeland et al., 2022). The age of participating children spanned from birth to 8 years, while the ages of parents ranged from 18 to 51. The children in these research were representative of a variety of demographics, including children with neurodevelopmental abnormalities that have been clinically identified, children at risk of conduct issues, and generally developing children with emerging behavioral difficulties. Two studies (Serrano et al., 2024; Valencia et al., 2021) focused on families of children with autism spectrum disorder (ASD) or preterm children who had delayed socialization and language. Other studies included children referred by child protective services (Karjalainen et al., 2021), children with high externalizing behavior scale scores (Weeland et al., 2022), and children with genetic conditions linked to developmental risk or known social-emotional vulnerabilities (Creasey et al., 2024a, 2024b; Serrano et al., 2024). Parental participants were predominantly mothers (ranging from 85% to 91% across studies). Several studies focused on high-risk groups, including families under state supervision (Arruabarrena et al., 2022), immigrant families, and those from low-income households (Blower et al., 2021; Bywater et al., 2022). Many studies reported elevated baseline parenting stress or low parental self-efficacy, highlighting the clinical relevance of the interventions in populations experiencing psychosocial adversity (Bywater et al., 2022; Pontoppidan et al., 2022; Serrano et al., 2024).

**Table 1:** Study Characteristics of Included RCTs

Study (Year)	Country	Design	Study Population (Control/Intervention)	Age Range
Arruabarrena et al. (2022)	Spain	RCT	Child (n=38/n=56); 35% female; Parents (n=50/n=76); 73% female	Child: 4-8 age Parents: 30-47
Blower et al. (2021)	UK	Pilot RCT	Parents (n=53/n=152) Gender not reported	Child: 0 ≤4 months Parents: Not reported
Bywater et al. (2022)	UK	RCT	Mother & Child (n=56/n=285) Gender not reported	Child: 0 ≤ 8 weeks Mother: 18 -43
Creasey et al. (2024a)	Netherlands	RCT	Child (n=147/n=139); 47% female Parent (149/138); 92% female	Child: 4-8 Parent: 37-46
Creasey et al. (2024b)	Netherlands	Longitudinal Observational RCT	Child (n=146/n=135); 48% female Parent (146/135); 92% mothers	Child: 3-9 Parent: 27-49
Huijzer-Engbrengthof et al. (2023)	Netherlands	Longitudinal Observational RCT	Parent & Child (n=190/196) 92% mothers; 54.2% boys	Child: 4-8 Parent: 23-51
Karjalainen et al. (2021)	Finland	RCT	Parent & Child (n=52/n=50) 80% mother; 63% boy	Child: 3-7 Parent: 30-39
Pontoppidan et al. (2022)	Denmark	Pilot RCT	112 families (n=36/76) %100 mother	Child: 0-4 month Parent: not reported
Serrano et al. (2024)	Spain	RCT	Parent & Child (n=34/n=34) Gender not reported	Child: 3-7- Parent: Not reported
Weeland et al. (2022)	Netherlands	Longitudinal Observational RCT	387 caregiver-child 91% mothers; 45% girls	Child: 4-8 Parent:23-51
Valencia et al. (2021)	Spain	RCT	70 families Gender not reported	Child: 2-5 Parents: not reported

### Intervention and Control Groups

Table 2 presents the information on the intervention protocol. The method, frequency, and length of the IY parenting interventions varied. Two of the eleven studies (Arruabarrena et al., 2022; Karjalainen et al., 2021) employed a home-visiting coach model and group intervention, whereas the other research used group-based IYP. Most studies had session frequencies ranging from 8 to 14 sessions, though a few implemented more intensive sessions. For example, Serrano et al. (2024) and Valencia et al. (2021) administered a program consisting of 22 sessions. Session duration varied across studies with most sessions lasting approximately 1.5 to 2 hours (e.g., Blower et al., 2021; Karjalainen et al., 2021). In contrast, Serrano et al. (2024) implemented a group-based program, but the exact session duration was not specified. The most commonly implemented intervention across the studies was the Incredible Years (IY) Parenting Program. Adaptations included IY-ASLD (Serrano et al., 2024; Valencia et al., 2021), IY Parent and Babies (Pontoppidan et al., 2022), and IY Infant and Toddler Parent Program (Blower et al., 2021). All studies used control groups for comparison, including those receiving usual care or visits, except for one study (Blower et al., 2021), which used an active control group (HENRY, Triple P). Compliance rates varied among the studies, ranging from 50% to 100%.

