# *Case Study 1: An Evidence-Based Prac t ce Review Report*

## *Theme: Interven t ons delivered by parents*

## *How e ec t ve are Incredible Years interven t ons at improving the behaviour of children with ASD?*


## Summary

The current review assesses the effectiveness of Incredible Years (IY) programmes at improving the behaviour of children with autism. IY is a parenting programme for children displaying behavioural problems. Parents meet for two-hourly sessions over a 14-20 week period to learn skills to manage child behaviour (Webster-Stratton, 2015). In recent years, the programme has been adapted for parents of children with autism (Dababnah & Parish, 2016a; Webster-Stratton, 2015). Following COVID-19, there is an increased need for parenting programmes due to the significant disruption the pandemic has had on routine, causing a negative impact on behaviour for children with autism (Narzisi, 2020).

The present review assessed five studies relevant to the review question. Mixed results were found for the effectiveness of IY interventions for child behaviour. Limitations in comparison were discussed with reference to the study designs and statistical anal

Initial database searches produced 26 results. Before screening the titles of these results, seven duplicate studies were removed as were two studies for not meeting the inclusion criteria (see Table 2). When screening the abstracts of the now 17 studies, five were removed for not meeting the inclusion criteria. Following full-text screening, seven

| | | | |
|---|---|---|---|
| | outside school learning hours. | school learning hours. | looking at a parent-led intervention and therefore must be done outside of school learning hours. |
| 5. Intervention | The study uses an Incredible Years intervention. | The study does not use an Incredible Years intervention. | The current review aims to assess the effectiveness of |

Table 3

| Included Studies |
| --- |
| Hutchings, J., Pearson-Blunt, R., Pasteur, M. A., Healy, H., & Williams, M. E. (2016). A pilot trial of the Incredible Years® Autism Spectrum and Language Delays Programme. , (1), 15-22. |
| Dababnah, S., & Parish, S. L. (2016). Incredible years program tailored to parents of preschoolers with autism: Pilot results. , (4), 372-385. |
| Dababnah, S., Olson, E. M., & Nichols, H. M. (2019). Feasibility of the incredible years parent program for preschool children on the autism spectrum in two US sites. |

Table 4

| Study | Methodological Quality (WoE A) | Appropriateness of Design (WoE B) | Topic Relevance (WoE C) | Overall Weight of Evidence (WoE D) |
|---|---|---|---|---|
| Dababnah & Parish (2016b) | 2 (medium) | 1.5 (low) | 1.75 (medium) | 1.75 (medium) |
| Dababnah, Olsen & Nichols (2019) | 1 (low) | | | |
| Hutchings et al. (2016) | | | | |

subscales: Emotional problems, Peer problems, Hyperactivity, Conduct problems and Pro-social behaviour. The SDQ has been shown to have high reliability and convergent validity (Goodman, 2001; Hill & Hughes, 2007). Roberts and Pickering (2010) used the Eyberg Child Behaviour Inventory (ECBI) to measure the degree and frequency of problem behaviours which Gross et al., (2007) deemed to have strong reliability and validity. Furthermore, another child behaviour measure with high reliability and validity (Storch et al., 2006) was used by Williams, Hastings, and Hutchings (2020) who used the parent rated Child Behaviour Checklist (CBCL) (Achenbach & Rescorla, 2000). The CBCL contained two subscales: internalising problems and externalising problems, and an additional total score.

Dababnah and Parish's (2016b) study assessed indirect measures of child behaviour. The current review determines indirect measures as measures which are likely to have a direct impact on child behaviour without directly assessing that outcome. The indirect measure to child behaviour conducted by Dababnah and Parish (2016b) was parental stress. The Parenting Stress Index Fourth Edition

child behaviour with specific child behaviour scales there is significant relevance for the current review question.

