Practical Functional Assessment
Producing Meaningful Improvements in Problem Behavior of Children with Autism

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www.practicalfunctionalassessment.com
freedom from these behaviors for persons with Autism and their caregivers is attainable
Fact:
With Autism, there is a higher likelihood of problem behavior

- Meltdowns
- Aggression
- Self-injury

References: Baghdadli, Pascal, Grisi, & Aussilloux, 2003; Horner et al., 2002; Kim et al., 2000; Murphy, Healy, & Leader, 2009; Thompson, 2009
Fact:

Problem behavior has led to a highly restrictive life style for many persons with autism and their families.
This lifestyle develops partly because problem behavior of children with autism is merely modified, medicated, or mollified rather than understood with treatments developed based on that understanding.
To understand

behavior analysts conduct functional assessments

to determine the personally relevant outcomes and context that influence problem behavior
Functional Assessment Process

Indirect Assessment
- interviews

Descriptive Assessment
- observations

Functional Analysis
- observations with manipulation

Fundamental Assumption:
If problem behavior is occurring with regularity, it is being reinforced.
A distinction of importance:

Proven efficacy
but of questionable effectiveness

Approaching effectiveness now....
The Generality of Interview-Informed Functional Analyses: Systematic Replications in School and Home

Joana L. Santiago¹ · Gregory P. Hanley²,³ · Keira Moore⁴,⁵ · C. Sandy Jin⁴,⁶
Case Example (Gail, 3 yo, dx: PDD-NOS)
Setting: Outpatient Clinic

Interview suggested that Gail engaged in meltdowns and aggression....
Interview suggested that Gail engaged in meltdowns and aggression....

When Mom was attending to other tasks or siblings....
Interview suggested that Gail engaged in meltdowns and aggression....

when Mom was attending to other tasks or siblings....

in order to gain Mom’s undivided attention and to have Mom play with her and her most preferred toys.

Case Example (Gail, 3 yo, dx: PDD-NOS)
Setting: Clinic
Test: Mom attends to other tasks and people....

As soon as Gail engaged in any problem behavior, Mom directs her undivided attention to Gail while interacting with her and her most preferred toys.
Test: Mom attends to other tasks and people....

As soon as Gail engaged in any problem behavior, Mom directs her undivided attention to Gail while interacting with her and her most preferred toys.
Control: *Mom directs her undivided attention to Gail while interacting with her and her most preferred toys the entire time.*
**Control:** Mom directs her undivided attention to Gail while interacting with her and her most preferred toys the entire time.
By alternating between 5 minute periods of test and control conditions, we were able to turn on and off Gail’s problem behavior....

Giving us and her Mom confidence as to why she was engaging in the extraordinary problem behavior

....to simply gain and maintain her Mom’s undivided attention and play time
Case Example (Dale, 11 yo, dx: Autism)
Setting: Clinic

**Hypothesis:**

Dale engages in meltdowns and aggression in order to obtain:

“His way” in the form of escape from adult instructions and access to preferred (tangible) items, and adult attention.
Some Important Aspects of our Approach

1. An open-ended interview is always part of the process (as is one brief and informal observation)

Goals of interview are to:

   a) Develop rapport with parents or teachers
   b) Identify unique contingencies
   c) Develop “function hunches”
   d) Set up a safe and quick analysis

•  *Interviews* allow for *discoveries* which can then be verified (or not) in a functional analysis
Some Important Aspects of our Approach

2. A two-condition analysis designed from the open-ended interview is always part of the process (i.e., an interview-informed analysis)

Functional analysis:
Direct observation of behavior under at least two conditions in which some event is manipulated
Some Important Aspects of our Approach

3. We **synthesize** multiple contingencies into one test condition, if the interview suggests the contingencies are operating simultaneously.

Acknowledgement of whole contingencies not just the parts

Acknowledgement that whole contingencies have power not found in the parts or even in the sum of the parts
Why might problem behavior occur?