### Study Outcomes Based on Measurement Tools

The majority of studies validated and standardized tools to assess behavioral, emotional, developmental, and relational outcomes in children, as well as parenting practices and psychosocial well-being in parents. Due to the heterogeneity in outcome measures, the results are presented narratively under two thematic domains: child and parent outcomes.

#### Child Outcomes

Child outcomes were assessed using a wide array of validated measures encompassing behavioral, emotional, developmental, observational, and more recently-biological domains. One of the most consistent findings across studies was the reduction in externalizing behaviors such as aggression, defiance, and hyperactivity. These outcomes were primarily measured through the Eyberg Child Behavior Inventory (ECBI), Child Behavior Checklist (CBCL), and Strengths and Difficulties Questionnaire (SDQ). In the study of Karjalainen et al. (2021), children in the intervention group demonstrated significant improvements on the ECBI Problem ( $p < .001$ ,  $d = 0.87$ ) and Intensity scales ( $p < .001$ ,  $d = 0.80$ ); however, effects were attenuated at 12-month follow-up. Likewise, Arruabarrena et al. (2022) observed large decreases in ECBI scores with effect sizes exceeding  $d = 1.5$  among clinically referred children.

For children under age three, developmental and social-emotional functioning were assessed using the Ages and Stages Questionnaire: Social-Emotional (ASQ:SE-2), the Cognitive Development Questionnaire and the SDQ (toddler version). Bywater et al. (2022) observed moderate gains in prosocial behaviors and social-emotional development, but these benefits were not consistently different from control groups. Similarly, Pontoppidan et al. (2022) reported small, favorable effects on maternal-reported infant temperament and interaction quality, yet group differences measured via the Coding Interactive Behavior (CIB) system were not statistically significant. Multidomain tools such as the Developmental Profile-3 (DP-3), Vineland Adaptive Behavior Scales–III (VABS-III), Social Communication Questionnaire (SCQ), and Autism Diagnostic Observation Schedule–2 (ADOS-2) were used in the case of children diagnosed with or at risk for autism spectrum disorder. Serrano et al. (2024) reported moderate to high levels of improvement in communication and socialization subscales of the VABS-III. Valencia et al. (2021) noted a reduction in CBCL Effect sizes were not provided, although total problem scores for children with ASD were. These results were confirmed by observational data. Using the Dyadic Parent–Child Interaction Coding System (DPICS-R), Weeland et al. (2022) found that increases in labeled praise during structured play tasks predicted post-intervention reductions in child problem behavior. Specifically, labeled praise rose from a mean of 1.5 to 4.0 instances per session in the intervention group. Two studies explored biological outcomes using epigenetic markers. Creasey et al. (2024a; 2024b) analyzed DNA methylation and epigenetic age acceleration using buccal swabs, suggesting a potential biological buffering effect of the IY parenting intervention. However, the results are preliminary and require replication. Finally, Huijzer-Engbringhof et al. (2023) addressed child temperament using latent difference score models to assess changes in disruptive behavior and effortful control. Children whose parents received IY showed greater decreases in disruptive behavior and greater increases in effortful control, with these improvements sustained at the 4-month follow-up.

#### Parent Outcomes

The outcomes for parents were evaluated using surveys and observations. Attention was given to psychological functioning, self-efficacy, interaction with the child, and the parent-child relationship. Improvement in parenting behavior was a common outcome across studies. The Alabama Parenting Questionnaire (APQ), the Parenting Practices Interview (PPI), and the Dyadic Parenting and Child Behavior Scale-Revised (DPICS-R) all reported higher rates of positive parenting and lower rates of coercive parenting. Arruabarrena et al. (2022) reported significant improvements in praise and inconsistent parenting.

