

Chapter 4

Planning-Focused Case Studies from Adolescence to Adulthood

Abstract Building on chapters one through three, the current chapter (chapter four) focuses on utilizing behavior assessment findings to create intervention programs to support adolescents and adults. Emphasis continues to be placed on working within multidisciplinary teams; however, in these stages of the life span, transition planning—from school to employment to independent living—becomes an increasingly critical area of focus. These transitions can be particularly complex for individuals with ASD and other developmental disabilities. The case scenarios presented in this chapter explore complex and sensitive dynamics often experienced during the adolescent, adult, and senior years. Considerations such as independent work and living, social skills, relationships with colleagues at work, with friends and neighbors, and with intimate partners are explored. The cases presented in this chapter challenge learners to consider the interplay of biological, psychological, and social factors that contribute to the onset and maintenance of behavior difficulties. These cases will further highlight the importance of positive and strength-based interventions along with the complex ethical considerations associated with developing the least intrusive, yet evidence-based, behavior support programs. In Chapter 4, entitled “Planning-Focused Case Studies for Adolescents and Adulthood,” these complex considerations are explored through five case scenarios involving adolescents, adults, and seniors in home, school, work, and community settings.

Keywords Planning · Intervention programs · Adults · Adolescents · Life span · Transition planning · School · Employment · Independent living · Autism · Biological factors · Psychological factors · Social factors

CASE: ii-P6

Why Does Jana Struggle in Some Places, and Not Others?

Setting: Home **Age Group:** Preschool

LEARNING OBJECTIVE:

- Determine the behaviors for change by operationalizing them and collecting data

TASK LIST LINKS:

- **Measurement**
 - (A-13) Design and implement discontinuous measurement procedures (e.g., partial and whole interval, momentary time sampling).
- **Behavior-Change Considerations**
 - (C-02) State and plan for the possible unwanted effects of punishment.
- **Identification of the Problem**
 - (G-04) Explain behavioral concepts using nontechnical language.
 - (G-05) Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.
 - (G-06) Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
 - (G-07) Practice within one's limits of professional competence in applied behavior analysis, obtain consultation, supervision, and training, or make referrals as necessary.
- **Measurement**
 - (H-01) Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
 - (H-02) Select a schedule of observation and recording periods.
 - (H-03) Select a data display that effectively communicates relevant quantitative relations.
 - (H-05) Evaluate temporal relations between observed variables (within and between sessions, time series).
- **Assessment**
 - (I-01) Define behavior in observable and measurable terms.
 - (I-02) Define environmental variables in observable and measurable terms.
 - (I-03) Design and implement individualized behavioral assessment procedures.

KEY TERMS:

- **Environment**
 - The construct of environment is essential to ABA, where “emphasis is placed on the functional relationship between human behavior and the environment” (Hernandez and Ikkanda 2011, p. 283). The environment is a setting or place that “lie[s] beyond the individual” (Neal and Neal 2013), each with distinct features (e.g., school, home, and community), often where social interactions happen.

- **Gender Identity**

- Gender identity can be defined as “one’s innermost concept of self as male, female, a blend of both or neither—how individuals perceive themselves and what they call themselves. One’s gender identity can be the same or different from their sex assigned at birth” (Human Rights Campaign 2016)

- **Operationalize**

- To operationalize a behavior is to provide a carefully developed definition that is not only observable, but also measurable: “a clear, precise description of the events or items being measured” (Mayer et al. 2014, p. 134).

- **Paraprofessional**

- In the ABA field, a paraprofessional can be described as a trained employee of a school or agency typically responsible for the provision of direct service, such as “the day-to-day implementation of one-on-one treatment” (Serna et al. 2015, p. 2) and who “carries out intervention methods under the direct supervision of a BCBA” (p. 3).

- **Unstructured Time**

- Unstructured times in the school environment are typically thought of as periods of time in the school day where minimal or no external structure is provided (e.g., lunch period) by school personnel (e.g., teachers); instead, students focus on socialization (Koegel et al. 2014).

Why Does Jana Struggle in Some Places, And Not Others?

Fifteen-year-old Jana is a complex high school student attending a large, urban high school, spread over three floors containing hundreds of classrooms. She is an adolescent girl—complicated all on its own—in an academic program for high-achieving students, with a diagnosis of Autism Spectrum Disorder. During the second term of class this year, her average hovers around 93 %, which is typical for her. Jana excels in Math- and Science-based courses (of which she takes plenty) but struggles in courses that are heavily based on language and literature—and social understanding. Without these latter courses, her average would be closer to 97 %. She is already planning to apply for post-secondary programs that will fit with her areas of strength. But in the high school setting, she still sometimes struggles when high school life moves beyond the academics and into its social components.

Over a brief moment of break time in the high school’s large staff room, the guidance counselor, various subject teachers, and/or some of the school’s **para-professionals** (both on Jana’s IEP team) often chat. Today, their conversation was about next steps for Jana. “I just do not quite get what is going on with Jana these days,” said one of the paraprofessional. “Although I am only ‘officially’ with her to

check in a few times a day to see if she has any outstanding needs, I often bump into her when I am called to deal with issues concerning other students. I am focusing on the issue I have been called in to deal with but there are times when I hear quite a bit of yelling and even growling—and see some shoving—coming from Jana but I can't hear enough of the conversations, nor pay enough attention to figure out exactly what is going on between her and the other students."

"And I just never see this, ever," replied her Calculus teacher. "She is fine in class. She works hard, she gets everything done (usually early). She listens to lectures. She will even show her calculations up front to share with the class. Granted, she is fairly quiet and doesn't interact much with others. But I would be completely shocked if I heard her ever *growl* in my class. This doesn't make sense to me. I just don't see it. Is this kind of behavior happening in her other classes?"

The paraprofessional consulted her notes: "Not that I can see, no. It is like there is a different world going on behind the scenes in the washrooms, in the hallways, by the lockers, and probably in the cafeteria, too. Maybe even outdoors. I think we'd have quite the story about what really happens in high school if we paid more attention to these **environments**. It is kind of scary how different it is. And I don't mean just for Jana. I think it's time for a meeting so we can stop this in its tracks. Let me chat with the guidance counselor and see what she can pull together. Okay?"

Luckily, Jana's father—her primary, custodial caregiver—was available quite quickly, and the IEP team came together. For the first time, the school's behavior counselor also attended the meeting regarding Jana. They began by addressing Jana's father. First, the guidance counselor spoke, "As we have talked about on the phone, Jana has run into some difficulties this year. It seems like these problems are not related to her academics or anything that happens inside the classroom, in that sense. From our informal notes that we have gathered so far, and in consultation with one another, it seems that she is struggling in what we would call "**unstructured**" time. So, socially-based times like hanging out by the lockers, chatting in the hallways and washrooms, and eating lunch together in the cafeteria. She is often seen slamming lockers, punching her fist into the wall, and yelling. Her subject teachers express great surprise that she is having difficulty anywhere (like what happened earlier today, where she threw a peer's gym shoes out the window), because they see none of it in class time, even in her less-preferred classes like Advanced Placement English."

Jana's father, looking comfortable, but concerned, answered, "Yes, I am not surprised. Keep going: tell me more."

The behavior counselor took a turn, "While I have just joined Jana's team—it's nice to meet you and I have some paperwork for you to complete—it sounds like we should do a few things next. One, we should **operationalize** Jana's challenging behavior so we all know exactly what the behavior is that is causing difficulties and so we would all describe it in the same manner. Then we need to gather some formal data. I suggest a scatterplot that will show us exactly when these incidents are occurring. I also suggest that we talk to Jana about all of this, including the data collection. She might have some insight into what is going on behind the scenes where we cannot see what is happening ourselves. I was hoping that she would attend today, actually, but I hear she is not feeling well. Before I let the next person

speak, I want to emphasize that every person is complex, and depending on diagnoses, skills, strengths, and needs—as well as the environment—behaviors can be quite different. And environment doesn't need to mean home versus school versus community settings; it can also mean the classroom versus the hallway versus the cafeteria. There might be variables happening in those latter places that we may not know, see, or understand—yet.”

