

Types of Preference Assessments

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WHAT'S COVERED

This lesson will explore types of preference assessments by defining and discussing the following:

1. Caregiver Report
2. Self-Report
3. Free Operant Preference Assessment
4. Multiple Stimulus Without Replacement (MSWO)
 - a. Conducting the MSWO
 - b. Data Collection for the MSWO
5. Brief MSWO
 - a. Conducting the Brief MSWO
 - b. Data Collection for the Brief MSWO
6. Multiple Stimulus With Replacement (MSW)
 - a. Conducting the MSW
 - b. Data Collection for the MSW
7. Paired-Choice
 - a. Conducting the Paired-Choice
 - b. Data Collection for the Paired-Choice
8. Data and General Considerations

1. Caregiver Report

The first type of preference assessment we will look at is the caregiver report. Individuals such as caregivers, siblings, friends, and teachers can be very helpful in identifying a variety of potential reinforcers.

This is virtually always the best starting point in narrowing down the potential items that should later be used in formal preference assessments.

➞ **EXAMPLE** Before starting her therapy session with Johan, the behavior technician asks the caregiver if there has been anything that he is particularly interested in this afternoon. Johan's grandpa indicates that he really loves his new dinosaur book. The behavior technician presents the dinosaur book within the preference assessment at the onset of the therapy session.

Again, while caregiver reports can be helpful, it is important to remember that items identified by caregivers may not always translate into effective reinforcers. A significant amount of research has demonstrated that caregiver opinion is not a reliable predictor of which items actually function as the most potent reinforcers.

We have several tools available with which to assess this. The Reinforcer Assessment for Individuals with Severe Disabilities, referred to as the RAISD, is one example of an interview protocol that can be used. The RAISD asks caregivers questions that help identify items and activities that may be preferred by an individual, as well as under what conditions.

The BCBA will determine what tools to use, and the behavior technician should follow the instructions of the BCBA.

2. Self-Report

Self-report can also be a helpful method of determining a patient's preferences. Open-ended questions, a list of choices, and asking the patient to rank order a list of choices are common methods in obtaining information. While asking a patient about their likes and dislikes can be very straightforward, it's important to remember that self-report has shown to correspond poorly to actual observed behavior.

Depending on the language and cognitive skill level of the patient you are working with, it may be possible to simply ask them what they want. This could involve

- open-ended questions
- a list of choices
- rank order of a list of choices

These could be a vocal question or a written question or survey. It could be as simple as asking the patient, "When we finish this worksheet, what would you like to do?"

This could also entail presenting something in a written format such as open-ended questions like, "What are your favorite toys to play with?" It could also involve providing choices such as, "Would you like cookies or would you like to play a game?"

Video Transcription

So we're going to do some questions and then would you like to print your work-- your coloring sheets or have a silly break?

That's hard. Is there something fun I'm going to do in the silly break or just sit around?

You can choose what you want to do. Do you want to play with your chickens or your slime?

I think I'll go for the coloring page.

For those patients with limited vocal language, visuals or icons may be presented with the choice. The patient could also simply nod yes or no to indicate their preference.

➦ **EXAMPLE** A teacher may present icons of the computer, books, and puzzles while asking, “Do you want to play computer, books, or puzzles?”

Video Transcription

All right, Lexi. Do you want to work from the green chair, or the bed?

I said as Lexi moves, we can head over to the couch.

The bed.

OK, we can work from the bed. Let's go, girl. We're going to brush our teeth, and then we can get in the bed.

Allowing a patient to verbalize their preferences can be helpful, but remember that self-report does not always reliably predict effective reinforcers for patients with developmental disabilities. Physical choice response is the most reliable indicator.

Video Transcription

You want Hickory Dickory Dock? Say no.

Doh.

OK. So you can see which one you want. Legos. You want trains? Trains. Do you want trains?

Trains.

Trains. Say trains.

Trains.

OK. Here. Let's go play with the trains.

3. Free Operant Preference Assessment

The next method is free operant preference assessment. It involves observing which items or activities a patient may choose to engage in or with during their free time, using the follow framework:

- Allow free access to a predetermined set of items or activities.
- Record the duration of time that the patient spends engaging with each activity or item.
- The longer the duration, the stronger the preference is perceived to be.

To help identify what these items or activities are, you will need to observe the patient during their free time.

This could be either throughout the day or possibly just before a learning session in a more contrived observation.

This can be in a naturalistic setting with the items available in that space. You would give free access to various items and gauge the patient's interactions with them, for instance, in the playroom, with their blocks, books, and toy cars out.

