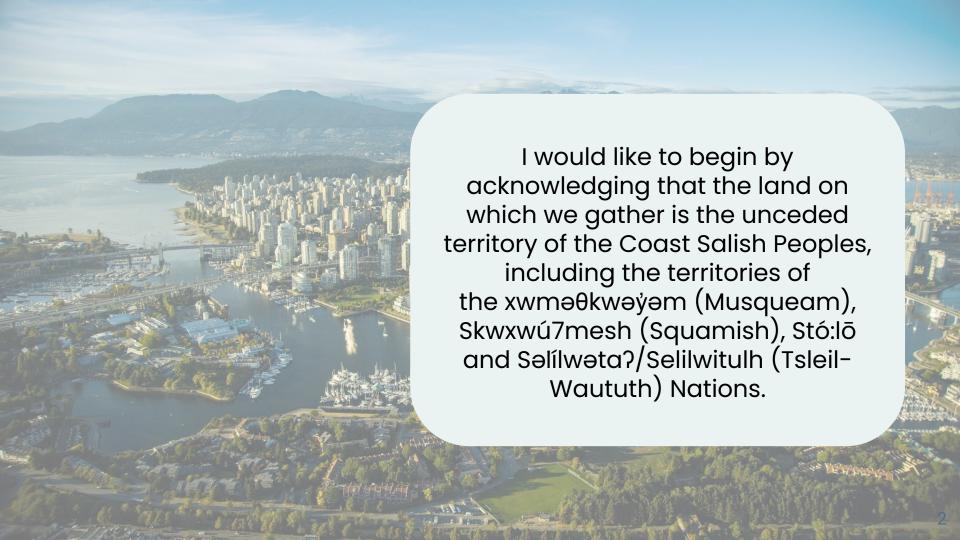


Getting to the Source

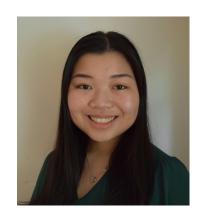
February 14, 2022







About Me



Rachel Horng 4th Year Undergraduate at UBC



Dr. Anamaria Richardson BSc, BEd, MD



Katie Allen M.S. BCBA

Overview

Structured Behavioural Observation

What is the problem behaviour?



Functional Behavioural Assessment (FBA)

What is causing the problem behaviour?



Practical Functional Assessment (PFA)

How do I control the problem behaviour?

