

**TFT reduces stress and
increases empathy in parents of
children with ASD**

Hadas Keppel, PhD
ACEP international conference, 2022

Autism Spectrum Disorder (ASD)

- a neurodevelopmental disorder, characterized by **impairments in social interaction and communication** across contexts, and **repetitive and restricted motor or verbal behaviors**.
- ASD affects the child's **development, learning, relationships** and consequently the child's and family's well being
- 1:44 children (CDC, 2021).

Stress

Experiencing one's environment as taxing or exceeding resources for coping (Lazarus, 1966).

- ✓ **Parenting stress** stems from varied sources.
- ✓ **General stress** is rarely measured in P-ASD.

Negative impact on:

- Immunity and health (Godbout & Glaser, 2006),
- Cognitive functioning (Friedel et al., 2017; Reyes et al., 2015)
- Relationships (Coyle et al., 2002; Randall & Bodenmann, 2009).

Parents of children with ASD experience higher levels of stress (Dabrowska & Pisula, 2010; Hayes & Watson, 2013; Zablotzky et al., 2013).

Stress management is recommended as part of a comprehensive intervention (Lindo et al., 2016; Osborne & Reed, 2010)

Empathy

The ability to share another person's internal world of thoughts and feelings (T. Singer, 2006; Walter, 2012).

- ✓ Affective (“feeling the other’s feelings”) and **cognitive** (“understanding the other’s feelings”) components overlap and interact.
- ✓ **Perspective taking** is a cognitive component of empathy (Davis, 1980).
- ✓ **The current research is the first to study the effect of TFT on cognitive empathy** (Perspective taking)

Limited studies on the **relationship between stress reduction and empathy**

Thought Field Therapy (TFT)

- An energy psychology method, developed by Dr. Roger Callahan.
- Integrates ideas and findings from the fields of psychology, applied kinesiology, quantum physics, and Eastern understanding of the mind-body energy system
- Combines cognition and somatics.

RESEARCH QUESTIONS

1. How does applying a stress reduction TFT protocol vs. a Control-stimulation sequence, impact the stress and empathy levels of P-ASD over time?
2. Does stress reduction mediate the effect of the TFT interventions on empathy?

METHODOLOGY

Mixed-Method design: 2 treatments (TFT vs. Control-stimulation), 3 measuring times.

Inclusion criteria: P-ASD, child w/ASD ≤ 12 y, One parent per household, No pregnancy or cancer, access to relevant technology.

Participants from Israel (May 2020-August 2020) and the USA (Sept 2020 – December 2020). Completed: January 15, 2021 (n = 35 from Israel, n = 28 from USA-group, Total N = 63)

Recruitment: Social media, local and national ASD organization (Israel). Rolling enrollment

Random assignment to treatments (TFT: n = 31, Control-stimulation: n = 32, Total N = 63).

MEASURES

Demographic questionnaire (T1)

Perceived Stress Scale (PSS, **General Stress**) (Cohen et al., 1983) (T1, T2, T3).
10 items.

Parenting Stress Index (PSI-SF/3e) (Abidin, 1995) (T1, T2, T3). 36 items.
Scales: Parental Distress, Difficult Child, Parent-Child Dysfunctional Interaction, Total, [Defensive scale].

Interpersonal Reactivity Index (IRI) (Davis, 1980) (T1, T2, T3). 7 items, 4 scales:
Perspective taking, Fantasy scale, Emotional concern, Personal distress.

Post (T2, 11 items) and **Follow-up** (T3, 12 items) questionnaires. What did you tap on? Subjective changes in your life? Did you search up the protocol?