Psychological well-being was most often evaluated using the PSI-SF, BDI-II, MDI, and WHO-5 Well-Being Index. Valencia et al. (2021) found reductions in parenting stress across all three PSI-SF domains: parental distress, difficult child perception, and challenging child assessment. Arruabarrena et al. (2022) also found that BDI-II scores decreased significantly from pre- to post-intervention assessment ( $d = 0.53$ ,  $p < .001$ ), particularly among parents with higher baseline symptom scores. Additionally, Bywater et al. (2022) and Pontoppidan et al. (2022) reported changes in MDI and WHO-5 scores with lower effect sizes. There was also improved parental confidence and self-efficacy.

The Parenting Sense of Competence Scale (PSOC) and the Karitane Parenting Confidence Scale (KPCS) showed improvements in parenting competence. Valencia et al. (2021) found that the Autism-Specific Five-Minute Speech Sample (AS-FMSS) showed increases in parental warmth and decreases in criticism and emotional over-involvement after the intervention, indicating improved parent-child relationship quality.

Overall, the findings from these 11 studies suggest that the Incredible Years program effectively enhances child behavioral and developmental outcomes, improves parenting quality, and promotes caregiver well-being. These effects were achieved across diverse populations and were supported by a comprehensive psychometric, observational, and biological assessment approach.



**Table 2:** Systematic Literature Review Based on Johns Hopkins Evidence-Based Practice (EBP)

Study	Type of Intervention	Control	Duration	Measure timepoint	Measures	Compliance rates
Arruabarrena et al. (2022)	IY Parent Program+ Small Group Dinosaur program + IY-Child program	Usual care	19 weekly sessions	Baseline-post-intervention, and follow-up	Parenting Practices Interview, Parenting Stress Index/Short Form, Beck Depression Inventory-II, Brief Child Abuse Potential Inventory, Eyberg Child Behavior Inventory, Dyadic Parent-Child Interaction Coding System-IV, Incredible Years Parenting Program Satisfaction Questionnaire	%59
Blower et al. (2021)	IY Infant and Toddler parent programs (E-SEE STEPS)	Usual care, HENRY, Triple P	IY-I: 8–10 weekly IY-T: 12 weekly sessions	Baseline- follow-up 1- follow-up 2- follow-up 3	Ages and Stages Questionnaire: Social-emotional, Second Edition (ASQ:SE-2); 9-item Patient Health Questionnaire (PHQ-9)	%88
Bywater et al. (2022)	IY Parents program ((E-SEE) Steps)	Usual care	Two hours weekly	Baseline- follow-up 1- follow-up 2- follow-up 3	ASQ:SE-2; PHQ-9; The Parent Sense of Competence (PSOC); CARE Index (Infancy); SDQ (2-4 yr version), Maternal Postnatal Attachment Scale (MPAS)	%95
Creasey et al. (2024a)	IY Parenting Program	Usual care	14 weekly session	Baseline- follow-up 1- follow-up 2- follow-up 3	Child DNAm; ECBI, SDQ; Dyadic Parent– Child Interaction Coding System–Revised; Positive Verbal Discipline scale; Praise and Incentives	86%
Creasey et al. (2024b)	IY Parenting Program	Usual care	14 weekly session	Baseline-follow-up	Physical punishment scale (6 items); Harsh and inconsistent discipline scale; ECBI, Infinium EPIC 850k and iSelect GSA	%71
Pontoppidan et al. (2022)	IY Parents and Babies program	Usual care	8 sessions	Baseline- post-test, follow-up	CIB system; Karitane Parenting Confidence Scale; Major Depression Inventory; World Health Organization Well-Being Index; Rosenberg Self-Esteem Scale; Being a Mother Scale; Parental Reflective Functioning Questionnaire; Parenting Sense of Competence Scale; Ages and Stages Questionnaire - Social-Emotional; Strengths and Difficulties Questionnaire (SDQ); Cognitive Development Questionnaire	%86
Huijzer-Engbregh of et al. (2023)	IY Parenting Program	Usual care	14 weekly sessions + one session	pretest, posttest, and follow up	ECBI; Child Behavior Questionnaire Very Short Form (CBQ-VSF)	Not Reported
Karjalainen et al. (2021)	IY® Parenting Program	Usual care	19 week sessions	baseline-post-test-follow-up	(ECBI); (CBCL); Teacher-reported SESBI-R; Caregiver-Teacher Report Form (C-TRF); Teacher Report Form (TRF);	%88