Another approach is to plant items in the environment. That is, set the environment to include a variety of predetermined items or activities.

Whether the environment is naturalistic or contrived, the patient is given sufficient time to freely move about and explore the presented items. The total time the patient interacts with an item within the observation is recorded. The longer the duration of interaction, the higher the preference for the item is thought to be.

Conducting free operant preference assessments helps provide a hierarchy of preference between the available items.

4. Multiple Stimulus Without Replacement (MSWO)

The last and most reliable method is using a structured assessment. We will cover three different kinds of this approach. Here the patient is given opportunities to make physical choice responses, such as grasping or pointing to the preferred item.

Now we are going to begin talking about conducting more formalized direct preference assessments in order to determine what item or activity may function as a reinforcer at that given moment. As we have discussed, individual preferences change. To ensure we are using effective reinforcers, preference assessments must be conducted frequently.

Multiple stimulus without replacement (MSWO) is a procedure that will help establish a hierarchy among multiple items. The patient is allowed to choose from among several items simultaneously in as many trials as there are items.

- Prior to starting, the patient is allowed to interact with each item.
- Here the patient is presented with an array of items that are laid out at equal distance from the patient, accompanied by a vocal instruction such as, "Pick one," or, "Which one do you want?"
- Once the patient selects an item, they are allowed to interact with the item for up to 30 seconds. After 30 seconds, all items are removed from the table.
- All the items that were not selected are then re-presented on the table for a new trial. So, as items are selected, they are not returned to the array for future trials.
- This procedure is continued until all the items have been chosen.

When might you choose to use this method?

Well, using the multiple stimulus without replacement method is the fastest formal preference assessment. So, if you are trying to move quickly, then this method can be helpful.

However, in order for this preference assessment to work, the patient needs to have the skills necessary to

scan all the items and then make a choice from a variety of items.

Many patients with developmental disabilities may have difficulty scanning more than two or three items at a time, in which case MSWO and MSW assessments are not appropriate.

4a. Conducting the MSWO

To conduct the MSWO, first you will need to identify and gather at least five to seven different items that are reported to be preferred by the patient. In this example, we will use

- a figurine
- blocks
- a toy laptop computer
- a doll
- a bead maze

The patient is shown all of the available items and then the items are presented at equal distance from the patient. They are then instructed to “Pick one.”

Let’s say the patient selects the computer. They are then allowed to interact with the computer for 30 seconds.

All the items are then removed from the table and re-presented, with the exception of the computer.

4b. Data Collection for the MSWO

In the table below, you can see that each row listed indicates a presented trial. The items presented in each trial are listed in the columns from left to right.

Item Presented	Item Presented	Item Presented	Item Presented	Item Presented
Figurine	Blocks	Computer	Doll	Beads
Figurine	Blocks	Doll	Beads	
Figurine	Doll	Beads		
Figurine	Beads			
Figurine				

In this sample, the items selected by the patient are indicated in red font. So, within the first trial, the patient was presented with the figurine, blocks, computer, doll, and bead maze. The computer was selected in this first trial as indicated by the red font.

The next row indicates the second trial presented. As you can see, the computer is no longer included within this array. Within the second trial, the blocks were selected.

In the third trial, the doll was selected, and in the fourth trial, the bead maze was selected. The figurine is the last item selected, indicating it is the least preferred item from the array. The computer would be identified as the most preferred item.

5. Brief MSWO

Formal preference assessments require a significant amount of time to complete. Even the MSWO, which is the fastest formal preference assessment, will likely take too long to conduct more than once per day, if even that often. Therefore, the results of formal preference assessments will rarely provide up-to-the-minute information on what stimulus is likely to be the most effective reinforcer at any given moment.

The brief MSWO is a modified MSWO that consists of only one trial. It takes well under one minute to conduct and therefore can be done many times per day. Assessing preference multiple times per day guarantees that you will have the best chance of identifying the most effective reinforcer at any particular moment in time.

However, the brief MSWO should not be considered a replacement for occasionally conducting a full formal preference assessment with a larger number of stimuli.

5a. Conducting the Brief MSWO

To conduct a brief MSWO, present two to five items that you already know from past experience are effective reinforcers for the patient. These should not necessarily be the same ones every day. It's important to be creative and add new ones from time to time.

When you present the items, ask the patient to choose one. Once an item is selected, allow the patient to interact with it for thirty seconds. Use this reinforcer with the patient until the next time you conduct another brief MSWO.

