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**Notes** 

This is a brief overview of information about 'Treatment and Education of Autistic and related Communication-handicapped Children' (TEACCH) interventions, taken from the Autism CRC report, Interventions for children on the autism spectrum: A synthesis of research evidence (Autism Interventions Evidence Report).

There are seven other category overviews available designed to help people learn about different interventions and their research evidence. To understand the information in its full context, we encourage you to access the full report.

# Why are TEACCH interventions supposed to support children's development?

TEACCH is a program based on structured teaching, which places an emphasis on adapting tasks and environments to support a child's independence, learning and participation. It has been used predominantly in classrooms but may also be used in home or community settings.

TEACCH is based on a proposed profile of the strengths, preferences, and needs of children on the autism spectrum, including a desire for routine, relative strength in processing visual information, heightened attention to detail, and strong sensory preferences and aversions. Collectively, TEACCH describes this profile as the culture of autism ( $\underline{note\ 1}$ ), and seeks to adapt the learning environment to enhance learning opportunities.

## How are these interventions used in clinical practice?

The TEACCH program was developed in North Carolina (USA) and involves both a clinical service and professional training program ( $\underline{\text{note 1}}$ ). Classrooms are organised to create structure and predictability through four key components:

- arranging the physical environment to minimise sensory distractions, and to create clearlydefined spaces,
- visual schedules to enhance predictability,
- work systems to inform the child about "what to do", "how long for", "when the task is finished", and "what happens next", and
- visual structure to enhance clarity.

Although the TEACCH program is based in the USA, structured teaching as a practice and constituent techniques (eg. visual schedules) are widely adopted across international educational and clinical settings (note 1).

## What are the principles that underpin the use of behavioural interventions?

Four essential mechanisms have been described for TEACCH (note 1):

- Structuring the environment and activities in ways that are understandable to the individual.
- Using individuals' (proposed) relative strengths in visual processing and interest in visual details to supplement other areas of relatively weaker skills.
- Using individuals' special interests to engage them in learning.
- Supporting self-initiated use of meaningful communication.

#### Who delivers these interventions?

Children on the autism spectrum often have needs across multiple domains of learning, and physical and mental health. Accordingly, children and families may benefit from the expertise of a range of clinical practitioners spanning health, education and medical disciplines.

For all intervention categories, it is essential that clinical practitioners have acquired appropriate qualifications, are regulated (eg. by a professional or government body), and deliver interventions that are within their scope of practice. A detailed explanation is provided in the full report.

# What is the evidence for the effect of TEACCH interventions on child and family outcomes?

Below is a summary of the evidence for the effect of TEACCH interventions on child and family outcomes, taken from systematic reviews published since 2010. This means that a range of relevant individual studies have been considered, and thus reflects the best available evidence at this point in time.

Listed first are findings from systematic reviews that considered a mixture of TEACCH interventions. Following that are findings relating to specific TEACCH intervention practices.

### **Summary of evidence tables**

- Each cell represents evidence for the intervention category or practice (horizontal rows) on various child and family outcomes (vertical columns).
- The effect of these interventions on a range of child and family outcomes is summarised as positive, null, or mixed.
  - + means that all available evidence indicated a positive effect of the intervention on a given child or family outcome.
  - ? means that there was a mixture of positive and null effects reported for the intervention on a given child or family outcome.
  - 0 means that all available evidence indicated a null effect of the intervention on a given child or family outcome.
- H / M / L indicates the methodological quality of the evidence that contributed to the overall
  intervention effect for a given child or family outcome. The quality of evidence on which these
  findings are based is summarised as high, moderate, or low. These quality ratings are relative
  to those that met the minimum standards to be included in the report. Where there is more
  than one quality rating, it means more than one systematic review is represented.
  - H indicates evidence from a high quality review
  - o **M** indicates evidence from a moderate quality review
  - L indicates evidence from a low quality review
- Where a cell is empty, it means there was no evidence available from the systematic reviews included in the report.

Please refer to the <u>full report</u> for a detailed explanation of the process used to collect, summarise, and synthesise the evidence presented here.

#### Core autism characteristics

Interventions	No. of systemic reviews	Overall autistic characteristics	Social- communication	Restricted and repetitive interests and behaviours	Sensory behaviours
Systematic review of TEACCH*	1		0 M		

Interventions	No. ofsystemic reviews	Overallautistic characteristics	Social- communication	Restricted and repetitive interests and behaviours	Sensory behaviours
Structured teaching	1				

## Related skills and development

Interventio	No. of Cor Bystemic reviews	mmunicat	<b>Exp</b> ressive language	Receptive language	Cognition	Motor	Social- emotional challengine behaviour	Play g	Adaptive behaviour	
Systematic review of TEACCH*	1									
Structured teaching	1									? L

## **Education and participation**

Interventions	No. of systemic reviews	School/ learning readiness	Academic skills	Quality of life	Community participation
Systematic review of TEACCH*	1				
Structured teaching	1				

## Family wellbeing

Interventions	No. of systemic reviews	Caregiver communication and interaction strategies	Caregiver social emotional wellbeing	Caregiver satisfaction	Caregiver financial wellbeing	Child satisfaction
Systematic review of TEACCH*	1					
Structured teaching	1					

<sup>\*</sup>Practices included in systematic reviews of assorted TEACCH interventions

View the full evidence table for all intervention categories

## Full reference of report

Whitehouse, A., Varcin, K., Waddington, H., Sulek, R., Bent, C., Ashburner, J., Eapen, V., Goodall, E., Hudry, K., Roberts, J., Silove, N., Trembath, D. Interventions for children on the autism spectrum: A synthesis of research evidence. Autism CRC, Brisbane, 2020

## Intervention category overviews

- Behavioural interventions
- Developmental interventions
- Naturalistic developmental behavioural interventions
- Sensory-based interventions
- Technology-based interventions
- Animal-assisted interventions
- Cognitive behaviour therapy
- <u>Treatment and Education of Autistic and related Communication-handicapped Children</u> (TEACCH) interventions

#### **Notes**

1. Mesibov, G. B., & Shea, V. (2010). The TEACCH program in the era of evidence-based practice. *Journal of Autism and Developmental Disorders*, 40(5), 570-579. doi:10.1007/s10803-009-0901-6

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