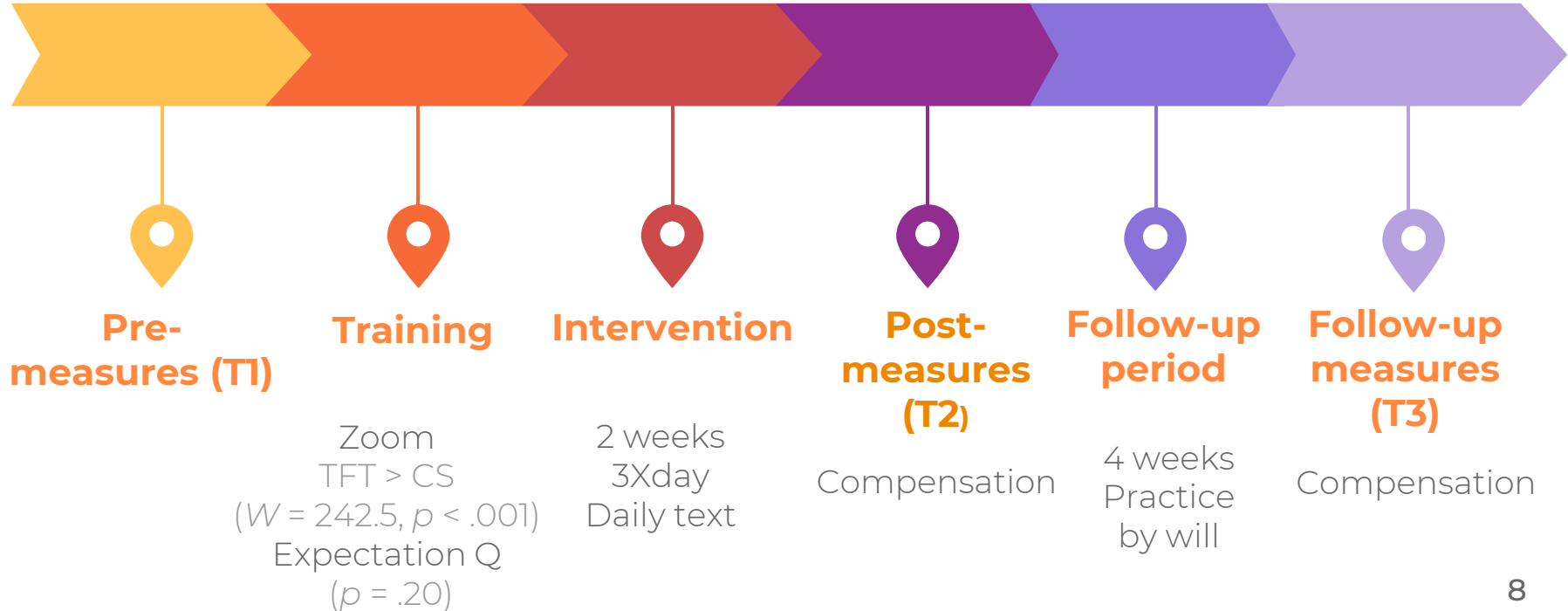
INTERVENTION: Protocols

TFT : Protocols for: PR; basic recipe (**anxiety**); **anger/rage**; **embarrassment, shame and guilt**; **sadness**; 9-gamut; repeat from basic recipe; floor to ceiling eye-roll

Control-stimulation: *open hand*. Think about stressor (**anxiety**); **anger/rage**; **embarrassment, shame, guilt**; **sadness** while tapping “unrelated” areas (cheeks, under chin, forearms, thighs, inner elbow). Sing a song; repeat; namaste

- Apply the protocol three times daily until the SUD (subjective unit of distress) is 0, or up to 5 minutes.
- **Illustrations**
- **Video demonstration (YouTube)**
- **Journals, list of stressors**

DESIGN



RESULTS

Reliability of measures (internal consistency):

- High: PSS, PSI/SF3e (T1, T2, T3, $\alpha > .80$), Perspective Taking (T2, T3 $\alpha = .83$)
 - Acceptable: IRI-Perspective Taking (T1 $\alpha = .76$)
-

Groups were comparable at T1

No significant difference on:

- PSS (general stress), PSI (parenting stress), IRI-PT (empathy) at T1 (all $p > .30$)
 - MH diagnosis variable at T1, T2, T3 (all $p > .29$)
 - “Total practice” variable at T2, T3 (all $p > .48$)
-

The effects of TFT vs. a Control-stimulation sequence on stress and empathy levels, Post intervention (T2)

Multiple Linear Regression or a Robust regression analysis

Model 1: Predicting scores at T2 from scores at T1 and intervention condition

Model 2: + nationality Model 3: + current MH status Model 4: + Total Practice

Model 5: Interaction MH-status and intervention condition

Criterion Predictor	General stress	Parenting stress	Perspective taking
Scores at T1	B=0.63 (SE=0.11) <i>p</i> < .001	B=0.79 (SE=0.06) <i>p</i> < .001	B=0.93 (SE=0.08) <i>p</i> < .001
Intervention (TFT=1; Control=0)	-2.98 (1.21) <i>p</i> = .017	-1.93 (2.78) <i>p</i> = .49	2.10 (0.83) <i>p</i> = .014
% Explained variance (Adjusted R2)	39.4%	70%	68.8%
	General stress scores decreased (all <i>p</i> < .02)	Parenting stress not affected by treatment (all <i>p</i> > .21)	Perspective taking scores increased by 2.1 points (all <i>p</i> < .014)

Why wasn't parenting stress affected post-intervention?