Serrano et al. (2024)	IY Parent Program adapted for families of children with autism or language delays (IY-ASLD)	Usual care	15-22 sessions	Baseline-post-test	Hollingsdale's Index of Social Position; Social Communication Questionnaire (SCQ); Autism Diagnostic Observation Schedule (ADOS2); Vineland Adaptive Behavior Scale-III (VABS-III, parent/caregiver report form); Developmental Profile-3 (DP-3); CBCL; Autism Program Parent Weekly Evaluation; Autism Program Parent Final Satisfaction Questionnaire; Individual interviews with parents; Individual interviews with clinicians; Parent Stress Inventory-Short Form (PSI-SF); Beck Depression Inventory (BDI); Alabama Parenting Questionnaire-Preschool version (APQ-Pr); Autism-Specific Five Minute Speech Sample (ASFMSS);	%50
Weeland et al. (2022)	IY Parenting program	Usual care	14 weekly sessions + one session	Baseline-post-test-follow-up	ECBI; Dyadic Parent-Child Interaction Coding System (DPICS-R);	%93
Valencia et al. (2021)	IY-ASLD® program	Usual Care	22-session	baseline-post-test	The Modified Checklist for Autism in Toddlers Revised with Follow-up (M-CHAT-R/F); Social Communication Questionnaire (SCQ); Vineland Adaptive Behavior Scale-III (VABS-III, parent/caregiver report form); Developmental Profile-3 (DP-3)	50

## Discussion and Conclusion

Eleven randomized controlled studies assessing the impact of the Incredible Years (IY) parenting program on children aged 0–8 and their caregivers were analyzed in this systematic review. Benefits of the IY program have been demonstrated in a variety of situations and populations, including lowering children's externalizing behaviors and enhancing parenting abilities. More information about the biological, developmental, and emotional effects surfaced. The pattern of results also highlights methodological issues, variations in efficacy, and significant ramifications for further study and application.

Across studies, IY was consistently found to reduce externalizing symptoms in children, particularly in those with elevated baseline problems. Nearly all studies reported reductions in parent-reported ECBI and CBCL scores, with large effect sizes in clinical and high-risk samples (e.g., Arruabarrena et al., 2022; Karjalainen et al., 2021). These results reinforce prior meta-analytic evidence, indicating that parenting interventions are especially advantageous for children with significant initial challenges (Gardner et al., 2019; Menting et al., 2013). Some studies even extended beyond behavioral outcomes, capturing improvements in emotional regulation, effortful control, and adaptive functioning—domains closely aligned with developmental resilience (Huijzer-Engbringhof et al., 2023; Serrano et al., 2024). Karjalainen et al. (2021) and Weeland et al. (2022) found weaker or null effects in teacher-rated outcomes, highlighting the recurring issue of limited generalizability across contexts. Similarly, the limited statistical significance of observational measures in some studies (e.g., Pontoppidan et al., 2022) may reflect measurement difficulties and the necessity of stronger fidelity in real-world applications. More innovative studies have begun to explore physiological and neurobiological outcomes. Creasey et al. (2024a, 2024b) provide compelling, albeit preliminary, evidence suggesting that participation in IY may mitigate biological markers of stress via epigenetic modulation. While these studies are nascent and underpowered for definitive conclusions, they open a promising interdisciplinary avenue that aligns with broader developmental neuroscience frameworks.