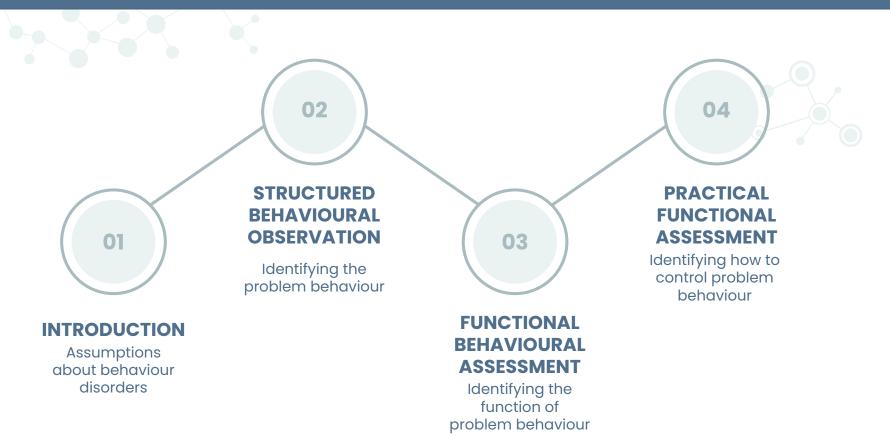


Learning Objectives

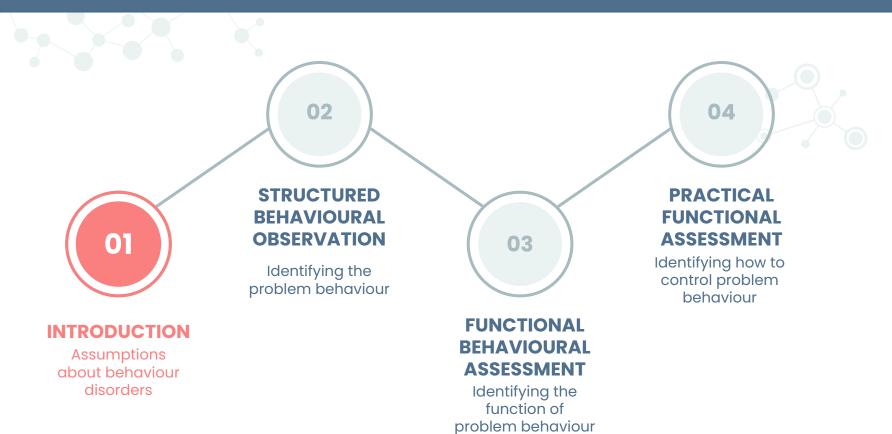
- 1. Identify the different methods of structured behavioural observation
- 2. Recognize the components of a Functional Behavioural Assessment (FBA)
- Recognize the components of a Practical Functional Assessment (PFA)
- 4. Differentiate between a functional analysis and an Interview Informed Synthesized Contingency Analysis (IISCA)



Outline



Outline



Assumptions About Behaviour Disorders



Behaviour serves as a form of communication

Most problem behaviours are used to communicate a need for attention, access to items/activities, or to escape unwanted tasks



Behaviours are learned and can be reinforced

Positive Reinforcement Negative Reinforcement Automatic Reinforcement

Assumptions About Behaviour Disorders



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Behaviours are learned and can be reinforced

Positive Reinforcement Negative Reinforcement Automatic Reinforcement

4 Functions of Behaviour



Attention

To receive attention from parents, teachers, siblings, etc



Tangibles

To receive tangible items such as food or toys



Escape

To escape from unwanted tasks, situations, or people



Automatic

Behaviour is being reinforced internally as it is rewarding

Assumptions About Behaviour Disorders



Behaviour serves as a form of communication

Most problem behaviours are used to communicate a need for attention, access to items/activities, or to escape unwanted tasks



Behaviours are learned and can be reinforced

Positive Reinforcement Negative Reinforcement Automatic Reinforcement

Positive Reinforcement

- Definition: Adding something to increase the likelihood of a behaviour
- **Example:** Attention/activities/tangible items are given to a child after an occurrence of SIB; this makes SIB more likely to occur.



Negative Reinforcement

- Definition: Removing something to increase the likelihood of a behaviour
- **Example:** Escaping/avoiding demands after an occurrence of SIB; this makes SIB more likely to occur



Automatic Reinforcement

- **Definition:** Self-stimulation produces rewarding feelings that increases the likelihood of the behaviour that produced it
- Example: If a child is left in an environment with minimal stimulation, they may feel the need to self-stimulate through SIB



Assumptions About Behaviour Disorders



Behaviour serves as a form of communication

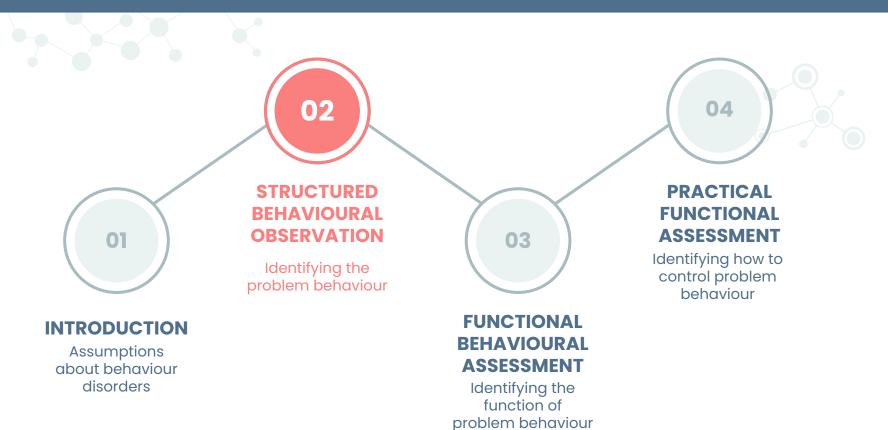
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Outline



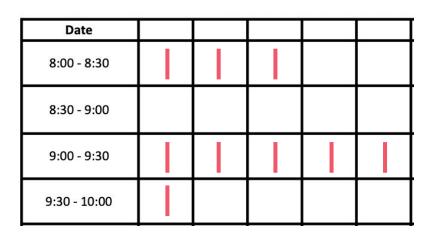
Structured Behavioural Observation

- Observing and recording a specific problem behaviour
- Emphasizes recording quantitative data:
 - Frequency
 - Duration
 - Latency
 - Interval