Parents chose to tap on general stressors

Parents thought of children with ASD. Were they the source of stress?

- COVID-19, ASD learned in-person

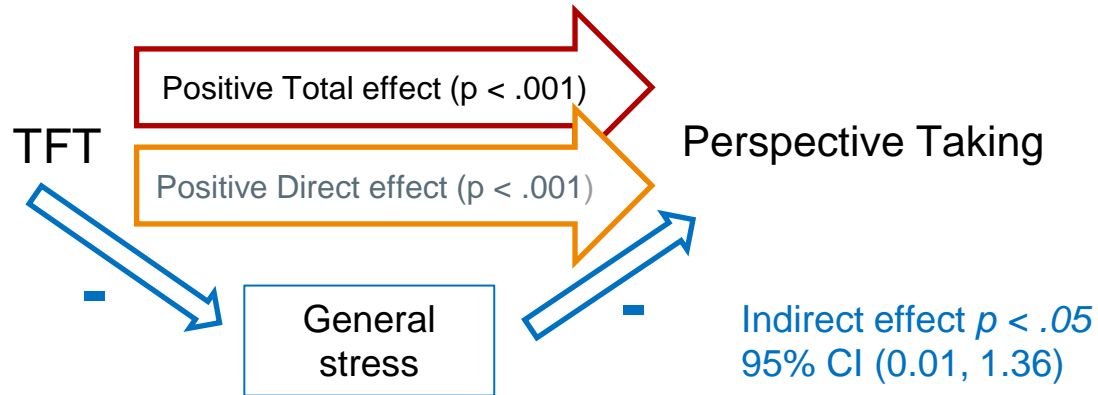
The efficacy of TFT as a single intervention for parenting stress

- Taught as palliative care

Does stress reduction mediate the effect of the interventions on empathy?

The effect of TFT on Perspective Taking scores at T2, with general stress (PSS) scores at T2 as the mediator.

Covariates: PSS scores at T1, IRI-PT scores at T1, and “Total Practice”



Partial mediation: Perspective taking increases with increased emotional regulation (Decety, 2011; Decety & Jackson, 2006; Eisenberg, 2000).

Emotion regulation is also a cognitive ability that supports empathy.

The effects of TFT vs. a Control-stimulation sequence on stress and empathy levels, at follow-up (T3)

Multiple Linear Regression or a Robust regression analysis

Model 1: Predicting scores at T2 from scores at T1 and intervention condition

Model 2: + nationality **Model 3:** + current MH status **Model 4:** + Total Practice

Model 5: Interaction MH-status and intervention condition

Model 6: interaction between Total Practice and intervention

STRESS: No difference between the groups on general stress (PSS) and most parenting stress scales (Total, Personal Distress, Difficult Child) (all $p > .17$). No other main effect or interaction was identified ($p > .19$).

- **PSI-Parent Child Dysfunctional Interaction-** Stress scores increased for TFT group ($p = .044$)
Model 1 explained 58.6% of the variability. No other main effect or interaction was identified (all $p > .20$). *Did decreased general stress highlight this pre-existing concern?*

PERSPECTIVE TAKING: No difference between TFT and Control-stimulation.

CONCLUSION 01

TFT was effective in **reducing general stress and increasing perspective taking** following a 2-week intervention period.

CONCLUSION 02

The effect of the intervention was not affected by participants' nationality or mental health status.

CONCLUSION 03

Long lasting effects of the TFT intervention. At follow-up, the average general stress scores did not increase; and the average PT did not increase compared to levels pre-intervention.

CONCLUSION 04

General stress was a **partial mediator** to the effect of TFT on perspective taking.



Thank you!

Questions?

[Link to full dissertation](#)

Hadaskeppel.mft@gmail.com