Jana's father nodded throughout, “And you are right on that last one for sure. I can actually provide some insight into that. Jana wasn't willing to share this information before, but since the “cat is out of the bag” so to speak with her peers, she asked me to tell you too. That is actually the reason she didn't come to the meeting. She has been struggling with her gender identity lately, and some of the boys in her grade have “caught her”—this is what Jana says—in the boys' washrooms where she says she is more comfortable. So you can imagine the gossip that is happening. I am afraid she is taking a lot of teasing and mocking from pretty much everyone. It would be my prediction that this isn't happening when teachers are around. So, how are we going to find out what's happening when teachers aren't there, and how are we going to stop it, before it stops her from being such a successful student?”

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) List three advantages and three disadvantages to using a scatterplot in this situation with Jana to determine when the behaviors are occurring.

(Q2) Referencing the Web site below, indicate the types of measurement systems that could be used with Jana with the scatterplot (i.e., frequency and duration). What measurement system would be most advantageous in this situation to give the team the information that they need.

http://www.specialconnections.ku.edu/?q=behavior_plans/functional_behavior_assessment/teacher_tools/scatter_plot

Processes

(Q3) Social interactions and unstructured time is difficult for many individuals with ASD. Indicate if there is a different data collection method that you could utilize with Jana other than the scatterplot that would provide you with additional or different information, especially given the information Jana's father shared regarding her gender identity.

(Q4) In this situation you are trying to measure unstructured periods of time, would you use an observational method of data collection having someone else collect data, or would you use a self-management strategy? Why or why not?

Practice

(Q5) Create an operational definition of Jana’s behavior that you will measure. You may need to create more than one.

(Q6) Looking at the scatterplot below, what does the data indicate is occurring? What other information would have been helpful if a different data collection method was used (Table 4.1)?

Table 4.1 Example scatterplot of Jana’s challenging behavior at school

| Time Interval | Class/Activity | Date: Oct 1 | Oct 2 | Oct 3 | Oct 4 |
|----------------|----------------|----------------|-------|-------|-------|
| 8:15–8:29 AM | Arrival | | | | |
| 8:30–8:44 AM | Chemistry | | | | |
| 8:45–8:59 AM | Chemistry | | | | |
| 9:00–9:14 AM | Chemistry | | | | |
| 9:15–9:29 AM | Chemistry | | | | |
| 9:30–9:44 AM | Chemistry | | | | |
| 9:45–9:59 AM | 1st Break | | | | |
| 10:00–10:14 AM | Calculus | | | | |
| 10:15–10:29 AM | Calculus | | | | |
| 10:30–10:44 AM | Calculus | | | | |
| 10:45–10:59 AM | Calculus | | | | |
| 11:00–11:14 AM | Calculus | | | | |
| 11:15–11:29 AM | 2nd Break | | | | |
| 11:30–11:44 AM | Lunch | | | | |
| 11:45–11:59 AM | Lunch | | | | |
| 12:00–12:14 PM | Lunch | | | | |
| 12:15–12:29 PM | Lunch | | | | |
| 12:30–12:44 PM | Lunch | | | | |
| 12:45–12:59 PM | 3rd Break | | | | |
| 1:00–1:14 PM | Biology | | | | |
| 1:15–1:29 PM | Biology | | | | |
| 1:30–1:44 PM | Biology | | | | |
| 1:45–1:59 PM | Biology | | | | |
| 2:00–2:14 PM | Biology | | | | |
| 2:15–2:29 PM | 4th Break | | | | |
| 2:30–2:44 PM | Literature | | | | |
| 2:45–2:59 PM | Literature | | | | |
| 3:00–3:14 PM | Literature | | | | |
| 3:15–3:29 PM | Literature | | | | |
| 3:30–3:44 PM | Literature | | | | |
| 3:45–3:59 PM | Wait for bus | | | | |

Legend:

 Occurrence of Behavior

(Q7) Develop a data collection method using a self-management strategy that you could create with Jana to help understand what is occurring in her environments to help plan for the intervention. Use the steps in the Web site below to help guide your practice.

<http://www.iidc.indiana.edu/pages/Dont-Forget-About-Self-Management>

Reflection

(Q8) Why is it important to design a program for unstructured periods for individuals with ASD? How does this help with quality of life or social validity?

(Q9) How does Jana's current struggle with gender identity influence the intervention planning process? What other supports or strategies may be warranted?

(Q10) Guideline G-07 on the *Tasklist* (BCBA, 2012) indicates that behavior analysts are to practice within their own limits of professional competence. In this situation, do you think that a behavior analyst in a school setting has the necessary professional development to deal with someone who is facing gender identity issues? Do other fields besides behavior analysis need to be involved, if so which ones and how (Reference Ethics Box 4.1, Behavior Analyst Certification Board, 2014)?

Ethics Box 4.1

Professional and Ethical Compliance Code for Behavior Analysts

- 1.02 Boundaries of Competence.
 - (a) All behavior analysts provide services, teach, and conduct research only within the boundaries of their competence, defined as being commensurate with their education, training, and supervised experience.
 - (b) Behavior analysts provide services, teach, or conduct research in new areas (e.g., populations, techniques, behaviors) only after first undertaking appropriate study, training, supervision, and/or consultation from persons who are competent in those areas.
- 1.05 Professional and Scientific Relationships
 - (c) Where differences of age, gender, race, culture, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status significantly affect behavior analysts' work concerning particular individuals or groups, behavior analysts obtain the training, experience, consultation, and/or supervision necessary to ensure the competence of their services or they make appropriate referrals.

Additional Web Links

Self-Management

<http://www.asatonline.org/for-parents/learn-more-about-specific-treatments/applied-behavior-analysis-aba/aba-techniques/self-management/>

Defining Behavior

<http://iris.peabody.vanderbilt.edu/wp-content/uploads/2013/05/ICS-015.pdf>

Scatterplot Data Collection

<http://www.autismoutreach.ca/elearning/applied-behaviour-analysis-aba/scatterplot-data-collection>

Data Sheets

<http://www.behaviorbabe.com/datasheets.htm>

Interventions for Unstructured time for Individuals with ASD

<http://www.hdc.lsuhs.edu/lasard/presentations/workgroups/2012%20213%20Success%20at.%20Recess%20and%20Other%20Unstructured%20Times.pdf>

CASE: ii-P7**Changing Ilyas's Outcomes by Changing his Environment**

Setting: Home Age Group: Adulthood

LEARNING OBJECTIVE:

- Determining strengths and skill building necessary for an adult transitioning into a supported living environment

TASK LIST LINKS:

- **Behavior-Change Considerations**
 - (C-01) State and plan for the possible unwanted effects of reinforcement.
- **Behavior-Change Systems**
 - (F-06) Use incidental teaching.
- **Identification of the Problem**
 - (G-01) Review records and available data at the outset of the case.
 - (G-03) Conduct a preliminary assessment of the client in order to identify the referral problem.
 - (G-06) Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
 - (G-08) Identify and make environmental changes that reduce the need for behavior analysis services.
- **Measurement**
 - (H-01) Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
 - (H-02) Select a schedule of observation and recording periods.
 - (H-03) Select a data display that effectively communicates relevant quantitative relations.

- **Intervention**

- (J-14) Arrange instructional procedures to promote generative learning (i.e., derived relations).

KEY TERMS:

- **Deficits**

- In the field of developmental disabilities and education, a person’s deficits in skills are often the focus of assessment and intervention, focusing on their weaknesses in order to qualify them for additional supports or special education services in the school system (Cosden et al. 2006).

- **Group Homes**

- Residences for groups of individuals with similar difficulties that arose after the deinstitutionalization movement, whereby individuals had homes in the community with a group of other individuals which are staffed to provide the support and care that is individualized to each individual (Felce et al. 2008).

- **Independent Living**

- Independent living focuses on the self-determination of individuals with disabilities and the belief that they have the right to live as independently as possible. Independent living skills are the skills that individuals need to live a more independent life, including anything from meal preparation, to making choices, to living in a supportive living arrangement (Ritchie and Blanck 2003).

