ABAT Exam Study Guide

Autism Spectrum Disorder

Autism Spectrum Disorder is a complex neurodevelopmental disorder characterized by a range of symptoms that can very significantly in each individual.

Risk Factors for Autism Spectrum Disorder (ASD)

- **Risk factors for Autism Spectrum Disorder (ASD)** are conditions or aspects of an individual's genetics or environment that increase the likelihood of developing ASD

- **Genetic Factors –** having a sibling or parent with ASD increases the likelihood developing ASD

- **Genetic Conditions**

- Fragile X Syndrome

- Tuberous Sclerosis

- Rett Syndrome

Risk Factors for Autism Spectrum Disorder (ASD)

- **Environmental Factors –** there has been concern and some evidence suggesting that exposure to air pollution during pregnancy and early life may be associated with an increased risk of ASD

Diagnostic and Statistical Manual of Mental Disorders (DSM-V)

- **DSM-V outlines specific criteria for the diagnosis of Autism Spectrum Disorder**

- **According to the DSM-V, there are two domains where individuals with ASD may show persistent deficits**
  1. Social Communication
  2. Social Interaction

Social Communication and Interaction Deficits

1. **Social Reciprocity –** difficulty in engaging in back-and-forth conversations and interaction

2. **Nonverbal Communication** – challenges in understanding using nonverbal cues such as eye contact, facial expression, and gestures

3. **Developing, Maintaining, and Understanding Relationships –** difficulty in making friends, empathizing with others, and understanding social norms

Cognitive Deficits

1. **Executive Functioning –** difficulties with planning, organizing, and carrying out tasks

2. **Attention –** challenges in sustaining attention, particularly in non preferred activities

3. **Cognitive Flexibility –** difficulty in shifting from one activity or thought process to another

4. **Memory –** some individuals may have an exceptional memory in specific areas, while others may struggle with memory recall

Language and Communication

1. **Delayed Language Development –** many children with ASD may not speak at all or may have delayed language development

2. **Pragmatic Language** – ability to use language in social contexts, including conversational skills and understanding figurative language

3. **Receptive Language** – is the ability to understand or comprehend language heard and read

4. **Expressive Language –** is the ability to put thoughts into words and sentences

Red Flags

- **Red Flags** used in early diagnosis.

- **Red Flags** for autism are certain behaviors or the absence of typical behaviors that may signal a potential for autism spectrum disorder (ASD) in young children.

Examples of Red Flags

- Lack of social smiling by 6 months of age

- Absence of consistent eye contact or back and forth sharing of sounds, smiles, or other facial expressions by 9 months

- Absence of back-and-forth gestures, such as pointing, showing, reaching, or waving by 12 months

- Any loss of speech, babbling, or social skills at any age

Differential Diagnosis

Differential Diagnosis is the process through which a healthcare professional distinguished between two or more conditions that could be behind a person's symptoms

Differential Diagnosis is made through psychoeducational assessments that measure cognitive and academic skills

Differential Diagnosis is typically made through standardized speech language evaluations

Differential Diagnosis is often based on clinical observation, rating scale, and the child developmental history

Attention Deficit Hyperactivity Disorder (ADHD)

- **Attention Deficit Hyperactivity Disorder (ADHD) –** is characterized by patterns of inattention and/or hyperactivity impulsivity that are inconsistent with the developmental level of the child

- **Attention Deficit Hyperactivity Disorder (ADHD) –** is most commonly known to co-occur with Autism Spectrum Disorder and involves challenges with attention, hyperactivity, and impulsiveness

Legal
Ethical
Professional

Scope and Role of Practice for an ABAT

- **Primary responsibility - direct implementation of behavioral plan under supervision**

- **Data collection** – **to assess the effectiveness of the treatment plan and inform necessary adjustments**

- Maintenance of professional boundaries

- Skill acquisition programs

- Behavior reduction interventions and crisis intervention

- Communication, training, and collaboration

- Adherence to treatment

- Continuing education

QABA

The **Qualified Applied Behavior Analysis (QABA)** credentialing board offers certifications for professionals practicing in the field of Applied Behavior Analysis (ABA), including QASPS and ABAT