(iResearchNet, 2016)

Frequency Recording



Total	Rate
3	0.1/min
0	0
5	0.17/min
1	0.03/min



Duration Recording

Date	Enter time when the behavior began	Enter time when behavior stopped	Length of time that the behavior lasted
05/18	9:55 AM	10:06 AM	11 min
05/18	10:19 AM	10:28 AM	9 min
05/18	10:43 AM	10:51 AM	8 min
05/18	11:23 AM	11:38 AM	15 min



Latency Recording

Directive Given? What?	Directive Time	Behaviour Initiated _{Time}	Total difference:
Pick up your toys	8:46 AM	8:52 AM	6 min
Do your work	9:32 AM	9:35 AM	3 min
Eat your food	10:55 AM	11:02 AM	7 min
Sit down	11:37 AM	11:41 AM	4 min

Interval Recording

1. Whole Interval Recording

 Behaviour occurred for the entire duration of the observation period

2. Partial Interval Recording

 Behaviour occurred at any point in time during the observation period

3. Momentary Time Sampling

 Behaviour occurs at the very end of the interval

Beha	viors	Behavior 1
7:00	7:30	Y N N/A
7:30	8:00	Y N N/A
8:00	8:30	Y N N/A
8:30	9:00	Y N N/A
9:00	9:30	Y N N/A
9:30	10:00	Y N N/A

Why do we need structured behavioural observation?

Perform structured behavioural observations before and after an intervention to judge its efficacy

Unsuccessful Intervention

Frequency, magnitude, duration, and interval of problem behaviour are unchanged/increased



Successful Intervention

Frequency, magnitude, duration, and interval of problem behaviour are decreased



(iResearchNet, 2016)

Structured Behavioural Observation



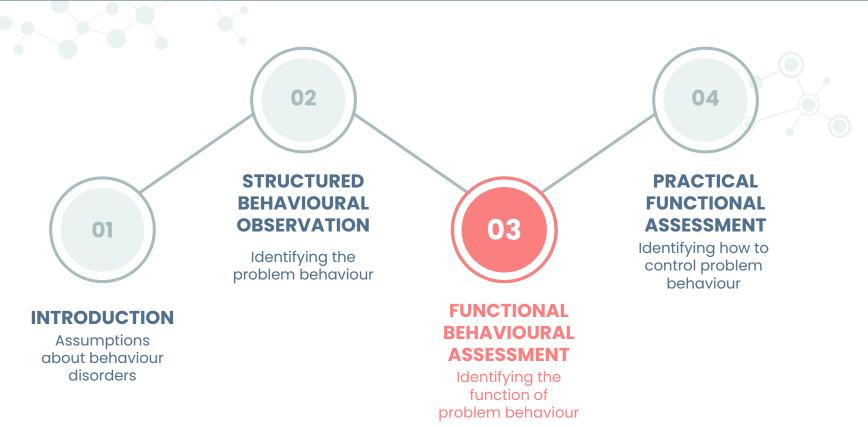
https://www.youtube.com/watch?v=B_xPqWCoHuM&ab_channel=behaviorfrontiers

(Dalphonse, 2021) 23

Resources

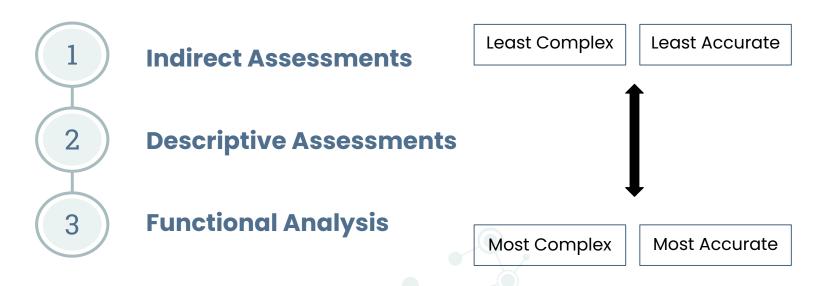
- https://masteraba.com/data-collection-methods/ interactive videos
- http://www.behavioradvisor.com/BehRecord.html
- https://ca01000043.schoolwires.net/cms/lib08/CA01000043/Cent ricity/domain/361/positive%20behavior/Data/Data%20Collection %20Methods.pdf
- https://howtoaba.com/partial-interval-recording/
- https://www.earlywood.org/Page/556 data recording sheets

