

# 14th European Conference on Tourette Syndrome & Tic Disorders

## LAUSANNE, SWITZERLAND 9-11 JUNE 2022

Behavioural Therapy for **beginner** participants

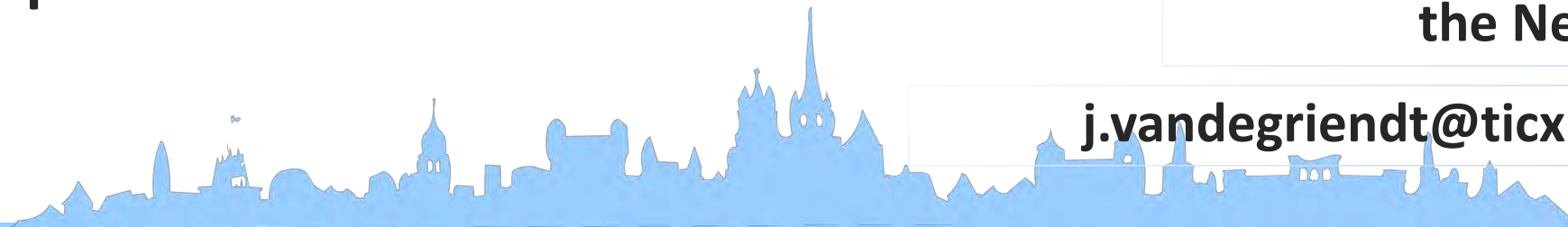
Thursday 9 June 2022, 10:00-13:00

**Tic treatment – Learn how to become a tic therapist or enhance your skills**

**Function based interventions**  
**Relapse prevention**

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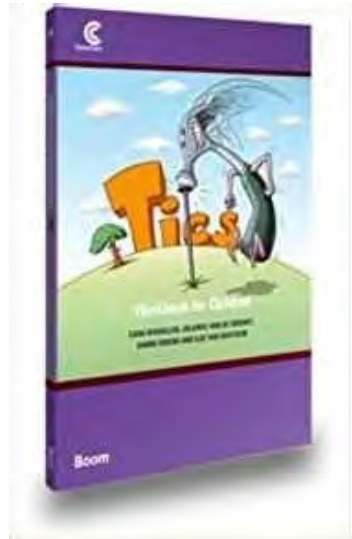
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# Function-Based Interventions

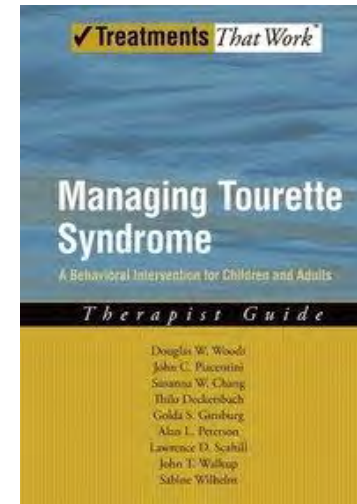
- Environmental events that exacerbate or maintaining tics.
- These events are then changed to facilitate tic reduction.

# Function based interventions

## Add on intervention



## Integrated in CBIT

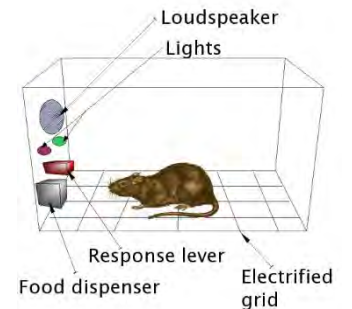


**Back to basics....**

**Hardcore behaviour therapy** 😊

# Operant conditioning (instrumental learning)

- **Operant conditioning** (also called **instrumental conditioning**) is a learning process through which the strength of a behavior is modified by reinforcement or punishment.
- First extensively studied by [Edward L. Thorndike](#) (1874–1949), who observed the behavior of cats trying to escape from home-made puzzle boxes.
- [B.F. Skinner](#) (1904–1990) is referred to as the father of operant conditioning, using an operant conditioning chamber (“Skinner Box”)



# Operant conditioning

SD:                      Response                      →                      Consequence

- SD = discriminative stimulus
- R = Response = behaviour of the subject
- C = Consequence = what happens to the subject AFTER the response

# Functional Analysis

## FA:

Sd: R (Response) → Sr (Consequence)  
(Discriminative stimulus)

Doing dishes: Tics increase → Short term:  
- don't have to finish dishes  
- mother gives me a massage  
- brother mad at me cause he has to finish dishes  
Long term:  
- tics will worsen

# Function-based interventions

Woods et al., 2008; Verdellen et al., 2011

- **Step 1: Functional assessment**
- **Step 2: Developing interventions**
- **Step 3: Develop plan for implementation**