Changing Ilyas’s Outcomes by Changing His Environment

The parents of 30-year-old Ilyas were feeling tired. Having waited until later in life to have a family in the first place, and then after three lusty boys making their way into the world barely two years apart each, Ilyas was born on his mom’s 42nd birthday. Of course he was a welcome delight, but now things are complicated as they continue to care day-to-day for him, a now full-grown son with a developmental disability, while they themselves started to feel the effects of aging as they entered their seventh decade of life. “There is also that little part of me,” intoned Ilyas’s mother, quietly, “that says that it should be my time at some point. All of our friends are long retired, taking cruises, vacations, and doing house exchanges all over the world. I feel like we have earned that turn, too.” As grandparents to six grandchildren of various ages who were growing up very quickly and still-involved parents to their three other, older children, they longed to visit more regularly, without upsetting Ilyas’s schedule.

“Perhaps,” mused Ilyas’s father, “it is really time to explore ours—and Ilyas’s—options for more **independent living**. At least, more independent from us. And we need to update our wills, too. We must make sure that Ilyas’s future is always

protected, even if we are not here or he is not with us, just as we have always done. Maybe it's time to involve 'the professionals' once again."

Frustrated by what always seemed to be a focus on diagnoses and **deficits** from the time that Ilyas was young and involved clinicians confirming his developmental disability, his parents had gradually moved away from what they called "the professionals," and typically taught and supported Ilyas on their own. After he left school at the age of 20, this became even more true. His parents developed a small business from the basement of their home, delivering healthy food from the local farmers' markets to senior citizens with low mobility. After 10 straight years in this routine, Ilyas did almost everything except the complex accounting and taxes, and drive the van. "We need to ensure that wherever Ilyas is in the future, he is able to maintain his working life, and the self-esteem we know he derives from contributing to our community," added his mother. Ilyas parents were quite ready for a second retirement from this second career which was developed around Ilyas's skills and needs.

In the following weeks, they visited at least a dozen **group homes** in their sprawling city, from smaller, downtown locales near all sorts of services and entertainment venues, to larger homes with more live-in clients in serene, suburban settings. In addition to viewing each venue, they kept detailed notes on each one, much like they did when they purchased their own home, decades ago. They also met with the staff and talked about the unique context of each group home. Some were run with state-funded money, and many others were run with private funds, supplemented by rental and care fees paid by the clients, the parents of clients, or trust funds carefully set up by parents or guardians *thinking* about—and planning for—future needs.

Narrowing down their choices after lengthy and difficult family conversations during this major time of transition for Ilyas and his family, they set appointments with the directors of three of the potential group homes that they had earmarked as best possibilities for his present and future needs. Following these meetings, they gathered their notes again and considered their choices with a friend who had known the family for nearly all of Ilyas's life and always showed a special interest in Ilyas. Ilyas parents discussed the group homes a little less optimistically than before. "It seems," started Ilyas's father, "that everyone we have spoken to focuses on his developmental disability. Not only that, they seemed to speak barely of anything else but the potential difficulties he might have in their homes: in the environments. It really wasn't all that positive. I don't understand why they don't want to first get to know Ilyas before they make judgments and recommendations. It's not like every person with a developmental disability is alike. And it's not like every person with a developmental disability has only needs and no strengths and no possibilities and no potential for learning."

Ilyas's mother responded, "True, both you and I realize that Ilyas does need a number of independent living skills which are hard for us to teach and encourage when he is living at home and dependent on us. But he does have many skills that are very positive, including excellent **social skills**. They don't seem to be taking this into account—they don't ask. They haven't met him. They haven't observed him going about his day. So how do they really know?"

The family friend had been following the conversation, but hadn’t really contributed anything more than some nods and brief interjections. “I wonder,” she suggested, “if the problem is not that you have turned to some professionals to help you through this transition. But perhaps you have turned to the wrong set of professionals. Have you thought about seeking out a professional in applied behavior analysis? Those with ABA expertise will focus on arranging the environment for success and teaching new skills for success in that environment.” Ilyas’s parents, cautiously optimistic, prepared to reach out to a behavior analyst.

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) One definition of social validity includes: “A feature of measured results that includes (1) the social significance or importance of the goals, (2) the social appropriateness of the procedures, and (3) the social importance of the effects” (scienceofbehavior.com, n.d.). Keeping this in mind, how does social validity play a role or how is it defined in Ilyas’s case?

(Q2) What is the difference between looking at a strength-based approach versus a skill-deficit approach? How does this work with the principles of applied behavior analysis? Use the chart below to help guide your answer (Table 4.2).

Table 4.2 Strength-based approach versus skill-deficit approach (Luong 2013)

| Strength-based concepts | Deficit-based concepts |
|---------------------------------------|--------------------------------|
| At-potential | At-risk |
| Gifts | Weaknesses |
| Participate | Exclude |
| Determined | Stubborn |
| Understand | Diagnose |
| Opportunity | Ineligible |
| Applaud (i.e., successes) | Punish (i.e., noncompliance) |
| Time-in | Time-out |
| Empower | Control |
| Process-focused | Behavior-focused |
| Flexible | Rigid |
| Unique | Abnormal |
| Person first | Professional first |
| Finds, builds, and utilizes strengths | Ignores or minimizes strengths |
| Client-centered | Mandate-focused |

Processes

(Q3) What would be one of the first things that you would do when meeting Ilyas and his family to understand his current skills and goals for future skill building?

(Q4) How would the below checklist assist in determining a plan for Ilyas in his choosing a supported living environment for him? Determine how you would use the checklist with Ilyas (Council Bluffs, n.d.)?

https://docs.google.com/file/d/0BxGP4iWt8SZ_SIFtcENZS3VuVUK/edit

Practice

(Q5) Based on the skills checklist on page 15 of the *Transition Health Care Checklist* at the link below, what would be some preliminary, achievable goals that you could present to the team?

<http://www.waisman.wisc.edu/wrc/pdf/pubs/THCL.pdf>

(Q6) What observation schedule and type of data collection would you use in Ilyas’s case when planning for his goals?

(Q7) Create a data collection sheet to measure Ilyas’s current level of independence in the home and in his business. Create a sheet that would assist you in explaining Ilyas’s current skills and skills that would lead to future success.

Reflection

(Q8) What could group home personnel change in order to indicate to the family that they were interested in Ilyas as an individual person and understood his strengths? How did language play a role?

(Q9) What are some benefits of a strength-based approach and what are some difficulties with it?

(Q10) Create 10 questions that you would ask Ilyas to determine skills that he would like to develop based on a strength-based approach (Table 4.3).

Table 4.3 Case examples using strength-based approach (ResearchGate, 2006)

| Potential areas of strength | Example of strength | How to use the strength in an intervention |
|--|--|---|
| Interests —Does the learner have any special interests or favorite characters? | Gloria knows a lot about cellphones. She can talk about many the different makes and models, the differences between the various operating systems, and will spend hours looking at pictures of cellphones | Gloria is struggling to learn to identify numbers when they are presented in an array on the table. Her clinical supervisor suggests the team try presenting numbers on cellphones and having her identify which cellphone is displaying the target number |
| Routine and Rules —Consider how the learner acts when it comes to rules or routines | Arden learns routines quite quickly, once he is walked through something once or twice he gets the routine down and is able to complete it independently | Arden’s teachers were struggling to get Arden to independently pack his backpack and the end of the day. When they asked his mom how she is able to get him doing so many tasks independently she explained that it helps to do it the same way a few times with Arden, then he will know what the routine is |

Additional Web Links

Strength-Based Perspective with Families and People with Disabilities

<http://familiesinsocietyjournal.org/doi/abs/10.1606/1044-3894.636>

Effective Communication with Adults with Developmental Disabilities

<http://vkc.mc.vanderbilt.edu/etoolkit/general-issues/communicating-effectively/>

Independent Living

http://www.cilt.ca/documents%20of%20the%20cilt%20website/ind_living_medical_model.pdf

CASE: ii-P8

Shape up, Cris, or ship out!