To maintain the ABAT certification, you are required to complete at least 12 CEUs to renew every 2 years

Principles

Professionalism – practitioners must conduct themselves professionally and represent their qualifications honestly. They also respect their rights and dignity of all individuals

Responsibility – practitioners are responsible for the welfare of their clients, providing only services for which they are competent and trained

Integrity – practitioners must uphold the highest standards of integrity and must not engage in fraudulent or deceptive behavior

Confidentiality – maintaining client confidentiality and privacy is crucial, except as otherwise required by law

Principles

Maintenance of Competence – practitioners are required to maintain their skills and knowledge, engaging in continuing education and staying current with research and best practices

Documentation – practitioners must keep accurate and detailed records of their work, including data collection and analysis

Collaboration – practitioners collaborate with other professionals in the best interest of their clients

Advocacy – practitioners advocate for the appropriate application of ABA and the rights of individuals receiving services

Advocacy and Collaborative Approach to Intervention

Advocacy – particularly for individuals with autism spectrum disorder (ASD) or other developmental disabilities, refers to the actions taken to support and promote the interest of these individuals.

Collaboration means professionals, caregivers, individuals with disabilities, and relevant stakeholders work together in partnership

Collaboration emphasizes shared decision making, pooling expertise and resources, and respecting the perspectives and contribution of all team members, including the individuals with the disability

Limitation of Confidentiality

Limitation of Confidentiality Mandated Reporting is a legal requirement in many jurisdictions that requires certain professionals, including those in the field of applied behavior analysis to report any suspicion of abuse, neglect, or exploitation of children, elderly individuals, or vulnerable adults to the appropriate authorities

This requirement overrides the standard **confidentiality** agreements between a practitioner and their client

Health Insurance Portability and Accountability ACT (HIPPA)

Health Insurance Portability and Accountability ACT (HIPPA) – provides data privacy and security provisions for safeguarding medical information

The act has become synonymous with the protection of **personal health information (PHI)**, establishing national standards to prevent the disclosure of sensitive patient health information without the patient's consent or knowledge

Privacy Rule and Security Rule

Privacy Rule is sets standards for the protection of individuals medical records and other PHI

Security Rule is sets standards for securing patient health information that is held or transferred in electronic form

Individualized Education Program (IEP) & Individuals with Disabilities Education ACT (IDEA)

Individualized Education Program (IEP) is to ensure that students with disabilities have the opportunity to be involved in and make progress in the general education curriculum

Individuals with Disabilities Education ACT (IDEA) governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children, and youth with disabilities.

Core Principles of ABA

Behaviorism & Behavior Modification

Behaviorism purposes that behavior can be studies in a systematic and observable manner with no consideration of internal mental states

It suggests that only observable behavior should be considered – cognitions, emotions, and moods are far too subjective

Behavior Modification is a therapeutic approach that applies the principles of behaviorism to change undesirable behaviors

Behavior Modification introduce a favorable stimulus to increase the likelihood of a behavior

Classical Conditioning & Operant Conditioning

Classical Conditioning is a learning process that occurs when two stimuli are repeatedly paired

A response which is at first elicited by the second stimulus is eventually elicited by the first stimulus alone

Operant Conditioning is a method of learning that occurs through rewards and punishments for behavior

An association is made between a behavior and consequence for that behavior

When a desirable result follows an action, the behavior becomes more likely to occur again in the future

Ivan Pavlov's Classic Experiment on dogs

- **Conditioned Stimulus – Like a bell**

- **Unconditional Stimulus – Like food**

- **Conditioned Response – Salivation**

Conditioned Reinforcement

- **Conditioned Reinforcement** is a stimulus that has become reinforcing because of its association with another reinforcer

- For example: **Money**

Unconditioned Reinforcement

- **Unconditioned Reinforcement** occurs naturally and does not require learning in order to work

- For example: **Food**

Reinforcement

- **Positive Reinforcement** provides ample reinforcement for compliance with demands to strengthen the behavior.