In order to make sure you are always using the most preferred item, you should conduct brief MSWOs as often as you can, without disrupting ongoing therapeutic activities unduly.

Video Transcription

OK. Pick one. Oh, Cool.

At a minimum, you should consider conducting brief MSWOs at the beginning of each major therapeutic activity, such as before each block of trials during discrete trial training or before implementing each new teaching lesson.

You should also consider conducting a brief MSWO whenever you have reason to believe the current reinforcer is no longer motivating. This may be when the patient no longer consumes or interacts with the reinforcer, when attention to the task decreases, or when the patient begins responding more slowly in general.

5b. Data Collection for the Brief MSWO

It may not be necessary to collect data every time you conduct a brief MSWO, and most behavior technicians generally do not.

Keep in mind that the main purpose of the brief MSWO is to tell you what reinforcer you should use at that particular moment; it's not necessarily to tell you what items are likely to be effective reinforcers for that patient, in general, as is the purpose of full preference assessments.

Therefore, you may be able to save time, without compromising therapeutic quality, by omitting data collection on the brief MSWO, as you will likely conduct many of them per day.

Still, there are plenty of situations where you may want to collect data during brief MSWOs.

➦ **EXAMPLE** If a patient is having a particularly difficult time with a specific lesson, you may want to know exactly which reinforcers are being used each time that lesson is taught.

Finally, if a patient’s overall attention or motivation seems to be decreasing during learning situations, or if they are simply having a hard time acquiring new skills, it may be useful to know exactly which reinforcers they are working for at all times.

6. Multiple Stimulus With Replacement (MSW)

6a. Conducting the MSW

The main difference between the MSWO and the MSW is that in the MSW, the item chosen by the patient remains in the array. So, the procedure starts off the same:

- Prior to the assessment the patient is shown and allowed to interact with the items.
- The items are then lined up in an array at an equal distance from the patient and they are asked to “Pick one.”
- Once an item is selected, they are allowed to interact with the item for 30 seconds.
- After the 30 seconds have lapsed the item is then placed back into the array of items on the table and the new trial is presented.

When might you use this method? Multiple stimuli with replacement can be very helpful if you are trying to move quickly. Keep in mind that a patient could, in theory, only choose the same item over and over on every trial. If this occurs, you will not have any information about the relative preference of the other remaining items, except that they are all less preferred than the one item.

Video Transcription

[CLATTERING] Which one do--

Oh, you want Clifford. Awesome. OK. Oh, good.

[CLATTERING]

OK, pick one. Oh, nice. OK. Oh, you like Clifford. OK. We can work for Clifford. Great job.

6b. Data Collection for the MSW

Here is a sample data sheet that you might use. This data sheet includes a legend that describes the patient’s behavior across each trail with each item presented in the array.

A = Approach	Item									
C = Chosen/Consumed	1	2	3	4	5	6	7	8	9	10
N = No Response										

Trial	1									
	2									
	3									
	4									

Data is collected about whether an item was approached, whether it was chosen or consumed, and whether the item received no response at all. The columns going left to right indicate the items presented across the trials, and the rows indicate the trials. Let's plug in our array from the previous example.

A = Approach C = Chosen/Consumed N = No Response		Item				
		Figurine	Blocks	Computer	Doll	Beads
Trial	1	N	N	C	A	N
	2	N	A	C	A	N
	3	N	A	C	N	N
	4	N	N	C	N	N
	5	A	N	C	N	N

Here you see categories for figurine, blocks, computer, doll, and bead maze indicated at the top of the columns. Since there were five items, we have data for five different trials. Also, note that all five items were presented across each trial. That is, the chosen items were replaced back into the array of items for trials that followed.

Across these trials, you see that the computer was chosen every presented trial. While the figurine, blocks, and doll were sometimes approached, the bead maze was never approached. So, given this data we could determine that the computer would be the most preferred item while the bead maze was the least preferred item.

7. Paired-Choice

7a. Conducting the Paired-Choice

Now let's talk about the paired-choice method, or what is sometimes referred to as the "forced-choice." Just like the MSWO, the goal of the paired-choice procedure is to establish a hierarchy of preferred items that can then be used in future therapy sessions. Only two items are presented at any given time.

Let's take a look at the procedure:

- Present stimuli in pairs until each stimulus has been presented with every other stimulus.
- Predetermine the sequence of the pairings.
- Tell the patient what you are presenting and then ask them to make a choice (e.g., "Mel, I have a yo-yo

and a book, pick one.”)