• Single contingencies:
  1. **Attention or toys** (social-positive reinforcement)
  2. **Escape/avoidance** (social-negative reinforcement)
  3. **Sensory/non-social** (automatic reinforcement)

• Combinatorial contingencies:
  1. **Attention and Toys**
  2. **Escape to toys**
  3. **Escape to toys and attention**
  4. **Escape to automatic reinforcement**
  5. Compliance with mands
  6. Escape to access to rituals, preferred conversations
  7. Escape to controlling people or objects
  8. Etc.....
Some replications of the Interview informed, synthesized contingency analysis (IISCA)

From Jessel, Hanley, and Ghaemmaghami (2016, JABA)
Interview Informed Synthesized Contingency Analysis

Single-test condition
Individualized test conditions
Synthesized contingencies
Reinforce precursors to and dangerous behavior

Test-matched control
Prior to treating problem behavior of children with autism, take an hour to:

1. Conduct an open ended interview to discover the context and outcomes that seem relevant to problem behavior

2. Conduct an IISCA to demonstrate the validity of the suspected contingency
   – and to set up the motivating conditions to teach skills
Once we identify the reinforcing contingency for the problem behavior, we

Teach the child how to effectively communicate for their reinforcers

Teach the child how to tolerate times when the reinforcer is unavailable

Teach what to do when the reinforcer is unavailable (play, work, etc.)

Extend this skill-based treatment to relevant people and contexts
Treatment

Treatment relies on shaping a repertoire with the synthesized reinforcers

Initially provided immediately following simple behavior

Ultimately provided intermittently and unpredictably following a variety of expected behaviors
Problem behavior = Meltdowns and aggression

Simple functional communication responses = “Play with me”
Problem behavior = Meltdowns and aggression

Simple functional communication responses = “Play with me”

Complex functional communication responses = “Excuse me,” waits for acknowledgement from parent, then says, “Will you play with me, please” with appropriate tone and volume
Problem behavior = Meltdowns and aggression

Simple functional communication responses = “Play with me”

Complex functional communication responses = “Excuse me,” waits for acknowledgement from parent, then says, “Will you play with me, please” with appropriate tone and volume
Meltdowns and aggression

“Play with me”

“Excuse me,” waits for acknowledgement from parent, then says, “Will you play with me, please” with appropriate tone and volume

Tolerance Response =
Saying, “okay” while glancing at parent who just said “No,” Wait,” “Hold on,” or “in a minute”
Meltdowns and aggression

“Play with me”

“Excuse me,” waits for acknowledgement from parent, then says, “Will you play with me, please” with appropriate tone and volume

Saying, “okay” while glancing at parent who just said “No,” “Wait,” “Hold on,” or “in a minute”
Meltdowns and aggression

“Play with me”

“Excuse me,” waits for acknowledgement from parent, then says, “Will you play with me, please” with appropriate tone and volume

Saying, “okay” while glancing at parent who just said “No,” Wait,” “Hold on,” or “in a minute”
Reinforcement: Time with Mom’s undivided attention and preferred toys

Compliance: Doing whatever Mom asked her to do quickly and completely
Meltdowns and aggression

"Play with me"

"Excuse me," waits for acknowledgement from parent, then says, "Will you play with me, please" with appropriate tone and volume

Saying, "okay" while glancing at parent who just said "No," Wait," "Hold on," or "in a minute"
**Reinforcement:** Time with Mom’s undivided attention and preferred toys

**Compliance:** Doing whatever Mom asked her to do quickly and completely
Reinforcement is: Function-based Differential Intermittent Variable in duration

Response requirement is: Variable Unpredictable
Treatment Implementation

*Materials not needed:*
- Laminate
- Laminating machine
- Glue guns
- Vis a vis markers
- Velcro
- Tokens
- Token boards
- Timers
- Stickers
- Candies
- Anything that was not already in the child’s environment!