- This could include verbal praise, tangible rewards, or access to preferred activities

Punishment

- **Positive Punishment** involves presenting an **unfavorable** outcome or event following an undesirable behavior, which decreases likelihood of the behavior occurring again

- **Negative Punishment** involves removing a **desirable stimulus** after a particular undesirable behavior is exhibited, resulting in the behavior happening less often in the future

Three Part Contingency

- **Antecedent (A)** is what happens immediately before the behavior

- **Behavior (B)** is the action or response that is observed

- **Consequence (C)** is what happens immediately after the behavior

Behavioral Terminology

- **Extinction** occurs when a previously reinforced behavior is no longer reinforced, leading to a decrease in the frequency of the behavior over time

- **Extinction Burst** is a temporary increase in frequency, intensity, or duration of the behavior after the removal of reinforcement, often seen before the behavior decreases

- **Deprivation** is a condition in which an individual has not had recent access to a particular reinforcer, which can increase the effectiveness of that reinforcer

Behavioral Terminology

- **Satiation** is the decrease in effectiveness of a reinforcer after it has been provided repeatedly over a short period

- **Reinforcement** is a process that increases the likelihood of a behavior recurring

- **Punishment** a decreases the likelihood of a behavior recurring

Four Basic Types of Schedules

Fixed Ratio (FR) provides reinforcement after a fixed number of response

- For example: **Fixed Rate 5** means every 5th response is reinforced

- For example: **If a teacher gives a student a sticker for every third math problem the student solves correctly**

Four Basic Types of Schedules

Variable Ratio (VO) provides reinforcement after a variable number of responses, based around an average

- For Example: **Variable Ratio 5 reinforcement** is given after an average of every 5th response, but varies from one to the next

- **Variable Ratio** leads to the highest rate of responding

Four Basic Types of Schedules

- **Fixed Interval (FI)** provides reinforcement for the first response after a fixed amount of time has passed since the last reinforcement

- For example: **Fixed Interval minute schedule** would provide reinforcement for the response after 5 minutes have passed since the last reinforcement

Four Basic Types of Schedules

- **Variable Interval (VI)** provides reinforcement for the first response after a variable amount of time has passed, based on an average

- For example: **Variable Interval 5 minutes schedule** would provide reinforcement an average every five minutes

- For example: if a dog trainer gives a treat to a dog for the first correct response after a **varying period of time**

Contingent and Noncontingent

Contingent is the reinforcement or punishment is **directly** dependent on the occurrence of the behavior

It is given only after the target behavior occurred

Noncontingent is the reinforcement or punishment is **not directly** dependent on the behavior

It is given regardless of what the individual does, often on a time base schedule

Primary Reinforcement & Secondary Reinforcement

Primary Reinforcement (Unconditioned Reinforcement) refers to a stimulus that satisfies a biological need and is inherently reinforcing

For example: **Food & water**

Secondary Reinforcement (Conditioned Reinforcement) refers to a stimulus that has acquired its reinforcing power through association with a primary reinforcer

For example: **Money & praise**

Applied Verbal Behavior

- **Mand** a request or a form of communication in which the speaker asks for something that they want or need

- **Tact** a comment or a form of communication used to share an experience or draw attention to something

- **Echoic** is a vocal imitation where the speaker repeats what someone else has just said

- **Intraverbal** is a conversation or a form of communication in which the speaker responds to another's verbal behavior with related but different verbal behavior

Applied Verbal Behavior

- **Textual** is reading written words out loud without understanding their mean

- **Transcription** is writing down what is heard, like taking dictation

- **Autoclitic** is a secondary verbal behavior that modifies the effects of primary verbal operant. It often conveys the speaker's attitude or comments on their own speech

Antecedent Intervention

Positive Behavior Support

- **Positive Behavior Support (PBS)** is a proactive approach to behavioral management that focuses on identifying the underlying reasons for behavior and teaching new skills to replace problematic behaviors