- Hold the stimuli or place them on a table in front of the patient.
- Give the patient the item that they choose for 30 seconds.
- If the patient attempts to take both, remove them both and re-present them.
- Repeat until all pairs have been presented.

When might you use this method?

Because a paired-choice procedure is more time-consuming to complete, you would want to select this method when you have adequate time. Most importantly, the paired-choice procedure should be used when you believe the patient may have difficulty scanning and choosing from among more than two stimuli at once.

Here is how we go about pairing the items. Let’s say we have identified five items that we would like to present within the paired-choice procedure: jelly beans, popcorn, sucker, doughnut, and crackers.

It’s common to include more items, even up to 14 items, during paired-choice preference assessments, but we will use five items for the purpose of this illustration. Recall that each item needs to be paired with every other item once.

Trial	Pairing
1	Jelly beans vs. popcorn
2	Jelly beans vs. sucker
3	Jelly beans vs. doughnut
4	Jelly beans vs. crackers
5	Popcorn vs. sucker
6	Popcorn vs. doughnut
7	Popcorn vs. crackers
8	Sucker vs. doughnut
9	Sucker vs. crackers
10	Doughnut vs. crackers

The easiest way to determine the pairings is to start with the first item and assign it to every other item once. Jelly beans go with popcorn once, sucker once, doughnut once, and crackers once. Then, popcorn goes with sucker once, and so on. Note that you need not pair popcorn with jelly beans again because jelly beans were already paired with popcorn in Trial 1.

Determining the pairings in this manner is convenient, but keep in mind that the actual order of trials should be randomized. The same item should not be presented on multiple consecutive trials.

Video Transcription

Awesome. What do you want to work for? Do you want candy? Or do you want toys?

Candy!

Candy. That's a good choice. Do you want M&Ms or Skittles.

Skittles!

Do you want Skittles or gummy bears?

Gummy bears!

That's a good choice!

7b. Data Collection for the Paired-Choice

This hypothetical data sheet illustrates the first four trials of a paired-choice assessment. For each trial, the item chosen is indicated in red font. It is also wise to record whether the patient actually consumed or interacted with the item, as opposed to rejecting it, after the item was delivered to them.

Trial	Item Presented	
1	Crackers	Jelly Bean
2	Sucker	Doughnut
3	Sucker	Jelly Bean
4	Sucker	Crackers

What do you do if the patient does not show interest in any of the items presented?

- If the patient does not approach either of the presented stimuli within the allotted five seconds, both items are then removed.
- Once it's removed, you can show the patient each item one at a time for five seconds.
- Once the patient has interacted with each item again individually, repeat the procedure. Present each item one at a time and label it. Then present both items together and instruct the patient to pick one.
- If after re-presenting the stimuli, the patient still avoids the items, they are again removed from the patient for five seconds. After five seconds the items are then re-presented together one more time.
- If on this second re-presentation the patient still avoids both items, they are again removed and the next paired-choice on the list should be presented.

7. Data and General Considerations

All full preference assessments produce preference rankings that must be summarized and reported. They should be summarized and ranked by preference from first to last.

When summarizing and reporting data, many prefer to graph the data with a bar graph. Preference assessment results can be made available to everyone working with the patient on a daily basis, such as functional behavioral assessments, behavior intervention plans, therapy logbooks, etc.

If a formal report is needed, this will likely be created by the BCBA. The behavior technician should follow the

BCBA's instructions and work under their guidance.

General considerations include the following:

- Preference assessments produce very reliable, clear results.
- If you find that the patient is not interacting with or consuming the items in the preference assessment, then those items are not reinforcers for that patient. If that is the case, it is important that you go back and identify new items and begin the assessment again with the new items.
- As we have mentioned several times, preferences change. So, while the items you selected were thought to function as reinforcers, the patient's preferences may have simply changed. This is why it is important to assess preference often.



SUMMARY

In this lesson, you learned about different types of preference assessments, beginning with **caregiver report** and **self-report**. You learned about **free operant preference assessment**, which involves observing items or activities a patient may choose to engage with or in during their free time. You also learned that the most reliable method is a structured assessment, in which the patient is given opportunities to make physical choice responses, such as grasping or pointing to the preferred item. We discussed three different kinds: **multiple stimulus without replacement (MSWO)**, **multiple stimulus with replacement (MSW)**, and **paired-choice**. Lastly, you reviewed some **data and general considerations**, noting that all full preference assessments produce preference rankings that must be summarized and reported, and since preferences change, it is important to assess preference often.