Behavioral recording

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BEHAVIORAL RECORDING

Developing and using reliable and accurate behavior measures to understand and predict it were among Skinner’s multiple contributions (Dowdy et al., 2023; Morris et al., 2005). Behavior record refers to a systematic collection process for observing an organism’s behavior within a specified time limit (APA, 2018). Specifically, the records allow us to keep track, in physical format, when the behavior appears, what situations trigger it, what consequences it has and what factors support it.

Furthermore, this enables the direct and accurate recording of behaviors as they occur in the person’s natural environment, easing the acquisition of a precise view of the recorded behaviors. It also allows for assessing the effects of intervention, guiding clinical decision-making, and preventing treatment errors (Cooper et al., 2007). The records allow the generalization of several behaviors to certain groups of people and also make it possible to record complex behaviors in populations with difficulties or mental disorders (such as immigrants, intellectual disability, or speech disorders) (e.g., Cooper et al., 2020).

On the other hand, this type of recording may have some disadvantages, such as the fact that the reliability of the recorded data depends on the clear definition of the behavior to be observed and on the skills and proper training of the person who will be recording them. Additionally, the recording process may require a significant amount of time, involve observer bias, and require an important level of observer preparation in the environment of interest.

Several methods are available, offering choices based on the assessment’s goals, the characteristics of the target behavior, and the suitability of the technique for the individual's particularity (Epp et al., 2012). Behavioral evaluation methods may be conducted by the therapist, other individuals in the client’s life (parents, teachers, other caregivers), or the person themselves (self-report/self-monitoring) (Epp et al., 2012).

Behavioral recording is a well-established technique for adhering to behavioral assessment standards, given its low degree of directivity and minimal inference. Its primary advantage lies in its ability to provide real-time insights into the occurrence of target behaviors, including how, when, and where they manifest. As a result, it provides accurate and reliable information applicable from the determinants and parameters of the
issue (Crespo López & Larroy García, 1998). However, there are several drawbacks, including the need for multiple observers, high costs, and potential reactivity.

- **Considerations in developing and using behavior records.**

Before observing a behavior, the target behavior must be selected and well-defined, considering that it has social relevance and is important to the individual whose behavior is observed (Dowdy et al., 2023). In this regard, it is recommended to choose behaviors considering that they provide access to new reinforcers, contingencies, or environments and that they are socially valid and widely applicable in different environments/contexts, people and behaviors. We should observe that these behaviors can compete and replace inappropriate behaviors and that the change in behavior generates an important effect on the individual and their life context (Bosch & Fuqua, 2001; Dowdy et al., 2023).

- **Target behavior definition**

A good definition should be objective (observable behavioral characteristics), clear (readable and unambiguous) and complete (outlining the boundaries of what will be included and what will be excluded) (Dowdy et al., 2023). In addition, a valid definition of target behavior enables observers to capture all aspects of the behavior of interest and none other (Cooper et al., 2020).

- **Types of definitions** (Cooper et al., 2020):

1. Topography-based definitions: based on all response shapes/forms that in most cases produce relevant outcomes in the natural environment.

2. Function-based definitions: based on function or its common effect on the environment.

- **Recording methods**

There are a variety of behavioral multi-informant: hetero-recording (parents, teachers, and caregivers) and self-recording (patients themselves), evaluation methods to record which target behavior(s) should be recorded and therefore changed (e.g., Cooper et al., 2020):

  a) **Narrative recording:** often carried out as a source of complementary information during the assessment process, it requires recording any behavior of interest (*how* events are organized). There is a lot of flexibility in terms of how descriptive or inferential and little quantification is used (Epp et al., 2012).
b) *Interval recording/time sampling*: records of behavior that are of moderate frequency of occurrence and do not have a clear beginning or end (e.g., walking, listening, or playing).

