

BEHAVIORAL PROCEDURE

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1. Core Definition

A **behavioral procedure** refers to any systematic psychological methodology or technique designed and implemented based entirely upon the established principles derived from **behavior theory**. Behavior theory, rooted in the foundational work of researchers like Pavlov, Watson, and Skinner, posits that all actions, thoughts, and feelings are behaviors that can be understood, predicted, and influenced by environmental stimuli and consequences. Consequently, a behavioral procedure is not merely an intervention; it is a meticulously crafted sequence of steps used either for empirical investigation (basic research) or for the practical modification and improvement of socially significant behavior (applied analysis). The defining feature of any true behavioral procedure is its direct reliance on the scientific laws of learning, primarily classical conditioning and operant conditioning, ensuring that the intervention itself is measurable, observable, and replicable across different contexts and subjects.

The procedures are characterized by their focus on external, observable behaviors rather than internal, unobservable mental states, although modern behavioral science acknowledges the importance of private events (e.g., thoughts and feelings) as behaviors themselves, subject to the same laws of learning. Whether the procedure aims to establish a novel behavior, increase the frequency of a desirable behavior, or decrease the incidence of an undesirable behavior, the operational mechanism remains consistent: manipulating antecedent stimuli and subsequent consequences in a controlled manner. This rigorous, empirical approach distinguishes behavioral procedures from other psychological interventions that may rely on subjective interpretation or theoretical constructs lacking direct environmental validation.

Furthermore, the procedural integrity of a behavioral intervention is paramount. This means that the procedure must be applied exactly as intended and documented, allowing researchers and practitioners to attribute any observed changes in behavior directly to the specific components of the procedure. For example, a procedure designed to increase compliance might involve a differential schedule of reinforcement (a behavioral procedure), where specific contingent rewards are delivered only after the target behavior occurs. If the procedure is applied inconsistently, its effectiveness cannot be reliably assessed, undermining both its scientific and applied utility. Adherence to these strict methodological criteria is what lends **behavioral procedures** their scientific credibility and robust evidentiary support.

2. Foundational Principles: Linking Procedure to Theory

The design and execution of any behavioral procedure are inseparable from the theoretical foundations of behaviorism. The two primary pillars supporting these procedures are Operant Conditioning, championed by B.F. Skinner, and Classical (or Respondent) Conditioning, initially articulated by Ivan Pavlov. Procedures based on operant principles focus on consequences that follow a behavior, modifying its future frequency. For instance, procedures involving **positive reinforcement** seek to increase behavior by adding a desirable stimulus, while procedures utilizing **extinction** decrease behavior by withholding the expected reinforcing consequence. Operant procedures analyze the three-term contingency--Antecedent, Behavior, Consequence (A-B-C)--and systematically manipulate these variables to achieve the desired behavioral outcome, relying on principles such as shaping, fading, and stimulus control.

Procedures rooted in classical conditioning, conversely, deal with the pairing of stimuli to elicit involuntary responses. While often less emphasized in modern Applied Behavior Analysis (ABA) focused on volitional behavior, classical procedures are fundamental to understanding and treating emotional and reflexive behaviors, such as those involved in phobias or anxiety disorders. Procedures like systematic desensitization, which involves the gradual pairing of anxiety-inducing stimuli with relaxation techniques, are classic examples derived from respondent conditioning principles. A comprehensive behavioral procedure often integrates both operant and respondent elements, particularly in complex interventions addressing clinical issues where reflexive anxiety responses must first be mitigated before new, functional operant behaviors can be taught.

Crucially, behavioral procedures emphasize the concept of **functional relationships**. This means that the procedure must clearly define and test the causal link between the intervention (the independent variable, e.g., the reinforcement schedule) and the resulting change in behavior (the dependent variable). Procedures are therefore highly individualized, as the function of a specific behavior (why it occurs) must be identified--often through a functional behavior assessment (FBA)--before an effective procedural technique can be selected and applied. A procedure that works to reduce attention-seeking behavior will differ fundamentally from one designed to reduce escape-maintained behavior, even if the topography (the form) of the behaviors appears identical. This requirement for functional determination ensures that the intervention addresses the underlying motivational variables rather than merely suppressing the symptom.

3. Contexts of Application: Research Versus Applied Settings

As noted in the primary source material, behavioral procedures serve a dual function, being utilized extensively both in basic scientific research and in applied settings. In the realm of **basic scientific research**, behavioral procedures are employed to rigorously test the parameters of learning, often using highly controlled laboratory environments with non-human subjects. Researchers might use specific reinforcement schedules, such as fixed ratio or variable interval procedures, to study how motivation, response rate, and resistance to extinction are affected by different environmental

manipulations. The goal here is purely theoretical: to advance the understanding of the universal, generalizable laws governing behavior across species, informing the development of more sophisticated behavioral models that can eventually be translated into practical human interventions.