Setting: School Age Group: Adulthood

LEARNING OBJECTIVE:

- Determine a team-based approach to creating an intervention plan

TASK LIST LINKS:

- **Fundamental Elements of Behavior Change**
 - (D-15) Identify punishers.
 - (D-19) Use combinations of reinforcement with punishment and extinction.
- **Behavior-Change Systems**
 - (F-01) Use self-management strategies.
- **Identification of the Problem**
 - (G-01) Review records and available data at the outset of the case.
 - (G-03) Conduct a preliminary assessment of the client in order to identify the referral problem.
 - (G-06) Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
 - (G-08) Identify and make environmental changes that reduce the need for behavior analysis services.
- **Measurement**
 - (H-01) Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

KEY TERMS:**• Bio-psycho-social Model**

- A bio-psycho-social model is an integrated, interdisciplinary approach to support, intervention, and treatment utilized for complex conditions with influences in multiple domains (e.g., medical, psychological, and social) (Griffiths and Gardner 2002).

• Dual Diagnosis

- A dual diagnosis refers to a combination of a substance use disorder and a psychiatric disorder (World Health Organization 2015). Dual diagnosis can also be used to refer to an individual having both a psychiatric disorder and a development disability (Centre for Addiction and Mental Health 2016).

• Text-to-Speech

- Text-to-speech is an example of an assistive technology software that uses “computer-generated speech as a tool for individuals who learn more effectively and efficiently through a multimodal experience and is becoming more commonly available (e.g., in cell phones, tablet computers, and websites).

• Word Prediction

- Word prediction software programs are assistive technology tools that typically work in conjunction with word processors, providing lists of contextual, semantically correct word possibilities predicted from only one or a few typed letters. This allows its users to recognize potential choices read aloud through text-to-speech technology and make word choices, rather than writing and spelling individual words. Users often struggle with print-based reading and writing.

Shape Up, Cris, Or Ship Out!

Crisanto, known to his friends as Cris, was working toward his education degree at a small college focused only on teacher education programs. Most of his classes were capped at 35 students, and often only 18 or 20 were enrolled in each one. At 20 years of age and into the second term of his third year of courses, he thought he had it all figured out. He met with the department of student services and his disability consultant at the college regularly to ensure he was coping well, and using

—or learning—strategies to cope with his **dual diagnosis** of AD/HD and a Specific Learning Disorder which has a noted impact on his ability to process and create print-based information. One of the strategies he figured out how to use early on (with a significant number of individualized supports) in his first year was technology. He started using the electronic planner on his phone with great discipline and care as soon as it became clear (to him and his professors) that he needed it, and took a number of recommended evening classes to learn visual organizational tools, **word prediction** programs, and **text-to-speech** technology. His essays became well formulated, once he could focus on his ideas and not worry about his struggles with transferring his ideas from his brain to a pen, pencil, or the looming blank screen of his laptop. By his second year of classes, most of his grades were in the A and B ranges, with a few of what he called “hiccups” in his language-based classes, like the mandatory French he was taking for his second language requirement. After years of struggle both before high school and in high school, he was pretty impressed with himself.

In this third year, Cris was confident enough to transfer to a larger college, and also registered for some practicum courses in addition to his first term course load. He silently cheered himself with *“I got this!”* as he waded his way through the online registration system. He made sure he had an academic advisor, which was mandatory for all students in the education program, but he didn’t bother to find the student services office to register as an exceptional student. Confidently again, he strode into his first class of the fall after a few test runs with a campus map, but stopped short when he realized he was in a large, multilevel lecture hall rather than the small seminar rooms to which he had become accustomed. He settled himself at the far back of the room, laptop open, textbook ready, but found it quite difficult to attend in this very busy, quite noisy—and crowded—learning environment.

Five weeks into his term, with assignments mounting up and due dates fast approaching, other projects overdue, and midterm exams looming, Crisanto flicked through his electronic scheduler, growing more despondent with each look at busy days with multiple expectations. He logged onto his college email, almost too afraid to open it, but more afraid not to after a registered letter showed up at his apartment with a return address from the “Office of Academic Advisement” emblazoned in its top left corner. Scanning his email list for problems, he could see a number of emails from the same source. It had been quite some time since he had checked his email, for important messages, notifications of his grades, or for complaints from his practicum supervisor noting his many unexplained absences at the school. Sighing, he thought, *“I might as well just read the one that came by mail ... it is likely the worst ...”*

He quickly scanned to the main body of the letter, which read:

We are concerned about your grades and your absences this term so far. In a professional program, we are all held to a particularly high standard. Our concerns are listed as followed:

- Poor attendance in a professional program, both in classes and at practicum site.

- Many failing and/or borderline grades in a professional program (minimum acceptable grade is 75 %).
- Poor assignment quality, not reflecting new learning in a professional program (e.g., pedagogical strategies).
- Lack of engagement in the school life of practicum placement (e.g., extracurricular activities).

Please call our office and arrange for a meeting in the next two days. If you do not comply with this emergency meeting, you are at least temporarily un-enrolled from your education degree program. Please note: you are still responsible for this term's fees.

"Well, at least that's not so bad," he considered, quickly picking up his phone to make that so-called very urgent call from his favorite seat at the college's busiest bar, where everyone knew him by name.

Two days later, he sat at the Office of Academic Advisement, awaiting his appointment, rising regularly from his seat to check out the view, the pamphlets, the magazines, and to chat with the administrative personnel. While he was engaged in these activities, his academic advisor was reviewing his file. Shaking his head, he muttered to himself on the way to greet Cris, "I kind of agree with his practicum supervisor. We need to give this guy a few tough consequences, and either he is going to shape up—or ship out. We can't have slackers like him in the education field." However, after his initial consultation with Cris—who provided documentation of his exceptionality to the college for the first time—the advisor could see that the situation was a little more complex than simply a student who was spending too much time at the bars and not enough time at the books. With Cris's consent, he arranged a meeting with a disability consultant, Cris, his practicum supervisor, and of course, a representative from the Office of Academic Advisement. The disability consultant took on the case, responding that, "Clearly, we need to look at this young man from a **bio-psycho-social** perspective. For him, it can't be just about the marks. I think we need to dig a little more deeply into what's going on with Cris."

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Explain what the bio-psycho-social perspective of assessing individuals with disabilities entails.

(Q2) In cases such as Cris, he is entitled to certain accommodations as a result of having an identified disability at college. Looking at the following testing accommodations checklist at the web link below, what are accommodations and how would they have assisted Cris in his term at the college? (INS@NPC, 2015)

<https://ilsnpc.wordpress.com/category/iep504-plan/>

Processes

(Q3) In ABA, the term consequence is used to describe anything that occurred after the behavior happened and is contingent on a behavior (Alberto and Troutman

Table 4.4 Definitions for the four consequences to behavior and corresponding examples

| Consequences to behavior | |
|---|---|
| Positive reinforcement | Positive punishment |
| <p>Definition: After a behavior stimuli is <i>added</i> which causes an <i>increase</i> in the future likelihood of that same behavior occurring again</p> <p>Example: If Joey hands in his homework on time, his teacher gives him 3 extra marks</p> <p>Behavior: handing in homework on time</p> <p>Consequence: bonus marks added</p> <p>Impact: more likely to hand homework in on time</p> | <p>Definition: After a behavior stimuli is <i>added</i> which causes a <i>decrease</i> in the future likelihood of that same behavior occurring again</p> <p>Example: Monique is talking while the teacher is explaining the assigned questions; the teacher assigns extra questions to Monique</p> <p>Behavior: talking while teacher is talking</p> <p>Consequence: teacher adds more questions on for Monique</p> <p>Impact: less likely to talk while teacher is talking</p> |
| Negative Reinforcement | Negative Punishment |
| <p>Definition: After a behavior stimuli is <i>removed</i> which causes an <i>increase</i> in the future likelihood of that same behavior occurring again</p> <p>Example: Mr. Mensen’s Science class has been quietly working hard at their assigned questions for the entire science period. At the end of class, Mr. Mensen announces to the class that whatever they completed during class time was to be handed in now; the remaining questions would not be homework</p> <p>Behavior: Quiet on-task work completing questions</p> <p>Consequence: Removal of homework</p> <p>Impact: Students will be more likely to work quietly in the future</p> | <p>Definition: After a behavior stimuli is <i>removed</i> which causes a <i>decrease</i> in the future likelihood of that same behavior occurring again</p> <p>Example: During lunch break Max shakes his bottle of soda and sprays it toward the cheerleading squad. A teacher walks in as this is occurring, Max has to eat lunch in the guidance counselors office for the remainder of the month</p> <p>Behavior: Spraying cheerleaders with soda</p> <p>Consequence: Removed from reinforcing environment (cafeteria and peers)</p> <p>Impact: Max will be less likely to spray soda in the cafeteria</p> |

2009). How was the word consequence used in this case study? What principle was the teacher referring to (Table 4.4)?