Outline

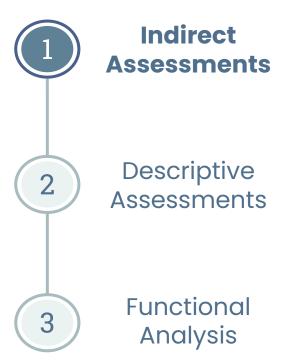


Functional Behavioural Assessment (FBA)

Used to identify the *reinforcers* (positive, negative, or automatic) of problem behaviour



Functional Behavioural Assessment



- Used to understand what situations the problem behaviour occur in
- Information is gathered from informants (caregivers, teachers, etc.), there is no direct observation
- Most simple method of assessment, but also the least reliable/accurate
 - Good for preliminary understanding

Closed-ended Interviews

- Answers are "Yes" or "No"
- Conducted with at least 2 individuals who have been present during the problem behaviour

	ID#	date: _	/ /
Teacher:			
Negative Reinforcers:			
an extended period of ti the respondent answer "	w a person who has observed ine in many different situal YES" to a question. For e it written on the line corres . EO Factors	ions. Check the b	oxes whenever se there should
Does the behavior o	ccur during certain seasons	of the year?	
_			
	be the result of any form of the, dizziness, blurred vis		
neadacne, stomacn a	icne, dizziness, blurred vis	on, ear intection,	etc.)
lack of rest, etc.)	be signaling some deprivat		
confused, toxic leve			
Could the behavior l	be the result of a medical c	ondition? (Seizure	s, PKU,
. Antecedents and Settin	ng Event Factors		
Are there any circum	nstances in which the beha	ior ALWAYS occu	ırs?
	nstances in which the beha	ior NEVER occurs	i?
	tain times of the day? ccur only with certain peop	1a2	
	be related to any skill defic		
Is the behavior relat	ed to any particular activit	ies?	
Is the behavior in re	sponse to aversive stimuli	(Tone of voice, ig	
	l, number of people in the udents, lighting, change in		
	s) Factors vior allow the student to ga	in? (Attention, pre	eferred activities
Does the behavior a	llow the student to postpon	e avoid or escane	aversive
stimulation? (Unpre	ferred activities, demands,	social interaction,	pain)
	rovide self-stimulation act		
	ccur collateral with any otl		part of a chain of

Closed-ended Interviews

ies
of
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Motivational Assessment Scale

- Used to identify motivators that reinforce behaviour
- Informant ranks situations on a scale of 0-6
- Highest scoring category indicates the most likely cause of behaviour

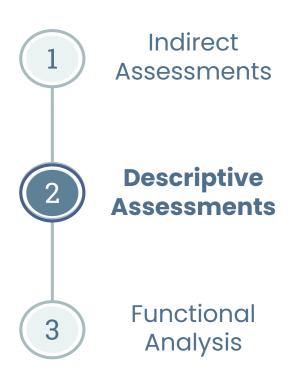
Student:	ID#:		Da	te:	_	_/_		_		
Interviewer:										
ructions: For each FUNCTION area add the numer the line marked TOTAL. The area with the highest s clion of the behavior.			E V E	L	N SEL E L D O M	FTH	7	A M L OS	A L W A Y S	A L W A Y S
nction: <u>SENSORY</u> Would this behavior occur continuously if your for long periods of time (e.g., one hour?)	child was left alone	Total	0	1	2	3		1	5	6
Does this behavior occur repeatedly, over and way (e.g., rocking back and forth for 5 minutes)?				1	-				5	6
Does it appear to you that the child enjoys per and would continue even if no one was around When this behavior is occurring does the child anything else going on around her/him?	1?		-	1	_	-			5	6
nction: <u>ESCAPE</u> Does this behavior occur following a command task?		Total	U	1	_	-			5	6
Does the behavior occur when any request is r Does the child seem to do this behavior to ups	•			1					5	6
when you are trying to get her/him to do what Does the behavior stop occurring shortly after making demands of her/him?	you ask?		0	1	2	3		1	5	6
nction: <u>ATTENTION</u> Does this behavior occur when you are talking the room?	to other persons in	Total	0	1	2	3		1	5	6
the room? Does the behavior occur whenever you stop at	ttending to the child?		0	1	2	3	1	1	5	6
Does the child seem to do this behavior to ups when you are not paying attention to her/him (separate room, interacting with another child)'	e.g., sitting in a		0	1	2	3		1	5	6
Does the child seem to do this behavior to get with her/him?	you to spend time		0	1	2	3		1	5	6
nction: <u>TANGIBLE</u> Does this behavior ever occur to get a toy, foc had been told they can't have?	od, or game that they	Total	0	1	2	3		1	5	6
Does the behavior occur when you take away a food?	a favorite toy or		0	1	2	3		1	5	6
Does this behavior stop occurring shortly after the toy or food they have requested?	r you give the child		0	1	2	3		1	5	6
Does this behavior seem to occur when the ch they can't do something they wanted to do?	ild has been told that		0	1	2	3		1	5	6