# **STEP 1**

## **Functional Assessment**

# Antecedents / SD

Sd :

R (Response) →

Sr (Consequence)

- Internal antecedents:

- Anxiety
- Excitement
- Anger
- Anticipation

- External antecedents

- Specific situations
- Specific activities

Woods et al, 2008

- [illegible]

## R (Response)

Sd :

R (Response) → Sr (Consequence)

- R is often an increase of symptoms:
  - More tics
  - More severe tics

# Sr (Consequences)

Sd :

R (Response) →

Sr (Consequence)

Often (Woods et al, 2008):

- Social Attention
- Escape from difficult situations

## Woods et al., 2008

- Social attention

- Someone tells the patient to stop tics
- Someone leaves the area
- Someone comforts patient
- Someone laughs at or with patient
- Someone expresses annoyance with patient
- Patient is asked to leave the area

- Escape from difficult situation

- Patient doesn't complete activity or tasks  
e.g. meal, homework, school tasks, chores
- Patient spends time doing pleasurable things  
e.g. stay up later, get a massage
- Patient gets help with required activities
- Patient doesn't have to do required activities

[illegible]

# Self-report form (Verdellen et al., 2011)

130

© BT-Tics 2016

Additional help for remaining tics

Day - moment	Situation • What is happening? • Where are you? • What are you doing? • Who else is there?	Feelings? • How do you feel? Angry, scared, happy or maybe sad?	Result? • What reaction follows the tics? • What do others do? • What are you doing?

Appendix 4.1 Getting an overview of tic situations

## **STEP 2**

# **Develop Interventions**



# Interventions on situations

- Minimize or eliminate situations when possible
- If situations cannot be eliminated: what strategies help to relieve tics in these situations
- Examples (Woods et al., 2008):

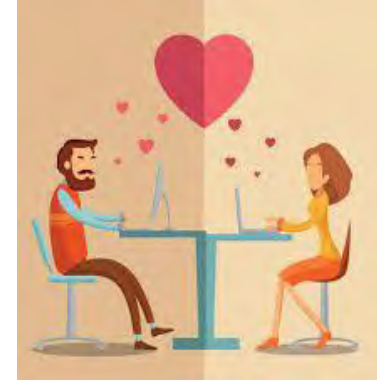


- **Classroom Tics**
  - Child should be seated in location that diminishes noticeability of tics
- **After School Tics**
  - Provide child 15 min of free time after school before making any requests; after 15 min child should return to family living area; exercise
- **Bedtime Tics**
  - Relaxation practice 15 min before bed
  - Establish a specific bedtime routine

# Interventions on situations

## ➤ **During dating**

- Discuss tics at an early stage
- Avoid tic-eliciting activities just before the date
- Model ignoring tics
- Be careful with alcohol



## ➤ **Finding a job**

- Think about whether you mention Tourette in your application
- Practice interviews so you feel more secure
- Arrive early to avoid stress on the way

## ➤ **(Public) Transport**

- Schedule transport during time of day when it is less crowded
- Seat child in a place where tics will cause the least safety risks
- Travel together with people you feel comfortable with
- Use a Tourette's pass



# Interventions on Consequences

## **Social attention:**

Parents/siblings/teachers/peers/coaches/spouses should...

- No longer tell the patient to stop the target tic
- No longer comfort the patient when target tic occurs
- No longer laugh at the patient when target tic occurs
- Provide specific instructions to peers not to react to the tics
- Educate peers, teachers and relatives about the child's condition

# Interventions on Consequences

## Escape items:

- The patient should not be encouraged to leave the room for mild tics
- Child must begin homework after 30 min at home, should work until finished
- Parents/spouse should prompt the use of behaviour therapy
- The child should not be sent from the table
- Practice tic management strategies
- Child must not be allowed to come out of the room after assigned bedtime

## **STEP 3**

**Develop plan for  
implementation**

## Develop Plan for Implementation

- Do functional assessment and develop a function-based treatment plan for a new tic each week.
- Discuss with the parents how the intervention would be implemented for the patient's particular situations.
- Training necessary to implement the intervention.

## Function-Based Interventions Form

Date Developed:  Date Implemented:

Target Tic:

List specific plausible strategies that can prevent the antecedent situations from occurring or prevent you from encountering them.

1.

2.

3.

4.

List specific strategies that could make a situation less likely to worsen tics if the situation cannot be prevented.

1.

2.

3.

4.

List ways in which consequences for this tic can be avoided or changed.

1.

2.

3.

4.