(Q4) Look up sample text-to-speech and word prediction software programs that Cris could use at college. What type of prompts are these to help him in school? Label each prompt that would be used in both of these software programs (Table 4.5).

Table 4.5 Types of stimulus and response prompts (Gulick and Kitchen, 2007)

| Stimulus Prompts | | Common Application | Prerequisites | Limitations |
|---------------------------------|---|--|--|---|
| Prompt | Topography/Method | | | |
| Positional prompt | Placing target object closer to the student | Receptive selection (point/touch/give) tasks | Basic attending skills | Not applicable when drill involves verbal responses |
| Proximity prompt | Positioning the instructor's body closer to or farther from the student | Receptive pronoun drills ("touch my nose") | Student must be able to verbally imitate | Limited to pronoun or possession drills |
| Voice inflection prompt | Magnifying or reducing the volume of the instructor's voice for a specific word | Magnification—Receptive selection (point/touch/give) tasks Reduction—Preventing echolalia | Basic attending skills | None encountered |
| Gestural (tap/point) | Tapping or pointing to target object | Discrimination tasks Visual performance tasks | Basic attending skills | Highly imitative students may mimic the tap/point |
| Gestural (hand placement) | Placing the instructor's outstretched hand nearer to the target object | Receptive selection (giving) tasks | Basic attending skills | None encountered |
| Gestural (blocking) | Shielding the nontarget object or otherwise blocking access to it | Receptive selection (point/touch/give) tasks | Basic attending skills | None encountered |
| Gestural (eye gaze or head nod) | Directing instructor's eye gaze or nodding head toward the target object | Receptive selection (point/touch/give) tasks | Well-developed attending skills | Requires student to be aware of subtle body cues |
| Highlighting | Placing brightly colored paper or other marking on or in close proximity to the target object or location | Receptive selection (point/touch/give) tasks Receptive placement tasks (prepositions) | Basic attending skills | None encountered |

(continued)

Table 4.5 (continued)

| Stimulus Prompts | | | | |
|--|---|--|--|---|
| Prompt | Topography/Method | Common Application | Perequisites | Limitations |
| Size | Increasing the size of the target object relative to the nontarget object | Receptive selection (point/touch/give) tasks | Basic attending skills | None encountered |
| Templates | Placing paper templates on the table to indicate specific locations for placement of objects | Sequencing and seriation tasks | Basic attending skills | None encountered |
| Dotted line prompt | Providing dotted line or lightly drawn figures as guides for the student to complete a written or drawn response | Graphic imitation (drawing/copying/writing) skills | Basic attending skills Correct grasp of writing implement | None encountered |
| Response prompts | | | | |
| Prompt | Topography/Method | Common application | Perequisites | Limitations |
| Verbal prompt (procedural) | Providing verbal directions to inform the student what they must do to complete the task Provided either partially (in steps) or whole task | Tasks that have a physical/nonverbal response | Student must have sufficient receptive understanding of the words and concepts used | Can be confusing to prompt verbal responses—especially with echolalic students |
| Verbal prompt (questioning) | Asking the student specific questions to prompt the completion of a (typically) complex task e.g., “what’s missing?” “What did you forget to add?” | Complex verbal and nonverbal tasks | Student must have sufficient receptive understanding of the words and concepts used and in most cases, should have question-answering skills | May evoke distracting verbal responses to the questions that could compete with completion of the physical task |
| Echoic prompt (whole word/phrase/sentence) | Instructor models the entire verbal response—typically using the sentence form “say (target verbal response)” | Verbal response tasks—fact or intraverbal | Student must be able to imitate the target verbal responses | Student may echo the prompt “say” |

(continued)

Table 4.5 (continued)

| | | | | |
|---|--|---|---|---|
| Echoic prompt (partial word or phoneme) | Instructor models a portion of the target word or the beginning sound (phoneme) of the target word | Single word echoic, tacting or simple intraverbal (fill-in) tasks | Student must be able to imitate the target phoneme or word | None encountered |
| Physical modeling (whole task) | Instructor models the entire physical response—can be paired with the phrase “do this” | Receptive commands (simple to complex) | Students must be able to imitate motor movements of similar complexity | None encountered |
| Physical modeling (partial) | Instructor models a portion of the physical response—typically the beginning of the movement cycle | Receptive selection (point/touch/give) tasks | Students must be able to imitate simple motor movements | None encountered |
| Physical prompt (whole task) | Instructor uses hands-on guidance to walk the student through the entire physical response | Receptive commands (simple to complex) Imitation tasks | None | Generally limited to physical actions Can be used for some rudimentary oral motor actions and phonemic production |
| Partial prompt (partial) | Instructor provides varying degrees of touch to facilitate the completion of a physical response | Receptive commands (simple to complex) Imitation tasks | None | Same as whole task physical prompt limitation |
| Peer modeling | Instructor has a peer or sibling physically or verbally model the target response in the presence of the student | Wide variety of verbal and nonverbal tasks | Students must be able to imitate similar verbal or nonverbal movements May be helpful to have the peer model be of similar age and gender as the student | Must establish compliance and interest of the peer Might require separate reinforcement contingency to motivate the peer |
| Time delay prompt | Instructor provides a short period of time (often paired with reinforcement) between steps of a multistep task | Multistep receptive commands Multistep imitation tasks | Student must be skilled in the completion of component steps of multistep task | None encountered |

Practice

(Q5) What type of initial assessment would you complete with Cris to determine his current skills and areas where he could use a skill building program in order to learn additional skills to attend college?

(Q6) Identify a data observation and measurement system that could be used to identify Cris’ current skills and areas for growth. What schedule of observation would you use? What dimension of behavior would you measure (Fig. 4.1)?

(Q7) What type of self-management strategies could be implemented with Cris? List three and describe how you would implement them.

Reflection

(Q8) In Cris’ situation, what would be some environmental variables that you could change to assist Cris with his success at college (Reference Ethics Box 4.2, Behavior Analyst Certification Board, 2014)?

Ethics Box 4.2

Professional and Ethical Compliance Code for Behavior Analysts

- 4.06 Describing Conditions for Behavior-Change Program Success. Behavior analysts describe to the client the environmental conditions that are necessary for the behavior-change program to be effective

(Q9) In seeing the reaction of the team members in response to Cris’ performance in college, what do you think could have been done differently? Do you think this would have been avoided if he was registered as a person with a disability?

(Q10) Knowing Cris was transferring to another college, what types of supports would you have put in place to ensure a seamless transition for Cris?