Table 5 contains the descriptive statistics and effect sizes of the direct and indirect outcome measures. Table 6 contains the descriptors for the effect sizes as recorded by Cohen (1998). Dababnah and Parish (2016b) clearly reported the effect sizes of their study. Descriptive statistics were clearly presented for three studies (Dababnah, Olsen & Nichols, 2019; Hutchings et al., 2016; Williams, Hastings & Hutchings, 2020) and effect sizes were calculated for the current review. One of the studies (Roberts & Pickering, 2010) only reported the difference in means in their study and therefore no effect size could be calculated. The differences in ease of effect size calculations impacted the WoE A.

Hutchings et al. (2016) highlighted that the Strengths and Difficulties questionnaire identified significant differences between baseline and follow-up in child behaviour scores. These were seen in a decrease of peer problems and a significant improvement in pro-social skills. Although the other subscales showed no other significeen b5 eoE A.

Table 5

| Study | N | Overall Outcome Measure | Pre-Intervention Mean (SD) ll | Post |
|---|---|---|---|---|

Table 6

| Study | Outcome Measure | Subscale | Significance |
|---|---|---|---|
| Dababnah & Parish (2016b) | Parenting Stress Index Fourth Edition | Distractibility/Hyperactivity | $p < .03$ |
| | | Adaptability | $p < .02$ |
| | | Reinforces Parent | $p < .05$ |
| | | Mood | $p < .02$ |
| | | Acceptability | $p < .001$ |
| Dababnah, Olsen & Nichols (2019) | ABC | Irritability | $p = .004$ |
| | | Hyperactivity/Noncompliance | $p = .001$ |
| Hutchings et al. (2016) | SDQ | Peer Problems | $p = .035$ |
| | | Pro-Social Skills | $p = .020$ |

Table 7

| Effect Size | Descriptor |
|---|---|
| 0.8 | Large |
| 0.5 | Medium |
| 0.2 | Small |

# Conclusions and Recommendations

## *Summary of Findings*

The current review aimed to assess the effectiveness of Incredible Years interventions on child behaviour for young children with ASD. The included studies examined both direct and indirect measures of child behaviour and reported both significant and non-significant results. Three of the five included studies received a 'medium' overall WoE D rating, one study received a 'high' rating, and one study received a 'low' rating.

Mixed findings were reported for child behaviour. One study reported a large significant effect for the direct outcome of child behaviour with a decrease of peer problems and a significant improvement in pro-social skills (Hutchings et al., 2016). Two studies reported non-significant medium and small effects (Dababnah, Olsen & Nichols, 2019; Williams, Hastings & Hutchings, 2020). However, one found small to medium significant effects in the subscales of hyperactivity/noncompliance and irritability (Dababnah, Olsen & Nichols, 2019). Another study reported a large significant effect for an indirect measure of child behaviour – the child domain of the parent stress index with significant differences in four of the five subscales (Dababnah & Parish, 2016).

Taking together the evidence of topic and methodological relevance, methodological quality and statistical effect, it currently cannot be concluded that the IY intervention programmes are effective for young children with autism. Gersten et al. (2005) suggests that there must be at least two studies assessed with a 'high' rating for

of young children. , (4), 207. https://doi.org/10.3390/brainsci10040207

Nevill, R. E., Lecavalier, L., & Stratis, E. A. (2018). Meta-analysis of parent-mediated interventions for young children with autism spectrum disorder. , (2), 84-98. https://doi.org/10.1177/1362361316677838

O'Nions, E., Happé, F., Evers, K., Boonen, H., & Noens, I. (2018). How do parents manage irritability, challenging behaviour, non-compliance and anxiety in children with autism spectrum disorders? A meta-synthesis. , , 1272-1286. https://doi.org/10.1007/s10803-017-3361-4

Pennington, B. F., Rogers, S. J., Bennetto, L., Griffith, E. M., Reed, D. T., & Shyu, V. (1997). Validity tests of the executive dysfunction hypothesis of autism. [redacted]2A46435Tw 19CID(-)Tj 0.004 >>BDC 0 0.00

## *Appendix A: Excluded Studies*

Table 8

| Full Study Reference | Exclusion Criteria Code |
|---|---|

| | |
|---|---|
| of young children with autism on children's play and behaviour. | Not accessible. Only a PowerPoint was attached. |