Conversely, in the **applied setting**--most notably within Applied Behavior Analysis (ABA)--behavioral procedures are directed towards achieving socially significant improvement in human lives. This application utilizes established procedures, but tailors them to specific environmental and individual needs, often targeting crucial skills like communication, academic performance, social interaction, and adaptive living skills. Examples of applied settings include educational environments for individuals with developmental disabilities, clinical settings addressing substance abuse (e.g., contingency management), organizational behavior management (OBM) within corporate structures aimed at improving productivity and safety, and public health campaigns designed to modify health-related behaviors.

The transition from basic research findings to applied practice requires a rigorous methodological standard. Applied procedures must not only be effective but also practical, acceptable, and ethical. This necessitates careful documentation using single-subject research designs (e.g., ABAB reversal designs or multiple baseline designs) to demonstrate experimental control, ensuring that the behavioral change is genuinely attributable to the implemented procedure and not to extraneous variables or maturational factors. The application of behavioral procedures is thus characterized by continuous measurement and data-driven decision-making, differentiating it sharply from subjective forms of intervention and ensuring accountability for outcomes.

4. Key Categories of Behavioral Procedures

Behavioral procedures can be broadly categorized based on their primary function: increasing desired behaviors, decreasing undesired behaviors, or teaching entirely new skills. Procedures aimed at **increasing behavior** rely heavily on reinforcement, which may be positive (adding a desirable consequence) or negative (removing an undesirable consequence). Specific procedures under this category include Differential Reinforcement of Alternative Behavior (DRA), which systematically reinforces a desirable substitute behavior while withholding reinforcement for the problem behavior; Differential Reinforcement of Incompatible Behavior (DRI), which reinforces a behavior that cannot physically occur simultaneously with the problem behavior; and **shaping**, which involves reinforcing successive approximations of a target behavior until the complete skill is mastered. These methods focus on building functional replacement skills rather than simply suppressing the problematic behavior.

Procedures designed to **decrease behavior** are generally used when safety or quality of life is severely compromised by a challenging behavior. These procedures include **extinction**, which

involves identifying and permanently discontinuing the reinforcing consequence that maintains the behavior; Response Cost, where a specific amount of earned reinforcers (tokens, money, points) is removed contingent on the occurrence of the behavior; and Time-Out from Positive Reinforcement, where an individual is briefly removed from the reinforcing environment following the target behavior. While punishment procedures are available, ethical guidelines strongly favor the use of reinforcement-based reduction methods, reserving aversive procedures only for extreme cases where documented reinforcement interventions have failed and the behavior poses a significant risk.

Finally, procedures for **teaching new skills** often involve highly structured instructional methods designed to promote efficient acquisition and mastery. These include **chaining**, where complex tasks (like brushing teeth) are broken down into sequential steps that are taught either through forward chaining (teaching the first step first) or backward chaining (teaching the last step first); prompt dependence reduction procedures, which systematically fade prompts (verbal, gestural, physical) to ensure independent performance; and **Discrete Trial Training (DTT)**, a highly structured method used primarily in early intervention to teach foundational skills through rapid, repetitive trials of antecedent-behavior-consequence sequences, maximizing the opportunity for learning and immediate feedback.

5. Methodological Requirements and Integrity

The integrity and efficacy of behavioral procedures are entirely dependent upon strict methodological adherence and objective measurement, forming the bedrock of evidence-based practice. Behavioral procedures demand precise **operational definitions** for both the target behavior and the procedural steps themselves. An operational definition ensures that the behavior is defined clearly enough that multiple independent observers can agree on whether the behavior occurred and whether the procedure was implemented correctly, thereby safeguarding the procedure's objectivity and scientific validity. Without this precision, procedures cannot be reliably replicated or compared across studies or settings.

Furthermore, core to the methodology is the principle of **data collection**. Behavioral procedures require continuous, objective measurement of the behavior before (baseline), during (intervention), and after implementation. This measurement often takes the form of frequency counts (how often the behavior occurs), duration recordings (how long the behavior lasts), latency measures (how long it takes for the behavior to start following a command), or interval recording (whether the behavior occurred during specific time blocks). This quantitative data allows the practitioner or researcher to visually analyze the effectiveness of the procedure through graphic display, facilitating objective, data-driven decision-making regarding whether the procedure needs adjustment, termination, or generalization planning.