1. Spin it!
2. Keep it to yourself
3. Require that behavior next time
App called “Names in a Hat”
App called “Roundom”
IISCAs and skill-based treatments have led to **socially-validated** outcomes

### Social Acceptability Questionnaire Results

<table>
<thead>
<tr>
<th>Questions</th>
<th>Ratings</th>
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<tbody>
<tr>
<td>1. Acceptability of assessment procedures</td>
<td>Gail</td>
<td>Dale</td>
<td>Bob</td>
<td>Mean</td>
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<td>7</td>
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<td>2. Acceptability of treatment packages</td>
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<td>3. Satisfaction with improvement in problem behavior</td>
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<td>4. Helpfulness of consultation</td>
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*Note. 7=highly acceptable, highly satisfied, or very helpful  
1=not acceptable, not satisfied, or not helpful*

from Hanley et al., 2014
3. Rate the extent to which you are satisfied with the amount of improvement seen in [ ]'s meltdowns.

Not Satisfied 1 2 3 4 5 6 7 Highly Satisfied

Please comment:

Highly Satisfied is an understatement! He has come a long, long way in such a short time.

11. Please provide any additional comments for our team. [ ] and I are very happy with how this whole process took place. We both feel our home life and [ ]'s quality of life is getting better and better. This was one of the best summers we had with him behavior wise, and best summers overall because of less behaviors. We actually took day trips to CT science museum, Boston science museum and Hampton Beach with [ ] issues of bad behavior. We feel that without this great program, we wouldn't have even attempted these trips knowing what the usual outcome would have been.
# Time Assessment

<table>
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<tr>
<th>Steps</th>
<th># of Visits (1 hr each)</th>
<th>Cost (in US dollars)</th>
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<tbody>
<tr>
<td></td>
<td>Range</td>
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<tr>
<td>1* Interview</td>
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<tr>
<td>2* Functional Analysis</td>
<td>1 - 4</td>
<td>2.3</td>
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<tr>
<td>3 Functional Communication Training</td>
<td>1 - 3</td>
<td>2</td>
</tr>
<tr>
<td>4 Complex FCT</td>
<td>1 - 4</td>
<td>2.4</td>
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<tr>
<td>5 Tolerance Response Training</td>
<td>2 - 7</td>
<td>4.6</td>
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<tr>
<td>6 Easy Response Chaining</td>
<td>1 - 5</td>
<td>2.6</td>
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<tr>
<td>7* Difficult Response Chaining</td>
<td>2 - 11</td>
<td>5.1</td>
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<tr>
<td>8* Treatment Extension</td>
<td>4 - 9</td>
<td>7.3</td>
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**Totals:**

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<th>Range</th>
<th>Mean</th>
<th>Range</th>
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**Grand Totals:**

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Achieving Socially Significant Reductions in Problem Behavior following the Interview-Informed Synthesized Contingency Analysis: A Summary of 25 Outpatient Applications

Jessel et al., in press, JABA

You found the recommended treatment acceptable
You are satisfied with the amount of improvement seen in problem behavior
You are satisfied with the amount of improvement seen in communication skills
You found the assessment and treatment helpful to your home situation
Not acceptable/satisfied/helpful
Highly acceptable/satisfied/helpful

Problem behavior per min

Baseline Treatment

N = 25

p < .001

Caregiver Rating
A final message

With Autism, there is a higher likelihood of problem behavior

Meltdowns
Aggression
Self-injury

References: Baghdadli, Pascal, Grisi, & Aussilloux, 2003; Horner et al., 2002; Kim et al., 2000; Murphy, Healy, & Leader, 2009; Thompson, 2009
freedom from these behaviors for persons with Autism and their families is attainable.
It is usually attainable
without drugs
without hospitalization
without harsh punishment
without candies, stickers, and token boards
It is attainable by first understanding why the child is engaging in the problem behavior. Understanding can be realized quickly, safely, and analytically.
It is attainable

when children are taught skills* to help them navigate our complex social world

*Communication and toleration
It is attainable when the skills are maintained via unpredictable and intermittent reinforcement which is probably the same arrangement under which the various forms of problem behavior developed.
Thanks for listening.

For more information go to: www.practicalfunctionalassessment.com

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