## *WoE B – Appropriateness of the Study Design*

Table 12

| Criteria | Weighting | Rationale |
|---|---|---|
| A. | | |

Table 13

| Study | Criteria A | Criteria B | WoE B Rating |
|---|---|---|---|
| Dababnah & Parish (2016b) | 1 | 2 | 1.5 (low) |
| Dababnah, Olsen & Nichols (2019) | 1 | 2 | 1.5 (low) |
| Hutchings et al. (2016) | 1 | 3 | 2 (medium) |
| Roberts & Pickering (2010) | 1 | 3 | 2 (medium) |
| Williams, Hastings & Hutchings (2020) | 3 | 2 | 2.5 (high) |

Weight of Ev

D. Outcome Measure

Table 15

| Study | Criteria A Rating | Criteria B Rating | Criteria C Rating | Criteria D Rating | Overall WoE C Rating |
|---|---|---|---|---|---|

# Appendix D: Example Coding Protocols

Coding protocol: Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C. & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. , 71 , 149-164. doi:10.1177/001440290507100202

Name of coder: Abigail Tutton Date: 05.02.2022

Full study reference: Dababnah, S., & Parish, S. L. (2016b). Incredible years program tailored to parents of preschoolers with autism: Pilot results. , (4), 372-385. https://doi.org/10.1177/1049731514558004

Research design: Quasi -experimental

Type of publication: Journal article

Essential Quality Indicators

***Describing Participants***

Was sufficient information provided to determine/confirm whether the participants demonstrated the disability(ies) or difficulties presented?

Yes

No

_____

N/A

Unknown/Unable to Code

Were appropriate procedures used to increase the likelihood that relevant characteristics of participants in the sample were comparable across conditions?

Yes

No

N/A

Unknown/Unable to Code

Was sufficient information given characterizing the interventionists or teachers provided? Did it indicate whether they were comparable across conditions?

Yes

No

N/A

Unknown/Unable to Code

***Implementation of the Intervention and Description of Comparison Conditions***

Was the intervention clearly described and specified?

Yes
No
N/A

Unknown/Unable to Code

Was the fidelity of implementation described and assessed?

Yes
No
N/A

Unknown/Unable to Code

Was the nature of services provided in comparison conditions described?

Yes
No
N/A

Unknown/Unable to Code

***Outcome Measures***

Were multiple measures used to provide an appropriate balance between measures closely aligned with the intervention and measures of generalised performance?

Yes
No

N/A
Unknown/Unable to Code

Were outcomes for capturing the intervention's effect measured at the appropriate times?

Yes
No

N/A
Unknown/Unable to Code

***Data Analysis***

Were the data analysis techniques appropriately linked to key research questions and hypotheses? Were they appropriately linked to the unit of analysis in the study?

Yes
No

N/A
Unknown/Unable to Code

Did the research report include not only inferential statistics but also effect size calculations?

Yes
No

N/A
Unknown/Unable to Code

***Desirable Quality Indicators***

Was data available on attrition rates among intervention samples? Was severe overall attrition documented?

Yes
No

N/A
Unknown/Unable to Code

Did the study provide not only internal consistency reliability but also test-retest reliability and inter-rater reliability (when appropriate) for outcome me1 (r)2007 Tw 0.2Mappropriate)

Did the study provide not only internal consistency reliability but also test m

Yes
No

N/A
Unknown/Unable to Code

Was evidence of the criterion-related validity and construct validity of the measures provided?
Yes

No
N/A
Unknown/Unable to Code

Did the research team assess not only surface features of fidelity implementation (e.g. number of minutes allocated to the intervention or teacher/interventionist following procedures specified), but also examine quality of implementation?
Yes

No
N/A
Unknown/Unable to Code

Was the nature of instruction or series documented in the comparison conditions?

Yes
No
N/A

Did the research report include actual audio or videotape excerpts that capture the nature of the intervention?
Yes
No

Unknown/Unable to Code

Were results presented in a clear, coherent fashion?

Yes
No
N/A

Quality Indicators

Essential Quality Indicators = 5. Desirable Quality Indicators = 2

Total Indicators = 7