DD 9



#### Touch therapy reduces symptoms in preschool children with autism

**CITATION:** Field, T., Lasko, D., Mundy, P., Henteleff, T., Kabat, S., Talpins, S., and Dowling, M. (1997). Brief report: Autistic children's attentiveness and responsivity improve after touch therapy. *Journal of Autism and Developmental Disorders, 2* (3), 333–338.

#### LEVEL OF EVIDENCE: IB2a

#### **RESEARCH OBJECTIVE/QUESTION**

To investigate the effects of touch therapy on inattentiveness (off-task behavior), touch aversion, and withdrawal.

#### DESIGN

Х	RCT	Single Case	Case Control
	Cohort	Before-After	Cross Sectional

#### SAMPLING PROCEDURE

Х	Random	Consecutive
	Controlled	Convenience

The procedure was not specified. The subjects attended a special preschool program half days for 2 years and had been diagnosed with autism by two independent clinicians.

Subjects were randomly assigned to a touch therapy or a touch control group based on a stratification procedure to ensure equivalence between groups.

#### SAMPLE

N=22	M age=4.5	Male=12	Ethnicity=not	Female=12
	years		specified	

## **PARTICIPANT CHARACTERISTICS**

Not reported

MEDICAL DIAGNOSIS/CLINICAL DISORDER Autism

#### **OT TREATMENT DIAGNOSIS**

N/A

### OUTCOMES

Outcome areas: touch aversion, attentiveness, withdrawal (performance components/impairment)

Measures	Reliability	Validity
Observation in classroom	Prior to the start of the	Prior to the start of the
for 30 minutes for touch	study, the observers had	study, the observers
aversion, off-task behavior,	a .90 interobserver	had a .90 interobserver
orienting to irrelevant	reliability; interobserver	reliability; interobserver
sounds, and stereotypic	reliability was assessed	reliability was
behaviors	on 30% of the	assessed on 30% of
	observations.	the observations.
Autism Behavior Checklist	Prior to the start of the	Prior to the start of the
(ABC) (teacher	study, the observers had	study, the observers
observations)	a .90 interobserver	had a .90 interobserver
	reliability; interobserver	reliability; interobserver
	reliability was assessed	reliability was
	on 30% of the	assessed on 30% of
	observations.	the observations.
Early Social Communication	Prior to the start of the	Prior to the start of the
Scales (ESCS)	study, the observers had	study, the observers
	a .90 interobserver	had a .90 interobserver
	reliability; interobserver	reliability; interobserver
	reliability was assessed	reliability was
	on 30% of the	assessed on 30% of
	observations.	the observations.

Frequency of Outcome Measures: measures were taken pre- and postintervention.

# Outcome—OT terminology

Performance components

Outcome—ICIDH-2 terminology Impairment

**INTERVENTION** 

### Description

The subjects in the touch therapy group were fully clothed except for the removal of shoes and socks. The entire body was massaged using a specific protocol. Moderate pressure and smooth stroking movements were used to the head and neck, arms and hands, torso and legs and feet. The subjects in the control group sat on a volunteer's lap with her arms around the child while playing a game. Intervention focus: performance component/impairment.

### Who delivered

A student volunteer was used for both groups

Setting Special preschool class

### Frequency

15 minutes per day, 2 days per week (8 sessions total)

#### Duration

4 weeks

### Follow-up

Not reported

## RESULTS

Repeated measures MANOVAs were conducted on the classroom behavior observation variables, ABC scores, and ESCS scores. Statistically significant MANOVAs were followed by ANOVAs, and the interaction effects were tested by Bonferroni *t* tests. Observations

Touch aversion decreased in both groups (F [1,20]=5.39, p <.05).

Off-task behavior decreased in both groups (F [1,20]=7.18, p <.05).

Orienting to irrelevant sounds decreased in both groups, but significantly more in the touch therapy group (F [1,20=6.24, p <.05).

Stereotypic behaviors decreased in both groups, but significantly more in the touch therapy group (F [1,20]=8.13, p <.01).

## Autism Behavior Checklist

Subjects in the touch therapy group showed significant improvement in the following scales whereas the control did not show any significant changes

Sensory scale: F (1,20)=7.39, p< .05

Relating scale: F (1,20)=4.91, p < .05

Total scale: F (1,20)=5.11, p <.05

Early Social Communication Scales:

Subjects in the touch therapy group showed significant changes while the control did not show significant changes:

Joint attention: F (1,20)=5.16, p < .05

Behavior regulation: F (1,20)=9.19, p < .01

Social behavior: F (1,20)=4.38, p < .05 Initiating behavior: F (1,20)=9.51, p < .01

# CONCLUSIONS

- Both groups improved on some behaviors, especially touch aversion and off-task behavior. The authors suggested that this finding is not surprising given that both groups received additional one-on-one attention and physical contact from an adult.
- The more active physical contact and relaxation involved in touch therapy may have contributed to the gains in the touch therapy group.
- The increased attentiveness could be related to enhanced vagal activity that occurs during touch therapy.

# LIMITATIONS

Biases

Attention	Х	Masking/blinding	Drop outs
Contamination		Co-intervention	

- Although the student raters were blind to the children's group assignment, it was not clear whether the teachers, who rated the children on the ABC, were aware of the group assignments.
- DSM III R was used to diagnose autism.
- Recruitment and selection of subjects/selection is unclear.
- Training and reliability of researchers performing treatment not stated
- The amount of treatment touch pressure through the children's clothes is not stated or replicable.
- Both the control and treatment groups improved; a third group is needed to control for the Hawthorne effect.
- Terminology used in this document is based on two systems of classification current at the time the evidence-based literature reviews were completed: Uniform Terminology for Occupational Therapy Practice—Third Edition (AOTA, 1994) and International Classification of Functioning, Disability and Health (ICIDH-2) (World Health Organization [WHO], 1999). More recently, the Uniform Terminology document was replaced by Occupational Therapy Practice Framework: Domain and Process (AOTA, 2002), and modifications to ICIDH-2 were finalized in the International Classification of Functioning, Disability and Health (WHO, 2001).

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For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, x 2040.

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