- **Positive Behavior Support (PBS)** is founded on the principle of Applied Behavior Analysis (ABA) and emphasizes the use of positive interventions to promote desirable behaviors, improve quality of life, and minimize the occurrence of challenging behaviors

Positive Behavior Support

- **Functional Assessment** is identifying the function or purpose behind challenging behaviors. This involves understanding the **antecedents** (triggers) and **consequences** that maintain the behavior

- **Behavioral Intervention** is to developing strategies that modify the environment and teach new skills to prevent the occurrence of challenging behaviors. This may involve teaching alternative communication methods, social skills, or coping strategies

Positive Behavior Support

- **Person Centered Planning** is ensuring that interventions are tailored to the individual's needs, preference, and life goals. This is essential for promoting engagement and ensuring the support plan is relevant to the person receiving it

- **Positive Reinforcement** is increasing the likelihood of a desirable behavior by providing positive consequence or reward following the behavior

- **Data Driven Decision Making** is collecting and analyzing data on behaviors and interventions to inform decision making and evaluate the effectiveness of the support plan

The Premack Principle aka Grandma's Rule
Behavior Momentum
Priming

- **Premack Principle** states that more probable behaviors can be used as rewards or reinforcers for less probable behaviors.

- **Behavioral Momentum** is analogous to the physical principle of momentum, it suggest that once a behavior is initiated, it is more likely to continue

- **Priming** is a technique used to prepare an individual to perform a desired behavior or respond to a situation in a desired way. It involves presenting cues or engaging in activities that will make the desired behavior more likely to occur

Picture Exchange Communication System (PECS)

- **Picture Exchange Communication System (PECS)** is to provide a means of communication for individuals who are nonverbal or have limited speech.

Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH)

- **Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH)** use of visual structures and supports to promote independence and learning

Functional Communication Training (FCT)

- **Functional Communication Training (FCT) t**o teach individuals alternative ways to communicate effectively and reduce challenging behaviors.

Social Stories

- **Social Stories** are short, descriptive stories that provide information about a social situation, including what to expect and why, and are designed to help individuals understand and navigate social interactions

Video Modeling

- **Video Modeling** is a teaching technique where individuals learn by watching a video demonstration of a behavior or skill and then imitating the behavior/skill

Visual Schedules

- **Visual Schedules** are supports that use pictures or symbols to represent the sequence of activities or steps of a routine, aiding understanding and management of daily tasks

Skill Acquisition Programming

Specificity Measurability Achievability

- **Specificity** – Goals and objectives should be specific enough to guide intervention strategies

- **Measurability –** Objectives must be quantifiable so that progress can be tracked over time

- **Achievability –** Goals should be attainable given the individual's current abilities and resources available

Generalization & Maintenance

- **Generalization** is for the learner to be able to generalize the imitated behavior to various settings, stimuli, and contexts beyond the initial teaching environment

- **Maintenance** repeated practice of imitated behavior is necessary to ensure that these behaviors are maintained over time

Task Analysis

- **Task Analysis** in ABA is a process where a complex skill or behavior is broken down into smaller, teachable units, which are sequenced into logical steps

Implementation Task Analysis

1. **Identify the task**

2. **Define the final outcome**

3. **Break down the task**

4. **Sequence the steps**

5. **Validate the task analysis**

6. **Teach the task**

7. **Monitor progress**

8. **Adjust as necessary**

9. **Fading support**

10. **Generalize and maintain**

11. **Review and update**

Prompts

- **Prompts** are used to increase the likelihood that an individual will engage in the correct or desired behavior

- When using **prompts**, a common strategy is to apply them from less intrusive to most intrusive, known as "**least to most prompt**"

- This approach encourages the learner to attempt the response with the least amount of assistance first, gradually increasing the level of prompting only

Types of Prompts from least to most intrusive

1. **Gestural Prompt (**Pointing, nodding, or looking at the object)

2. **Visual Prompt** (Pictures, text, symbols, or other visual cues)

3. **Verbal Prompt** (Words)

4. **Modeling** (Demonstrating)

Prompt Fading and Demand Fading

- **Prompt Fading** is the strategy used to gradually remove these prompts, so the individual learn to perform the behavior without assistance