# Relaxation Training (RT)

- Increase in stress lead to increases in tics and vice versa
- Intervention: Deep breathing, progressive muscle training, imagery
- 8 case studies (N=1 to N=6): Mostly modest, short-lived improvement but Peterson et al (2021) found no significant change until relaxation was combined with CBITs.
- 2 studies examined RT as a mono-component treatment under controlled conditions:
  - RT (32%) < SM (44%) < HRT (55%) (N=6; Peterson & Azrin, 1992)
  - RT = Minimal therapy (N=23; Bergin et al., 1998)
- Conclusion: RT is not evidence based for tics, although it can be of some importance in the short term



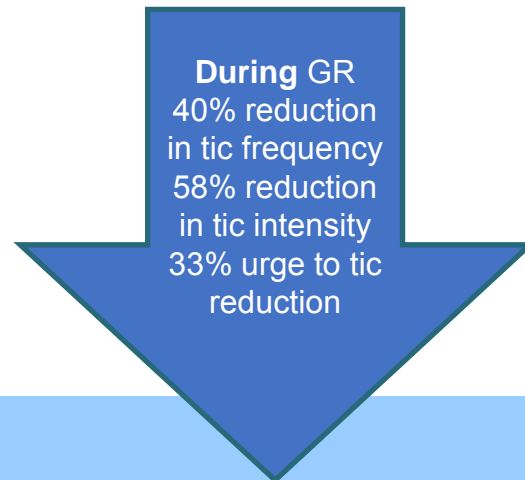
# At ease with your tics: A Guided Relaxation

(Anderson, Murphy, van de Griendt, Verdellen & Murray, 2019)

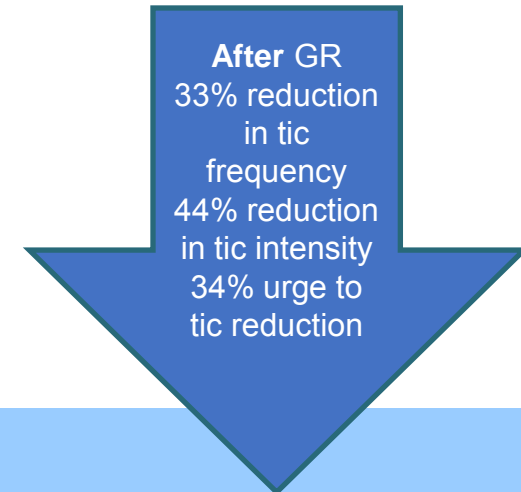
- 'Mindful movement' to allow individuals who would struggle to sit still to complete standard mindfulness practices
- Participants can stay with their urges, tolerating them similar to therapy.

254 relaxations were downloaded between Match 2018-19 & 42 people completed the feedback survey

## During relaxation



## After Relaxation



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# At ease with your tics: A Guided Relaxation

(Anderson, Murphy, van de Griendt, Verdellen & Murray, 2019)

## Conclusions

- 68% were very or somewhat satisfied with GR.
- 48% used words or phrases from GR ('calm and relaxed')
- 76% said they would recommend GR to help with tic symptoms
- GR associated with a decrease in intensity of tics
- Planning a larger trial to evaluate the intervention
- Planning to make an adapted version for children
- <https://www.tourettes-action.org.uk/51-shop.html>



# Relapse management

## ➤ Keep-the-tics-away-plan

- In what situations could tics come up again?
- What signs are there that tics may be coming back?
- What are you going to do if this happens\*
- Who are you going to ask to help you?
- At what point you will get back into contact with your therapist?

## ➤ Examples

- Look back over notes / manual
- New tics/ increase of tics: keep a list
- HRT: Train awareness twice a week 20 minutes
- Restart daily practice of HRT
- Make an appointment if professional help is necessary



## Symptoms/ Alarmsbells:

- More tics
- More severe tics
- Headache
- Getting irritated by tics
- Tiredness

## Risk situations:

- When I'm enthusiastic
- When I'm stressed
- During holidays/ festivities

## What can I do about it/ how can I prevent it?

- Take a moment of relaxation
- Cuddle with my dog
- Practicing response prevention
- Making it more difficult for myself:
  - Focus on my tic alerts
  - Talk about tics
  - Doing half of a tic and then stop
  - Looking in the mirror
  - Practice with BT-Coach app
- Chat with friends

*Who can help me?*

- I CAN!
- My mom & dad
- My therapist
- My teacher
- My dog



## Take home Messages

Now you know:

- How operant conditioning can play a role in tic disorders
- What common antecedents are that can increase tics
- What common consequences are that can increase tics
- And how to intervene with Function Based Interventions
- A bit about relaxation and relapse prevention

Questions?

**Ready to get started next Monday morning??**

**Questions?!?**



**Thank you for your attention!**