Improvements in parenting practices were among the most robust and consistent findings. Increases in positive reinforcement (e.g., praise) and decreases in harsh discipline were documented using self-report tools (e.g., APQ, PPI) and observational tools (e.g., DPICS-R). Additionally, growth in emotional sensitivity was documented. These changes contribute directly to child outcomes and support the theoretical basis of IY. IY posits that coercive cycles can be interrupted through skill-based shifts in parenting (Webster-Stratton, 2011). Several studies have reported significant reductions in parenting stress and depressive symptoms, which are common in families facing adversity and known to interfere with intervention engagement and effectiveness (Arruabarrena et al., 2022; Valencia et al., 2021). Improvements in parenting self-efficacy were also observed, albeit more modestly than behavioral changes (Pontoppidan et al., 2022). These effects on caregivers reinforce that parenting programs like IY target not only child behavior but also promote broader family well-being and emotional functioning. The emotional relief and competence gains reported by caregivers may also increase retention and the long-term sustainability of change. The overall results support the effectiveness of IY; however, variability across studies suggests that context, implementation, and population characteristics moderate outcomes. For example, families involved with child protective services (Arruabarrena et al., 2022; Karjalainen et al., 2021) and families raising children with ASD (Serrano et al., 2024; Valencia et al., 2021) have benefited significantly from adapted IY protocols. These results suggest that IY is scalable across contexts involving clinical and complex needs. However, findings from large-scale implementation efforts (e.g., Bywater et al., 2022) indicate challenges with recruitment, retention, and fidelity that could diminish effects.

Although increases in positive parenting partially mediated improvements in child behavior (Weeland et al., 2022), causal inferences are limited by the concurrent measurement of mediators and outcomes, the absence of active comparison groups, and inconsistent modeling. Future trials should incorporate longitudinal mediation models with temporal separation between variables and stronger observational designs.

In summary, this systematic review confirms that the Incredible Years parenting program is an effective and adaptable intervention for promoting early childhood mental health. The program has an impact on behavioral, emotional, and developmental domains, and it benefits caregivers as well. Despite limitations in measurement and implementation, the program's substantial evidence base, adaptability, and theoretical foundation establish it as a valuable asset in the field of early intervention. By bridging developmental science and practical application, the Incredible Years program offers a promising, effective, and sustainable approach to improving the lives of children and families.

### **Limitation**

This systematic review is subject to several limitations. First, the inclusion of only English-language RCTs may have introduced publication and language bias. Second, heterogeneity in intervention protocols, outcome measures, and follow-up durations limited comparability across studies. Third, reliance on parent-reported outcomes raises concerns about response bias, with less consistent findings from teacher and observational reports. Additionally, few studies examined long-term effects or biological outcomes with sufficient power. These factors constrain the generalizability and robustness of conclusions and highlight the need for more rigorous, diverse, and longitudinal research.

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### **Etik Beyannamesi**

İlgili araştırmada anket, mülakat, odak grup çalışması, gözlem, deney, görüşme teknikleri kullanılarak katılımcılardan veri toplanmasını gerektiren araştırma türü olmadığından ve doküman incelemesi yoluyla yürütüldüğü için etik kurul iznine tabi değildir. Ayrıca araştırmanın tüm sürecinde Committee on Publication Ethics (COPE) tarafından belirlenen etik kurallara uyulmuştur.

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## Genişletilmiş Özet

### Giriş

Bu sistematik derleme, Eşsiz Yıllar (EY) ebeveynlik programının 0–8 yaş arası çocuklar ve ebeveynleri üzerindeki etkilerini incelemektedir. Erken çocukluk döneminde karşılaşılan davranışsal ve duygusal güçlükler, bireyin yaşam boyu süren ruh sağlığını, akademik başarısını ve sosyal ilişkilerini olumsuz yönde etkileyebilmektedir. Bu tür güçlükler genellikle olumsuz ebeveyn-çocuk etkileşimleri, çevresel stres faktörleri ve çocukların zayıf öz-düzenleme becerileri ile ilişkilendirilmektedir. Sosyal öğrenme kuramı ve bağlanma temelli yaklaşımlara dayanan Eşsiz Yıllar programı, otoriter ebeveynliği azaltmayı, ebeveynlikte duyarlılığı ve sıcaklığı artırmayı ve çocukların öz-düzenleme becerilerini geliştirmeyi amaçlamaktadır. Bu programın, davranışsal sorunları azaltma ve ebeveynlik becerilerini iyileştirme konularındaki etkisi, çok sayıda randomize kontrollü çalışma ile desteklenmektedir. Ancak, etkilerin bazı ailelerde oldukça güçlü iken, bazılarında sınırlı kalması programın uygulanma biçimi, bağlamı ve katılımcı özelliklerine bağlı olarak değişkenlik gösterebileceğini ortaya koymaktadır.