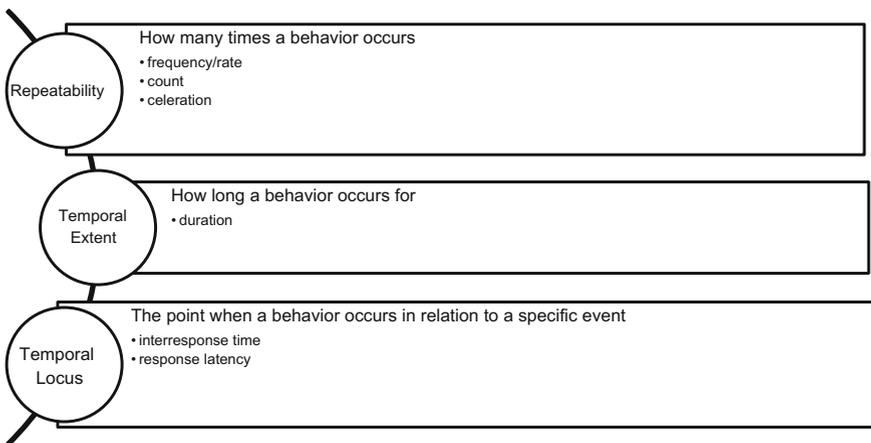


Fig. 4.1 Dimensions of behavior and corresponding recording systems

Additional Web Links**Common Misuses of ABA Terms**

<http://www.wisaba.org/about-behavior-analysis/common-misrepresentations-of-behavior-analysis/misrepresentation-10-terminological-notes-this-area-covers-common-misuses-of-behavior-analytic-vocabulary/>

Prompting Learning Module

<http://afirm.fpg.unc.edu/prompting>

Speech-to-Text Software

http://www.brainline.org/content/2010/12/speech-recognition-for-learning_pageall.html

Word Recognition Software

http://mason.gmu.edu/~aevmenov/Portfolio/Growth/Word_prediction.pdf

Assistive Technology

<http://ldatschool.ca/technology/assistive-technology/>

CASE: ii-P9 Guest Author: Christina Belcher**Is Garth's Experience Enough?**

Guest Author: Dr. Christina Belcher, PhD, OCT

Professor, Redeemer University College

Setting: Community Age Group: Adult

LEARNING OBJECTIVE:

- Determining behavior principles to apply to a workplace setting utilizing the mediator model

TASK LIST LINKS:

- **Fundamental Elements of Behavior Change**
 - (D-19) Use combinations of reinforcement with punishment and extinction.
- **Identification of the Problem**
 - (G-01) Review records and available data at the outset of the case.
 - (G-03) Conduct a preliminary assessment of the client in order to identify the referral problem.
 - (G-06) Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
- **Assessment**
 - (I-07) Design and conduct preference assessments to identify putative reinforcers.

KEY TERMS:**• Culture**

- Culture is a complex, context-bound construct with variable definitions related to both beliefs and its related actions. In the context of behavior, it can be defined as “the extent to which a group of individuals engage in overt and verbal behavior reflecting shared behavioral learning histories, serving to differentiate the group from other groups, and predicting how individuals within the group act in specific setting conditions” (Sugai et al. 2012, p. 200).

• Progressive Discipline

- Progressive discipline is terminology typically found in places of employment and the field of human resources. Progressive discipline “increases the severity of a penalty each time an employee breaks a rule. Typically, a policy progresses from oral warnings to written warnings, suspensions and then termination. That way, employees are not surprised when they reach the end and are fired” (Business Management Daily 2013, p. 6).

• Rewards

- The term reward is often used synonymously with reinforcer (ErinoakKids Autism Services 2012). It is more common outside clinical environments, such as home, school, and work.

Is Garth’s Experience Enough?

At 50 years of age, Garth’s 30 years of experience at his place of employment had taught him ways to positively enhance—or positively avoid—any workplace conflicts. Garth was an experienced worker and currently held the position supervisor. Garth was well appreciated by his peers for his knowledge and experience in his field, but was also known both in his profession and in his office to be resistant to change. He arrived at his desk with his morning coffee and donut; he had his day neatly ordered into four parts. In the morning, he almost always reviewed his agenda for the day, reviewed his tasks in order of priority, answered his email, and then had a break at 10:30. On Monday, he had weekly meetings beginning with the staff promptly at 11:00 a.m. to address any concerns in the workplace, to commend staff on accomplishments, and to outline new business arising, ending precisely at noon. Lunch consisted of his usual sandwich, fruit, and a paper copy of the local newspaper. In the afternoon, he continued with his files and personal service to customers. In the last half hour of the day, Garth ordered his files for the following day, reviewed any new email, made any required phone calls, slotted in any conference calls, and prepared his task list for the next morning’s arrival. Garth functioned like a man on a mission. He took care of business. He was content and satisfied with his performance.

In Garth's supervisory capacity, the ideal employee was one who maintained the agenda and rules of the company. Successful practice leads to success in the future. And that required experience.

Recently, an issue of a member of the staff brought to the table on Monday morning had failed to be resolved during the hour meeting time slot. Garth had implemented company policy by contacting the organization's human resources department to begin the process of addressing the concerns through their **progressive discipline** process regarding an employee who was not meeting the company's expectations in areas of punctuality, which fell into the category of general performance. The human resources professional contacted an internal colleague specializing in workplace behavior: a Board Certified Behavior Analyst (BCBA).

In an initial meeting with the Garth, the BCBA noted that she would like to take some time to consult the literature about what the available evidence suggests might be effective in addressing the difficulties with punctuality. From there, a behavior-change program would be developed. She would monitor progress by collecting data to ensure that behavior-change goals and objectives would be met. She explained that these are all parts of adopting an evidence-informed approach.

Garth immediately had an issue with this idea, and responded by stating: "I have more than 30 years of experience. I do not need to look to some research done elsewhere, or even collect data. I know what to do when things are or are not working. Doesn't my experience count?" This response displayed insight into understanding Garth's behavior across his career span. Although Garth did well maintaining the company processes, he was not innovative in learning new approaches to understanding or mediating the personal habit reformation of those in his care. The BCBA consultant could see that both Garth and the employee in question posed problems for planning this intervention. It appeared obvious to her that both had different views toward business and what was valued in their positions.

The BCBA consultant was concerned with Garth's resistance to change, reliance on experience and habits, and his dismissal of the need for exploring current research on institutional matters. For example, at a recent staff meeting, when staff first raised discomfort with the unreliability of "a staff member" coming to work on time, and suggested some possible interventions, Garth responded by naming such innovation and intervention a waste of time. He believed experience already had shown what worked through what had been maintained and left unchanged. He proceeded to expand his statement by saying that in his experience, it had been suggested that "in the past" those who did not work "did not eat," and that the answer to this young person's noticed behavior of being late for work at the beginning of the day should be, without question, termination. The majority of the staff, however, felt this young man had the potential to be a valued employee, despite his frequent tardiness in arrival to the office or job sites. They liked him. They recognized a sharp mind, personable wit, and a helpful and innovative interpersonal work posture. He often worked later—right into the evening—and that too, was a point of concern for Garth.

Garth liked his timetable to be one that reflected a traditional nine A.M. to five P.M. timeline. He was accustomed to working independently and often could justify his decision making. He was a faithful company employee and was of good value to

company history and frequent customers. And his employees liked him as a person. He was just and fair in his dealings: a straight shooter. As a result, the employees—as a group—found themselves in a lock-down as to what to do about Garth's views and their hopes for the employee in question. This issue of resolution was divided. To this end, Garth did not feel that exploring research to change the less-than-desirable habits of employees or to understand the root of this so-called bad habit was necessary.

The BCBA consultant suggested to Garth that in the area of work-related complaints, research showed that different concerns required different views on what made a company successful, and that interpersonal considerations, lifelong learning, and company policy need also be considered. In the current cultural workplace, she explained, a focus on mentoring and guidance for grooming potential success in employees was valued. For growth of the company, it would be helpful to create the conditions in which a younger person could be successful in the workplace in order to continue having the company flourish. Yes, most employees had some flaws in certain areas, but what else could they offer? Positive focus and **rewards** in the workplace were also required. For example, in cases of late arrival to work, there may be other extenuating circumstances in the larger picture of an employee's life that may mitigate that outcome—beyond the first instinct that the employee was lazy, negligent or just indifferent to opportunities. Had the reason for this employee's late arrival ever been addressed? Had his tardiness been addressed individually?

The BCBA consultant suggested that in this case, failure for being to work on time may have been reinforced in other working environments, or individual employment tasks. Like Garth, *experience* in other work situations may have served to reinforce this habit of nonpunctuality as being acceptable, just as punctuality had served to reinforce Garth's own behavior in the workplace. For example, in some venues, punctuality was essential to the job. For example when he was a student, and classes started at 9:00 A.M., a teacher needed to be present by 8:30 at the latest to prepare for the arrival of her charges. Students could not arrive to an absent teacher. However, if someone had a meeting at ten and was already prepared, arriving at 9:45 rather than 9:30 A.M. may not be problematic, depending on the role the individual played.