- **Demand Fading** is a technique designed to help individuals gradually tolerate and respond to demands more effectively by initially reducing the member or difficulty of demands and then systematically increasing them over time

Escape Extrication

- **Escape Extrication** sometimes combined with demand fading, this involves not allowing the individual to escape the demand situation as a consequence of challenging behavior, while still providing support and ensuring success

Functional Communication Training (FCT)

- **Functional Communication Training (FCT)** teach the individual appropriate ways to request a break or decline a task, which provides them with a socially acceptable alternative to challenging behaviors

Pairing

- **Pairing** is a process used to establish oneself as reinforcer for a client

- This involves associating the therapist or educator with positive experiences so that the client feels comfortable and motivated to engage in the learning process

Pairing Process in ABA

1. **Establishing trust**

2. **Association with positives**

3. **No immediate demands**

4. **Noncontingent reinforcement**

5. **Building positive associations**

6. **Transition to learning**

7. **Outcome of successful pairing**

Modeling

- **Modeling** is a key teaching strategy used in ABA that involves demonstrating a desired behavior to help a client learn through imitation

- **Modeling** is often used for teaching new behaviors or skills, from basic motor actions to comple social interactions

- **Modeling** can help reduce prompt dependence since the learner is encouraged to initiate the correct response after observing the behavior

Types of Models

1. **Peer Modeling**

2. **Adult Modeling**

3. **Self Modeling**

Imitation

- **Imitation** is a foundational learning strategy in ABA that involves an individual observing and them replicating the action of other

- **Importance of Imitation in ABA**

1. Skill acquisition

2. Social development

3. Naturalistic learning

Errorless Learning

- **Errorless Learning** is a technique where the educator structures learning in such a way that the learner is unlikely to make mistakes

1. Providing immediate prompts

2. Gradually fading prompts

3. Consistent reinforcement

4. Minimizing the opportunity for errors

Error Correction

1. **Immediate correction**

2. **Modeling the correct response**

3. **Guided practice**

Discrete Trial Teaching (DTT)

- **Discrete Trial Teaching (DTT)** is a structured ABA Technique that involves a series of distinct, clear phases aimed at teaching specific skills

- **Discrete Trial Teaching (DTT)** is designed to teach skills systematically and incrementally ensuring that complex tasks are broken down into manageable steps

Discrimination Training

- **Discrimination Training** is a process where a learner is taught to respond differently to two or more stimuli

Shaping

- **Shaping** is a technique used in behavioral psychology that involves gradually modifying a learner's behavior towards a desired goal by reinforced **successive approximations** of the target behavior

1. Identify the target behavior

2. Determine the starting behavior

3. Develop successive approximations

4. Reinforce the approximations

5. Move through the steps

6. Achieve the target behavior

Backward Chaining

- **Backward chaining** starting instruction from the last step of the task and moving backward

1. Starting at the end

2. Building independence

3. Immediate sense of completion

Forward Chaining

- **Forward Chaining** starting instruction from the begin step of the task and moving to the end

1. Starting at the beginning

2. Sequential learning

3. Gradual building of the task

Natural Environmental Teaching (NET)

- **Natural Environmental Teaching (NET)** is a strategy used within ABA that involves teaching skills in the natural environment, often through play and daily activities, rather than in structured setting like a classroom or therapy center

Pivotal Behavior

- **Pivotal Behavior** are key behaviors that once learned, can have widespread effects on other behaviors and areas of development

Pivotal Areas

- Motivation

- Self management

- Social imitations

- Responding to multiple cues

- Interventions

Pivotal Response Training (PRT)

- **Pivotal Response Training (PRT)** is an evidence-based intervention model derived from ABA principles

- **Pivotal Response Training (PRT)** aims to produce broad improvements across other social, communicative, and behavioral areas

Behavior Reduction Interventions

Behavior Intervention Plan (BIP)

- **Behavior Intervention Plan (BIP)** is a strategic plan that is designed to address **problematic behavior** exhibited by students, typically in a school setting