Motivational Assessment Scale

Function: <u>ATTENTION</u> 1. Does this behavior occur when you are talking to other persons in the room?	Total	0	1	2	3	4	5	6
Does the behavior occur whenever you stop attending to the child?		0	1	2	3	4	5	6
3. Does the child seem to do this behavior to upset or annoy you when you are not paying attention to her/him (e.g., sitting in a separate room, interacting with another child)?		0	1	2	3	4	5	6
4. Does the child seem to do this behavior to get you to spend time with her/him?		0	1	2	3	4	5	6



Functional Behavioural Assessment



Information is gathered through direct observation

Antecedents-Behaviour-Consequences (ABC) Assessment

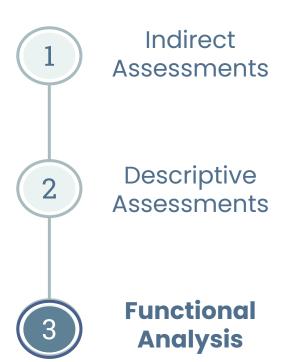
- Record antecedents and consequences of the problem behaviour
- This helps identify which activities cause an occurrence of SIB



Example of Descriptive Assessment

Antecedent	Behaviour	Consequence	Possible Function
Child is alone	Child presses on eye	Nothing	Automatic reinforcement
Parent is talking to a friend	Child bangs head on floor	Positive social reinforcement	
Parent asks child to put toys away	Child bites hand	Parent takes child to another room (Removal of task)	Negative reinforcement by escape
Parent is on telephone	Child slaps face repeatedly	Parent distracts child with favourite toy	Positive reinforcement by access to tangibles

Functional Behavioural Assessment



- Used to determine the function of problem behaviours through experimental manipulation of antecedents and consequences
- Most precise method of assessment, but also the most complex/time consuming

Functional Analysis

Condition	Environment	Antecedent	Consequence if SIB occurs	Purpose
Play	Attention given. Toys available. No demands presented.	Experimenter provides attention in the absence of SIB	Ignored - unless severe enough to end the session.	Control condition: Designed to prevent occurrences of SIB



Functional Analysis

Condition	Environment	Antecedent	Consequence if SIB occurs	Purpose
Play	Attention given. Toys available. No demands presented.	Experimenter provides attention in the absence of SIB	Ignored - unless severe enough to end the session.	Control condition: Designed to prevent occurrences of SIB
Attention	Attention withheld. Toys available. No demands presented.	Experimenter directs child to play with toys while they 'work'	Experimenter provides brief attention through statements of concern ("Don't do that, you'll hurt yourself") and physical contact (hand on shoulder). Then, returns to 'working'.	Tests for positive social reinforcement

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Escape	Attention given. Toys withheld. Demands presented.	Experimenter presents challenging tasks.	Experimenter terminates trial and turns away from child for 30 seconds. Then re-presents the demand.	Tests for negative social reinforcement.