The BCBA consultant brought to Garth's attention that in a digital age, time and location did not have the cultural implications as they did 30 years ago (nor are parts of the same **culture**). If employees could have the ability to work at home as well as to work face-to-face on tasks, this would raise new ways of "minding the clock" depending on the innovative possibilities of the workplace. If that proved to be the case, some short-term outcomes to address the behavior that has been found wanting by this employee in Garth's current work environment may be helpful to the company as well as illuminating to the employee. It would be helpful to all concerned to consider a "big picture" regarding the employee's late arrival across the broader scope of his life, behavior, and performance as a complex set of events, and not just as an isolated incident unrelated to anything else. His desire to work later may prove to be admirable, and not realistically represent a way "to get out of being on time" or to "make up hours on the clock." Although, if the company had

specific reasons for punctuality in this particular employee's work task to be mandatory, (like having a machine ready and safety checked for use in a factory or having shelves stocked with produce before business opened), short-term goals and interventions could be helpful to decrease the problem of tardiness.

In hopes of changing Garth's mindset, the BCBA consultant suggested the process of addressing the concerns through their progressive discipline process (i.e., beginning with letters documenting concerns, frequent meetings, progressing to verbal and written warnings, suspensions, and even dismissal). This initial meeting also shed light on the reality that both Garth and his young employee may see what is valued at work from a different experiential lens, and that lifelong learning for Garth in understanding current research may also be valuable to the future of the company.

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Identify which behavioral principles are involved in progressive discipline. Which principles align with reinforcement and which align with punishment?

(Q2) In this situation, what effects would reinforcement have on behavior as compared to punishment? What would be some of the downfalls of implementing a pure punishment-based procedure as Garth is suggesting (Reference Ethics Box 4.3, Behavior Analyst Certification Board, 2014)?

Ethics Box 4.3

Professional and Ethical Compliance Code for Behavior Analysts

- 4.08 Considerations Regarding Punishment Procedures.
 - (a) Behavior analysts recommend reinforcement rather than punishment whenever possible.
 - (b) If punishment procedures are necessary, behavior analysts always include reinforcement procedures for alternative behavior in the behavior-change program.
 - (c) Before implementing punishment-based procedures, behavior analysts ensure that appropriate steps have been taken to implement reinforcement-based procedures unless the severity of dangerousness of the behavior necessitates immediate use of aversive procedures.
 - (d) Behavior analysts ensure that aversive procedures are accompanied by an increased level of training, supervision, and oversight. Behavior analysts must evaluate the effectiveness of aversive procedures in a timely manner and modify the behavior-change program if it is ineffective. Behavior analysts always include a plan to discontinue the use of aversive procedures when no longer needed.

Processes

(Q3) Although the behavior analyst in the case would prefer to use reinforcement-based procedures, she decides to go with the progressive discipline system at the workplace that is already in place. What effect do you think this approach will have in changing Garth's behavior and implementing a different approach to dealing with difficult staff behavior? Use the behavior skills training model as a guide. <http://www.bsci21.org/behavior-skills-training-in-4-steps/>

(Q4) What changes could you make to each component the progressive discipline approaches to make them more highly based on the principles of reinforcement instead of punishment?

Practice

(Q5) Based on the behavioral skills training approach, list your strategy to teach Garth how to implement the progressive discipline approach with the employee. See Fig. 4.2 (Parsons et al., 2012)

(Q6) What data would you collect before you started the procedure about the current discipline techniques and reinforcement occurring at the workplace? Who would you collect it from?

(Q7) What type of data collection system would you use to track the adherence with the progressive discipline system across the management team?

Reflection

(Q8) Looking at the way that the behavior analyst approached the situation above with Garth, what would you have done differently? Why?

(Q9) When planning with the team on implementing the progressive discipline intervention, what must you consider? What duties and information are you providing to the person who hired you or Garth's boss? What information are you required to keep confidential?

(Q10) In this situation, who is your client? Looking at the Professional and Ethical Compliance Code for Behavior Analysts (2014), are there any potential conflicts of interest (also consider third parties)?

Additional Web Links**Organizational Behavior Management Network**

<http://www.obmnetwork.com>

Discipline without Punishment

<http://www.watson-training.com/blog2/46-discipline-with-punishment-a-best-practices-approach-to-disciplining-employees.html>

Behavior Skills Training

<http://www.bsci21.org/behavior-skills-training-in-4-steps/>

CASE: ii-P10**Is Daisy's Behavior a Message in Disguise?****Setting: Home Age Group: Adulthood****LEARNING OBJECTIVE:**

- Determine a team-based approach for understanding the biological causes and communication of behavior.

TASK LIST LINKS:

- **Identification of the Problem**
 - (G-01) Review records and available data at the outset of the case.
 - (G-02) Consider biological/medical variables that may be affecting the client.
 - (G-03) Conduct a preliminary assessment of the client in order to identify the referral problem.
 - (G-06) Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
 - (G-07) Practice within one's limits of professional competence in applied behavior analysis, obtain consultation, supervision, and training, or make referrals as necessary.
 - (G-08) Identify and make environmental changes that reduce the need for behavior analysis services.
- **Measurement**
 - (H-01) Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
 - (H-02) Select a schedule of observation and recording periods.
 - (H-03) Select a data display that effectively communicates relevant quantitative relations.
 - (H-04) Evaluate changes in level, trend, and variability (Fig. 4.2).

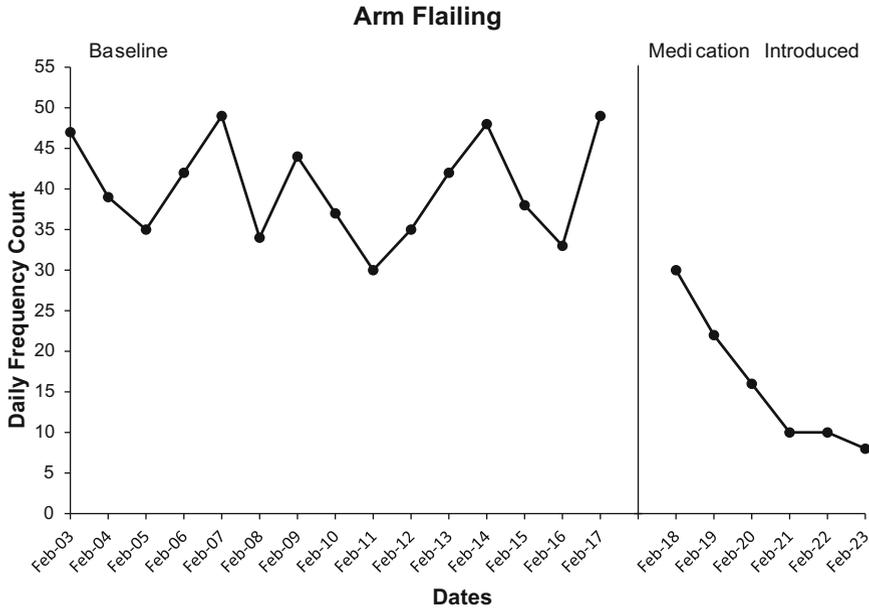


Fig. 4.2 Figure displaying frequency data on Daisy’s arm flailing behavior collected by Daisy’s nurse before starting medication and after the medication was introduced on the evening of February 17

KEY TERMS:

- **Family Conference**

- Family conferences typically focus on partnering with the wider family and empowering that family unit in decision making for positive change, rather than supporting an individual in isolation (Hayden, 2009).

- **Functional Perspective**

- Analyzing behavior from a **functional perspective** means examining behaviors and their environmental consequences to explain why behaviors begin, are maintained, and increase (or decrease over time): “research in laboratory and real-life settings has demonstrated that problem behaviors produce environmental functions that maintain such behavior” (Cipani 2014, p. 78).

- **Medical Causes**

- Some problem behavior may be related to complex underlying medical causes or conditions (e.g., pain) (Guinchat et al. 2015).

- **Safe Space**

- A safe space is an antecedent-based environmental adaptation, established as a designated area to go during times of stress or emotional distress, for a break and relaxation. Safe spaces can include elements such as sensory tools (e.g., stress balls), preferred items (e.g., family photographs), and reminders of strategies for self-calming (e.g., visual task analysis), as well as soft, comfortable, and comforting furnishings (Geiger et al. 2010; The Psychology Foundation of Canada, n.d.)