- **Behavior Intervention Plan (BIP)** is based on the results of a functional behavior assessment (FBA) and outlines a series of strategies and interventions to reduce, eliminate, or replace the unwanted behavior with more desirable behaviors

Component of Behavior Intervention Plan (BIP)

1. **Descriptive of the problem behavior**

2. **Functional Assessment Data**

3. **Behavioral goal**

4. **Intervention strategies**

5. **Support strategies**

6. **Crisis plan**

7. **Data collection methods**

8. **Implementation and monitoring**

Purpose of Behavior Intervention Plan (BIP)

- To provide proactive and reactive strategies to address challenging behaviors

- To teach and reinforce positive behaviors in place of negative ones

- To ensure a consistent approach to behavior management across different settings and personnel

4 Functions of Behavior

1. **Attention**

2. **Escape**

3. **Tangible**

4. **Sensory stimulation**

Functional Behavior Assessment (FBA)

- **Functional Behavior Assessment (FBA)** is a process used to understand the purpose or function of a specific behavior

Joint Attention Contingency Interventions

- **Joint Attention** is the shared focus of two individuals on an object or event

- **Contingency Interventions** are behavioral strategies used to modify and manage behaviors by manipulating the consequences of those behaviors

Common Contingency Interventions

1. **Token Economy (Reinforcers) –** It's effective in reinforcing positive behavior and teaching new skills

2. **Positive Practice –** Individual is required to practice a correct form of behavior or more acceptable alternative behavior repeatedly

3. **Over Correction –** requires the individual correct the consequences of their inappropriate behavior in an exaggerated manner

4. **Response Cost –** remove positive reinforcer

5. **Time Out –** a period no access to positive reinforcement

Differential Reinforcement Procedures

Differential Reinforcement is a key concept in behavior modification where reinforcement is provided for certain behaviors while others are not reinforced

1. **Differential Reinforcement of Other Behavior (DRO)** providing reinforcement only when the target behavior has not occurred for a specific period

2. **Differential Reinforcement of Alternative Behavior (DRA)** reinforcement is given for a specific desirable behavior that serves as an alternative to the unwanted behavior

Differential Reinforcement Procedures

3. Differential Reinforcement of Incompatible Behavior (DRI) this method reinforces behavior that are physically incompatible with the problem behavior

4. **Differential Reinforcement of Low Rates of Behavior (DRL)** is used to reduce the frequency of a behavior but not eliminate it entirely

5. Differential Reinforcement of High Rate of Behavior (DRH) reinforces behaviors that occur at high rates

Data Collection & Analysis

Components of Operational Definitions

- **Operational Definitions** are crucial in research and data collection as they specify precisely what is being measured and how it is measured

1. **Specificity**

2. **Measurability**

3. **Objectively**

4. **Relevance**

Types of Assessments

1. **Preference Assessments** used to determine the likes or preference of an individual

2. **Self Monitoring –** involves individuals tracking and recording their own behaviors or responses

3. **ABC Assessment –** used to understand the context of a specific behavior

4. **Environmental Evaluation –** looking at the physical, social, and attitudinal environment in which behavior occur

Types of Measurement

1. **Frequency / Event Recording –** counting number of times a behavior occurs within a specific time period

2. **Duration –** how long a behavior lasts

3. **Time Sampling –** observation periods / intervals

4. **Interval Recording –** observing whether a behavior occur or not during specified intervals of time

5. **Partial Interval Recording –** observer records whether the behavior occurred at any time during the interval

6. **Latency –** measures the time that elapses between the presentation of a stimulus and the

Graphs

- **Line Graphs** used to display data points connected by straight lines

- **Scatter Plots** consist of points plotted on a horizontal and vertical axis show the relationship between two variables

- **Bar Graphs** use bars of different heights or lengths to represent data

Interobserver Agreement (IOA)

- **Interobserver Agreement (IOA)** refers to the degree to which two or more independent observers report the same observed values after observing the same events

Thank you

Reference

SWANSON, JESSICA. ABAT Applied Behavior Analysis Technician Study Guide