Functional Analysis

Conditi	on Environment	Antecedent	Consequence if SIB occurs	Purpose
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Escap	Attention given. Toys withheld. Demands presented.	Experimenter presents challenging tasks.	Experimenter terminates trial and turns away from child for 30 seconds. Then re-presents the demand.	Tests for negative social reinforcement.
Alone	No materials/demands presented	N/A	If the behaviour is being reinforced internally, we would expect to see increased occurrences of SIB in environments with minimal stimulation.	Tests for automatic reinforcement

Interpreting the Results



- The conditions last for 15 minutes each and conditions alternate non-consecutively
- The amount of time the child engages in SIB during each condition is recorded and compared across all conditions
- Conditions that present the highest rates of SIB are assumed to be the reinforcers of SIB

(Iwata, 2010) 39

Functional Analysis In Action



https://www.youtube.com/watch?v=9W2qSqi1R10&t=4199s&ab_channel=AutismCenterofExcellence

Time Consuming

Duration of a traditional FA tends to exceed the limited amount of time available for clinic appointments



Brief FA

Conditions only last 5-10 minutes.
Not all 4 conditions are
conducted.



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Duration of a traditional FA tends to exceed the limited amount of time available for clinic appointments



Brief FA

Conditions only last 5-10 minutes.

Not all 4 conditions are

conducted.

Setting Constraints

Difficult to conduct a traditional FA in non-clinical settings



Trial-Based FA

Trials are 2-4 minutes instead of 10-20 minutes. Designed to be conducted in school settings



Time Consuming

Duration of a traditional FA tends to exceed the limited amount of time available for clinic appointments



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Trial-Based FA

Trials are 2-4 minutes instead of 10-20 minutes. Designed to be conducted in school settings

Risk

Involves eliciting a severe problem behaviour which raises concerns about the child's safety



Latency FA

Sessions are terminated after the first instance of SIB



Time Consuming

Duration of a traditional FA tends to exceed the limited amount of time available for clinic appointments



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Latency FA

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Reinforcement-Based Treatments

Noncontingent Reinforcement

- Eliminate the antecedent event
- Provide reinforcer frequently on a fixed schedule so that the child is no longer motivated to engage in SIB to obtain the reinforcer

Extinction

• Eliminate reinforcer

<u>Positive:</u> Attention and tangibles are withheld following occurrences of SIB

Negative: Continuation of the task presented during instances of SIB

Automatic: Block sensory stimulation through the use of protective equipment

Differential Reinforcement

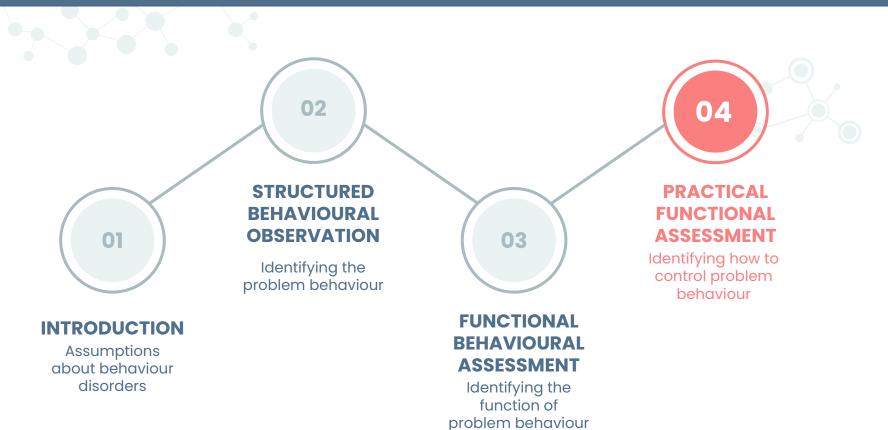
- Replacing SIB with an alternative response
- Functional
 Communication
 Training (more on this later)

Resources

- https://www.carautismroadmap.org/functional-behavioral-assessment/
- https://docplayer.net/38720-How-to-conduct-a-fu nctional-assessment-develop-behavior-plans-to-r educe-problem-behavior.html
- https://wmuace.com/videos/functional-analysis



Outline



Practical Functional Assessment (PFA)

An experimental method used to control problem behaviour



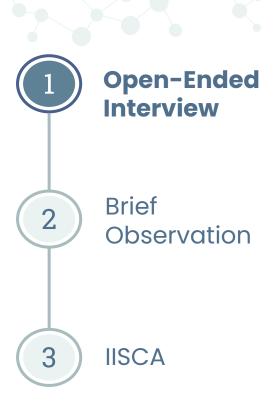
2 Brief Observation (not always necessary)