The importance of **procedural fidelity** (or treatment integrity) cannot be overstated. Procedural fidelity refers to the degree to which the independent variable (the behavioral procedure) is implemented exactly as written and prescribed. Low procedural fidelity can lead to ambiguous results, potentially causing the failure of an otherwise effective procedure, leading to the false conclusion that the procedure itself is ineffective rather than recognizing the implementation failure. Therefore, behavior analysts often use direct observation, checklists, and inter-observer agreement checks to ensure that those implementing the procedures--whether teachers, parents, or clinical staff--are doing so consistently and correctly, thereby maintaining the experimental control necessary to draw valid conclusions about the procedure's effectiveness.

6. Significance and Impact

The widespread application of structured behavioral procedures has profoundly impacted various fields of psychology, education, and public health, offering empirically supported, data-driven solutions to complex human and societal problems. In clinical psychology, behavioral procedures form the basis of effective third-wave behavior therapies such as Cognitive Behavioral Therapy (CBT), Dialectical Behavior Therapy (DBT), and Acceptance and Commitment Therapy (ACT). While these therapies integrate cognitive components, their effectiveness relies heavily on the systematic use of exposure, skill rehearsal, contingency management, and behavioral experiments--all forms of structured behavioral procedures used to modify dysfunctional response patterns. The significance lies in the procedures' ability to produce measurable and durable changes in observable behavior, offering a highly accountable alternative to less structured interventions.

Perhaps the greatest societal impact is seen in the field of developmental disabilities and special education, where ABA procedures have demonstrated unparalleled efficacy. Intensive, systematic application of behavioral procedures--including DTT, chaining, and differential reinforcement--has been instrumental in teaching communication, self-help, social skills, and academic competence to individuals with autism spectrum disorder, intellectual disabilities, and related conditions. These structured procedures, when applied consistently, have dramatically improved the functional independence, quality of life, and inclusion opportunities for countless individuals who previously faced severe behavioral deficits. This success underscores the utility of a purely functional and environmental approach to understanding and modifying complex human behavior, transitioning treatment away from speculative causes toward observable functions.

Beyond clinical and educational contexts, behavioral procedures are also critical in public health initiatives, such as promoting adherence to medical regimens (often via contingency management), encouraging safe driving practices (via feedback procedures), and developing effective programs for environmental conservation (via antecedent and consequence manipulation). By focusing on the environmental variables that maintain behavior, these procedures offer scalable, cost-effective

solutions for large-scale societal challenges, demonstrating that precise, scientifically derived behavioral methods are powerful tools for positive social change across diverse populations.

7. Ethical Considerations and Debates

While behavioral procedures are inherently scientific, their application necessitates adherence to strict ethical codes, particularly concerning issues of control, coercion, and the use of intrusive techniques. Early debates focused heavily on whether behavioral procedures inherently restrict personal freedom or manipulate individuals against their will. Modern ethical guidelines, particularly those established by professional bodies like the Behavior Analyst Certification Board ([BACB](#)), mandate that all behavioral procedures must prioritize the client's dignity, autonomy, and rights, ensuring that interventions are the least restrictive possible and are aimed solely at maximizing positive, functional life outcomes for the client. Informed consent, competency of the practitioner, and adherence to scientific evidence are non-negotiable ethical requirements.

A primary area of ongoing debate revolves around the selection of behaviors targeted for intervention. Ethical application requires that the behavior chosen for modification must be truly **socially significant** and agreed upon by the client and relevant stakeholders, avoiding procedures designed simply for the convenience of caregivers or staff. Furthermore, procedures involving punishment, though behaviorally effective in certain situations, require the most intense ethical scrutiny and are almost universally implemented only after all reinforcement-based procedures have failed to address a dangerous behavior. When punishment is necessary, it demands stringent oversight, continuous data collection, and integration with a comprehensive plan to teach and reinforce desirable replacement behaviors.

The ongoing critique also addresses the potential for over-reliance on highly structured, discrete procedures that might fail to promote generalization or spontaneity in behavior. Critics argue that an overly mechanistic focus on procedures can sometimes neglect the broader social and emotional context of human learning, potentially resulting in behaviors that are rigid or context-dependent. Practitioners must, therefore, balance procedural rigor with clinical flexibility, ensuring that procedures lead to functional, meaningful, and naturally occurring behaviors that integrate smoothly into the client's natural environment, thereby maximizing the ultimate goal of independence and inclusion.

Further Reading

[Behaviorism \(Wikipedia\)](#)

[Applied Behavior Analysis \(Wikipedia\)](#)

[Operant Conditioning \(Wikipedia\)](#)

[Behavior Analyst Certification Board \(BACB\) Ethics Code](#)

B. F. Skinner (Wikipedia)

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