### Yöntem

Bu çalışma, 2021–Aralık 2024 yılları arasında yayımlanmış olan ve Eşsiz Yıllar ebeveynlik programını içeren randomize kontrollü çalışmaları inceleyen sistematik bir derlemedir. Web of Science, PsycINFO ve ERIC veri tabanlarında yapılan kapsamlı literatür taraması sonucunda, yalnızca 0–8 yaş arası çocukların ebeveynleriyle gerçekleştirilmiş, İngilizce dilinde yayımlanmış ve randomize kontrollü deney (RCT) tasarımına sahip olan çalışmalar dahil edilmiştir. PRISMA yönergelerine uygun olarak yürütülen süreç sonucunda 11 çalışma incelemeye alınmıştır. Seçilen çalışmalarda toplam 2928 katılımcı yer almış, çalışma seçimleri Rayyan platformu üzerinden bağımsız araştırmacılar tarafından yürütülmüş ve Cohen's Kappa istatistiği ile %86 düzeyinde tutarlılık sağlanmıştır. Veriler tematik kategorilere ayrılmış ve çalışmalardan elde edilen bilgiler tablolastırılmıştır. Etik kurul izni bilgileri, yöntem kısmında ve makalenin son sayfasında sunulmuştur.

### Bulgular

İncelenen çalışmalarda çocuklara yönelik bulgular, özellikle dışsallaştırıcı davranışlarda (saldırganlık, karşı gelme, hiperaktivite) anlamlı azalmalar olduğunu göstermektedir. Bunun yanı sıra, sosyal-duygusal gelişim, iletişim becerileri, uyum davranışları ve bazı biyolojik göstergelerde (örneğin DNA metilasyonu) olumlu değişiklikler rapor edilmiştir. Özellikle otizm spektrum bozukluğu veya gelişimsel risk taşıyan çocuklar için uyarlanmış Eşsiz Yıllar programlarının etkili olduğu görülmektedir. Ebeveynlere yönelik bulgular ise pozitif ebeveynlik uygulamalarında artış, ebeveyn stresinde azalma, depresyon belirtilerinde düşüş ve ebeveyn öz-yeterliğinde artış yönündedir. Bu etkiler, standardize edilmiş ölçme araçları, gözleme dayalı yöntemler ve biyolojik değerlendirmelerle desteklenmektedir. Programın etkileri, sosyoekonomik açıdan dezavantajlı, göçmen ya da koruma altındaki ailelerde de başarılı şekilde gözlemlenmiştir.

### Tartışma, Sonuç ve Öneriler

Elde edilen bulgular, Eşsiz Yıllar ebeveynlik programının çocukların davranışsal, duygusal, gelişimsel ve biyolojik alanlardaki kazanımlarını desteklemede etkili bir müdahale olduğunu göstermektedir. Program, ebeveynlik becerilerini geliştirme, ebeveyn stresini azaltma ve aile içi ilişkileri güçlendirme açısından güçlü kanıtlar sunmaktadır. Özellikle klinik gruplar, özel gelişimsel ihtiyaçları olan çocuklar ve risk altındaki aileler için programın farklı varyantlarının etkili olduğu belirlenmiştir. Bununla birlikte, bazı çalışmalarda öğretmen değerlendirmeleri ve gözlem verilerinde etkilerin daha zayıf olması, bağlam farklarının ve değerlendirme araçlarının rolünü düşündürmektedir. Gelecekte yapılacak araştırmaların, aracı değişkenleri ele alan boylamsal modeller içermesi, biyolojik



etkilerin daha büyük örneklerle incelenmesi ve müdahale sonuçlarının sürdürülebilirliğinin değerlendirilmesine odaklanması önerilmektedir. Programın esnekliği, teorik temeli ve geniş kanıt tabanı, Eşsiz Yıllar Programı erken çocukluk ruh sağlığını destekleyen önemli ve uygulanabilir bir müdahale haline getirmektedir.