Interview Informed Synthesized Contingency Analysis (IISCA)



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Practical Functional Assessment (PFA)



Aims to identify:

- The most concerning problem behaviour and other behaviours that co-occur
- Events that evoke/co-occur with the problem behaviour
- 3. Events following the problem behaviour that are able to stop the problem behaviour

Example of Open-Ended Interview

To determine which problem behavior(s) will be targeted in the functional analysis:

- 6. What is the single-most concerning problem behavior?
- 7. What are the top 3 most concerning problem behaviors? Are there other behaviors of concern?

To determine the antecedent conditions that may be incorporated into the functional analysis test conditions:

- 10. Under what conditions or situations are the problem behaviors most likely to occur?
- 11. Do the problem behaviors reliably occur during any particular activities?
- 12. What seems to trigger the problem behavior?
- 13. Does problem behavior occur when you break routines or interrupt activities? If so, describe.
- 14. Does the problem behavior occur when it appears that he/she won't get his/her way? If so, describe the things that the child often attempts to control.

To determine the test condition(s) that should be conducted and the specific type(s) of consequences that may be incorporated into the test condition(s):

- 15. How do you and others react or respond to the problem behavior?
- 16. What do you and others do to calm him/her down once he/she engaged in the problem behavior?
- 17. What do you and others do to distract him/her from engaging in the problem behavior?

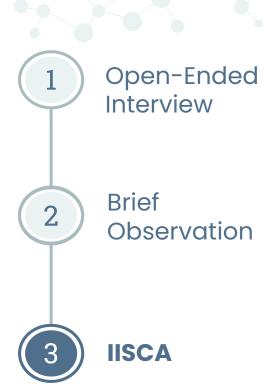


Practical Functional Assessment (PFA)

Open-Ended Interview **Brief Observation IISCA**



Practical Functional Assessment (PFA)



- Experimental manipulation used to turn problem behaviour on and off
- The main difference between a PFA and a FBA
 - IISCA (PFA)
 - 2 Conditions
 - Control behaviour
 - o FA (FBA)
 - 4 Conditions
 - Determine cause of behaviour

Interview Informed Synthesized Contingency Analysis (IISCA)

Control Condition

- "Dream Condition"
- All variables thought to cause SIB are absent
- Reinforcers are given the entire time
- There should be no instances of SIB

Test Condition

- "Nightmare Condition"
- All variables thought to cause SIB are present
- Reinforcers are withheld until SIB occurs
- If SIB occurs, reinforcers are delivered for a short period of time





Function-Based Treatment

Functional Communication Training (FCT)

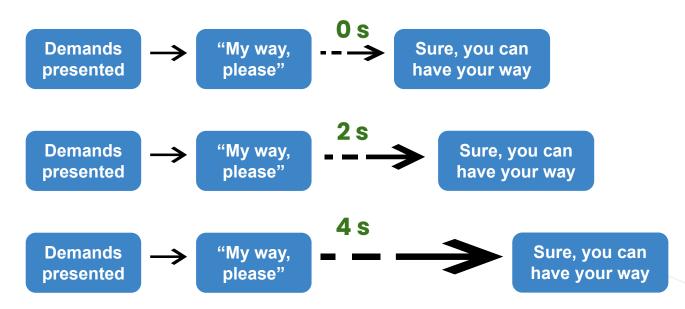
- Differential reinforcement procedure
- SIB will be replaced by teaching the child an easy communication response ("My way, please")
- The communication response will allow the child to obtain the same reinforcers in a more effective manner, thus, SIB will no longer be reinforced



Function-Based Treatment

Delay Tolerance Training

 As the child becomes more comfortable using the communication responses, intermittent delays of requested reinforcers will be introduced



(Hanley & Cammilleri, 2020)

IISCA In Action



https://practicalfunctionalassessment.files.wordpress.com/2015/06/gavin-walk er-website-video.mp4

(Hanley, 2015)

Resources

- https://practicalfunctionalassessment.com/
- https://wmuace.com/videos/functional-communic ation-clinical



Questions?

Thank you for listening!

If you have any questions, please feel free to email us at sstephens@fsibc.com and we will be sure to discuss them in our upcoming session:

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Thanks!

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