Is Daisy's Behavior a Message in Disguise?

Daisy had reached the magnificent age of 72 while happily living in her family home where she and her late husband had raised their five children. Luckily, this home was a bungalow, allowing her to access every area of functional living space even with some mobility issues. Her children—all adults scattered across the country and around the globe—had moved her fairly ancient washer and dryer upstairs so that she could continue doing her laundry independently, and they took on the job of cleaning the finished basement when they came for their rare visits, since the guest rooms were on this floor. Their visits, however, were becoming quite sparse as they were feeling collectively unwelcome.

The last time that her son visited with his children, Daisy's two oldest grandchildren aged 14 and 16 visited; Daisy's behavior was quite unusual—for Daisy. She yelled at them every time they entered the kitchen. When they went out the mall together, she was rude to anyone who asked her a question or held out the door for her. She said things like, "I don't need your help!" in a loud and querulous voice. Her son called his big sister—Daisy's oldest child—and described her as "cantankerous," telling her she better "watch out" next time she visited. When Daisy's daughter did visit the next month, along with Daisy's youngest grandchild, an infant, Daisy's behavior seemed to have escalated. During this visit, whenever Daisy found items of baby care around the house, like her granddaughter's toys, board books, or stuffed animals, she threw them out the back door into the backyard. Daisy's daughter wanted to retrieve them, but was feeling a little frightened to leave her baby in the house with Daisy. *Would Daisy throw the baby outdoors, as well?* Daisy's daughter was not quite sure what to do, so she gathered her baby's belonging from the yard after her mother went to bed for the evening.

Disturbed by the latest chain of events on each of their visits, Daisy's son and eldest daughter held a **family conference**, with the three other siblings joining in remotely via the computer. After a long and emotional discussion, Daisy's children decided to pay for a day companion for Daisy: a practical nurse with (obviously) experience in working with elderly clients. Daisy's son was given the tough job of convincing Daisy that this would be a good idea, and he managed to pull it off, including obtaining her written permission. However, this did not stop Daisy's new nurse from being the target

of her now-sharp tongue and other unusual behaviors, growing in frequency. Daisy's nurse/companion, happily, had taken more than a few professional development events about challenging behavior in aged clientele, and took careful descriptive logs and frequency counts about each day's events. In the following weeks, the nurse used a variety of strategies: She carefully moved herself and any visitors away from Daisy, and if Daisy engaged in any aggression, such as flailing her arms, and snapping her fingers in the faces of her friends, she verbally calmed Daisy with a soft voice and provided helpful suggestions. If necessary, she guided Daisy to a **safe space**, such as her soft, comfortable couch or her rocking chair that faced the window.

"According to my logs," the nurse concluded at the most recent family conference, "these troubling incidents are not decreasing—they are increasing. I think we are going to have to look beyond my services, and plan to engage support from a behavior consultant, as well as a visit back to Daisy's physician. All the data I have collected in these past weeks with Daisy should really help with our planning." Daisy's children agreed, the geographically closest sibling set up the relevant appointments and brought the recommendations back to the next family conference.

"Here are my notes," he began, and read the relevant points to the group, including Daisy's daily nurse:

- Her physician wants to trial her on some different medication to see if they have any effect on her. She says problems like this are common in older people, and that medications tend to keep the worst symptoms under control.
 - The physician wants her to have a full physical checkup from head-to-toe. She says it has been close to five years since Mom has done this.
 - She also wants us to think about referring Mom to a psychiatrist for an evaluation.
 - The behavior consultant agreed that it is very important to examine any **medical causes** for behavior change before looking at them from a behavioral perspective.
 - He also said that when the time is right, that we should think about focusing on understanding mom's behavior from a "**functional perspective.**" In other words, we should figure out if there her behavior is a message in disguise. He says that all behavior is communication and we need to figure out what mom is trying to tell us. He said that he can help with all of this, and that this is a first step to planning a successful program of behavior change.
- He continued, "That's all of it! What do we want to do?"

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) What does the team mean when they indicate that they want to look at Daisy's behaviors from a functional perspective? Based on some of the behaviors described in the case, what is the functional perspective for those behaviors?

(Q2) When the nurse guided Daisy to her "safe space," what was the resulting consequence in each of those instances? What behavior principle was at work here?

Processes

(Q3) Daisy's nurse took frequency counts of her behavior. This let the family know the behavior was increasing. What other types of data could she have taken that would have provided the family with more information at this meeting?

(Q4) The next steps, after ruling out any underlying medical factors, that the team is planning is to conduct a functional behavior assessment for Daisy. What could be done before conducting a full observation of Daisy's behavior to start the functional behavior assessment process? Explain the tools that you would use and an explanation of why you would use them (Reference Ethics Box 4.4, Behavior Analyst Certification Board, 2014). Use the following tools as a guide:

<https://sites.google.com/a/ghaea.org/challenging-behavior-team/data-collection-resources-1>

Ethics Box 4.4

Professional and Ethical Compliance Code for Behavior Analysts

- 3.02 Medical Consultation
Behavior analysts recommend seeking a medical consultation if there is any reasonable possibility that a referred behavior is influenced by medical or biological variables.

Practice

(Q5) Look at the graph below of the frequency data that the nurse collected and the changes that were tracked once Daisy started the prescribed medication. Explain the level, trend, and variability.

(Q6) Based on the graph above, do you think there is a clear functional relationship between the medication and the behavior change? Why or why not? What data would you take to determine if there was a clear functional relationship?

(Q7) What design could you use to now implement a behavior technique into the intervention with Daisy with the medication alone? What is this type of single-subject design called? How could you design it so you could determine if there was a functional relationship?

Reflection

(Q8) The Professional and Ethical Compliance Code for Behavior Analysts (2014) state that biological and medical factors for behavior change should be considered. At this point, do you think they have been considered to the point that a behavior intervention can begin? What are the risks of waiting for the medical screening? What are the downfalls of not starting the behavior techniques immediately?

(Q9) In the current situation with Daisy, you are hearing information second hand from the doctor through the nurse. Are there any ethical dilemmas by completing your intervention with this communication method? What could you do differently (Reference Ethics Box 4.5, Behavior Analyst Certification Board, 2014)?

Ethics Box 4.5

Professional and Ethical Compliance Code for Behavior Analysts

- 2.04 Third-Party Involvement in Services.
 - (a) When behavior analysts agree to provide services to a person or entity at the request of a third party, behavior analysts clarify, to the extent feasible and at the outset of the service, the nature of the relationship with each party and any potential conflicts. This clarification includes the role of the behavior analyst (such as therapist, organizational consultant, or expert witness), the probable uses of the services provided or the information obtained, and the fact that there may be limits to confidentiality.
 - (b) If there is a foreseeable risk of behavior analysts being called upon to perform conflicting roles because of the involvement of a third party, behavior analysts clarify the nature and direction of their responsibilities, keep all parties appropriately informed as matters develop and resolve the situation in accordance with the code.
 - (c) When providing services to a minor or individual who is a member of a protected population at the request of a third party, behavior analysts ensure that the parent or client-surrogate of the ultimate recipient of services is informed of the nature and scope of services to be provided, as well as their right to all service records and data.
 - (d) Behavior analysts put the client’s care above all others and, should the third party make requirements for services that are contradicted by the behavior analyst’s recommendations, behavior analysts are obligated to resolve such conflicts in the best interest of the client. If said conflict cannot be resolved, that behavior analyst’s services to the client may be discontinued following appropriate transition.

(Q10) What other factors must be considered for Daisy? Consider environmental variables as well.

Additional Web Links

ABA in the Elderly

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2078575/>

ABA and Behavioral Medicine

http://www.academia.edu/13279646/Applied_Behavior_Analysis_and_Behavioral_Medicine_History_of_the_Relationship_and_Opportunities_for_Renewed_Collaboration

Level, Trend, and Variability

<http://www.educateautism.com/applied-behaviour-analysis/visual-analysis-of-aba-data.html>

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