c) *Behavioral observation*: direct and repeated observations of the temporal sequence of the patient's behavior in a specific natural environment (e.g., anecdotal observation) (Cooper et al., 2020). There are three kinds of measures, depending on the target behavior that is intended to be measured:
   - **Repeatability (countability) recording**: count how many times a behavior can occur repeatedly during a specific period of time. Measure: simple tally of the number of occurrences of a behavior (minutes, hours or days, or a week) and rate (number of answers per unit of time).
   - **Temporal recording**: how long a behavior occurred during a given period of time. Measure: duration (amount of time elapsed between the start and end of a response).
   - **Temporal locus**: every instance of behavior occurs at a given moment in time relative to other events (e.g., If the behavior of interest was "being attentive" in a classroom, a time period of 10 minutes could be selected, during which it would be recorded whether the child was focused or not on the task at intervals of 40-second intervals). Measure: latency (time passed between the appearance of a stimulus and a later response).

d) *Questionnaires* (Checklist and rating scales): observation method focused on specific behaviors that have already occurred [e.g., Classroom routines (FACTS-Part-A, The Functional Assessment Checklist for Teachers and Staff, March et al., 2000), Phobias (BAT, Behavioral Avoidance Test, Muris et al., 1998)].

**HETERO RECORDING**

When the recording is carried out by a person other than the patient, we refer to it as *hetero recording*. The steps are as following:

1. Define clearly and objectively the behavior(s) you want to see, and as close as possible to what you expect to record.
2. Find a "pool" of eligible target behaviors and decide which behaviors are considered a priority for assessment. answering questions, for instance, how long has the problem or skill lasted?
3. Choose the type of behavioral record that you consider most right for monitoring behavior.

4. Decide when you are going to observe the behavior across different activities and topics, several situations or only in just one.

5. Decide who will be the one who will carry out the behavior record, a family member, a teacher, or a caregiver who works alongside the therapist. Training the observers if it is needed.

6. Decide how long each of the observations will last (time range) and how often it should be recorded.

7. Record target behaviors.

8. Calculate the result depending on the type of record used: a) repeatability/countability recording (frequency): average number of occurrences per minute, hour or day; b) temporal recording (duration): percentage of total observation time in which the behavior occurred; and c) temporal locus (latency): percentage of intervals in which the behavior occurred.

- **Instructions**

  The therapist instructs the co-therapist (e.g., family members, teachers or caregivers) to faithfully record all the information that will be useful to obtain the most reliable record possible of the target behavior, trying to avoid as much as possible any type of bias. The aim of the task is explained in advance, doubts are clarified, and training is given on what, when and how to mark. A practice exercise is carried out until the necessary skill to do it is acquired.

**SELF-RECORDING**

Self-recording is an information gathering tool that falls within the framework of behavioral observation techniques, in this case, self-observation (by the patient themselves). Self-observation is a technique for the direct and objective assessment of behavior.

The advantages of this technique are it allows for obtaining precise and valid information; avoids interpretation problems; it has a low cost-effectiveness ratio; promotes motivation. On the contrary, one of its disadvantages is reactivity.
The steps are the same than in the recording by external observers:

1. Definition of the target behavior
2. Choice of the measurement method
3. Choice and development of the recording sheet
4. Subject training
5. Self-observation and recording
6. Graphical representation of the data

- **Design of the procedure:**

The design of the procedure depends on the purpose (Crespo López & Larroy García, 1998):

a) **Information collection:** maximizing the accuracy of the self-record.
   To achieve this objective, it is essential to ensure:
   - The behavior and the recording are followed.
   - The person is trained.
   - The person should be positively reinforced when the recording is right.
   - The recording sheet shouldn’t be complicated.
   - Fatigue should be checked.
   - Competitive tasks should be erased while recording.
   - An independent observer is recommended.
   - There is more accuracy in motor behaviors and positively valued behaviors.

b) **Therapeutic effect:** maximizing the reactivity.
   To achieve this objective, it is essential to ensure:
   - The recording is done before the behavior occurrence.
   - The recording is focused on only one behavior.
   - The recording sheets should be in visible locations.
   - The recording sheet should be visually appealing.
   - The positive aspects of the behavior are the focus of the recording.
   - There is more reactivity when the person is motivated for change, with non-verbal behaviors, or when it is focused on discriminative stimuli related to the behavior.
References


