Interview and Observation Methods in Functional Assessment

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Introduction

Challenging behaviors are evinced by individuals who have a variety of disabilities including those with intellectual disability (ID; McClintock, Hall, & Oliver, 2003; Poppes, van der Putten, & Vlaskamp, 2010) and/or autism spectrum disorders (ASD; Matson, Wilkins, & Macken, 2009; Mudford et al., 2008; Murphy, Healy, & Leader, 2009), as well as those individuals who have mild disabilities or do not possess any documented disabilities (Gettinger & Stoiber, 2006; Kinch, Lewis-Palmer, Hagan-Burke, & Sugai, 2001). When formulating treatment plans for these individuals, clinicians often state that conducting a functional behavioral assessment is an integral part of the process and assists in treatment planning. In fact, federal law in the USA currently mandates that treatment of all challenging behaviors is based on the results of a functional behavioral assessment as stated in the Individuals with Disabilities Education Act Amendments of, 1997 and 2004 (Individuals with Disabilities Education Act Amendments of, 1997, 20 U.S.C. Section 1400 et seq, 1997; Individuals with Disabilities Education Act Amendments of, 2004, 11 Stat. 37 U.S.C. Section 1401, 2004). However, the methods of conducting a functional behavioral assessment need not be identical across cases. Techniques are often individualized depending on the frequency and severity of the challenging behavior, availability of resources, and information that has already been acquired regarding the challenging behavior and its function(s).

Functional behavioral assessment, in general, refers to methods of ascertaining the maintaining variables of challenging behaviors through both experimental and nonexperimental means, and it comprises three main categories: indirect or anecdotal assessments, descriptive or naturalistic observational assessments, and experimental functional analysis (EFA) (Iwata, Vollmer, Zarcone, & Rodgers, 1993; Neidert, Dozier, Iwata, & Hafen, 2010). Although only the former two is discussed in this chapter, it is first critical to understand the difference between functional behavioral assessment in general and EFA. While these terms may seem synonymous and are often confused as such, they are not and should not be used interchangeably. Functional behavioral assessment includes a group of possible strategies used to determine the function(s) of challenging behavior, whereas EFA, which is one type of functional behavioral assessment, refers solely to the experimental manipulation of environmental variables to achieve this same information.

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The remaining functional behavioral assessment techniques do not incorporate experimental manipulation of variables.

EFA is commonly viewed as the hallmark of functional behavioral assessment (Hanley, Iwata, McCord, 2003; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994; Neidert et al., 2010). This is largely in part due to the fact that EFA is the only established way in which a causal relationship can be determined between different functions and behaviors, while other functional behavioral assessment strategies only indicate which functions and behaviors correlate with one another. An earlier chapter of this book provides an in depth review of EFA and its components, so it will not be discussed thoroughly here. However, it is important to note here that, despite its elite status, EFA is not always practical or safe to employ. In these circumstances, other functional behavioral assessment methods, such as those that will be reviewed here, are necessary.

Instances in which EFA would not be deemed appropriate include when the behavior is not occurring frequently enough to adequately assess it in such a setting (Matson & Minshawi, 2007). If the challenging behavior is occurring only rarely, the chances of it occurring within a contrived setting are also low. The safety of the individual and others also needs to be given consideration when conducting a functional behavioral assessment. Severe behaviors that may cause injury to the self or others are not ideally assessed through EFA. This is because an EFA requires that the challenging behavior occurs without interruption. Therefore, safety parameters frequently employed in the naturalistic setting would actually interfere with identifying the function of the behavior. Another concern with EFA is that factors related to the challenging behavior may be unable to be integrated into the assessment process, such as the behavior occurring with specific caregivers (English & Anderson, 2004). Furthermore, EFA typically requires large amounts of resources including trained staff, significant periods of time, reinforcers, and work space that is not always readily available to clinicians or facilities (Matson & Minshawi, 2007). Therefore, alternative functional behavioral assessment methods tend to be necessary and/or preferred in many cases.

The focus of this chapter is on interview and observations methods that may be completed as a part of the functional behavioral assessment process. First, overall interview methods is addressed with descriptions of some of the most commonly used and most researched interviews currently available being provided. Next, a similar overview is given for direct observation methods and their examples. Then, since many studies exploring the psychometrics of both interviews and direct observation methods are in comparison to one another as well as other functional behavioral assessment methods, psychometric data, advantages, and disadvantages of these tools are offered and compared in subsequent sections.

Interview Methods

Interviews are among the most common functional behavioral assessment strategies employed (Ellingson, Miltenberger, & Long, 1999; Rojahn, Whittaker, Hoch, & González, 2007). Use of interviews allows clinicians to collect a variety of information regarding the challenging behavior(s) and bypasses many of the concerns with EFA. Such methodology does not require the target behavior to be exhibited during the assessment process, which permits assessment of less frequently occurring behaviors and those behaviors that pose serious danger or risk to the self or others. Furthermore, an interview of this kind could be viewed as a broadband functional assessment measure. In contrast to EFA and many scaling methods such as the *Questions About Behavioral Function* (QABF; Matson & Vollmer, 1995) and *Motivation Assessment Scale* (MAS; Durand & Crimmins, 1992), all of which are thoroughly reviewed in other chapters of this book, the results provide clinicians with comprehensive information surrounding the target behavior that may otherwise not be considered. Responses are typically open-ended and are, therefore, not limited or restricted by confounding variables or specific categories of functions. However, as will be discussed later on with respect to the interviews

reviewed herein, there are also drawbacks with functional behavioral assessment interviews, as with any other assessment strategy.

Teacher/Caregiver Interviews

Functional Analysis Interview Form

The Functional Analysis Interview Form (FAIF) is one of the most popular and frequently used interview measures for assessing the function(s) of challenging behaviors. The interview is administered to someone familiar with the individual being assessed (e.g., parent and caregiver) and takes approximately 45–90 min to complete (O'Neill et al., 1997). The FAIF is a paper-and-pencil interview and primarily elicits information through open-ended questions related to the behaviors in question. It comprises 11 sections which probe for information regarding the following: (1) descriptions of the behaviors, (2) potential bioenvironmental events that may affect the behaviors, (3) events and situations that predict the presence of the behaviors, (4) the functions or consequences maintaining the behaviors, (5) the efficiency of the behaviors, (6) functional alternative behaviors the individual already displays, (7) the individual's communicative abilities, (8) things to do and avoid when working with the person to increase their success, (9) reinforcing items, activities, or events for the individual, (10) behavior and treatment history, and (11) a diagram to summarize the information collected regarding predictors and/or consequences of challenging behaviors. Interviewers pose the questions to respondents and record the respondent's answers in the appropriate space. Follow-up questions may be asked as needed throughout the interview.

Functional Assessment Checklist: Teachers and Staff

Although its name may imply otherwise, the Functional Assessment Checklist: Teachers and Staff (FACTS) (March et al., 2000) is a semi-structured interview to be used for functional behavioral assessments with student populations. The interview was created by modifying the FAIF (O'Neill et al., 1997) and is administered in a similar fashion. However, rather than requiring 45–90 min to complete, the FACTS only requires 10–25 min, with administration time dependent on how knowledgeable the informant is with respect to the student being assessed and the number and complexity of challenging behaviors in question (McIntosh et al., 2008). The interview comprises two parts: Part A begins by collecting narrative information regarding strengths of the individual, identifying problem behaviors, and identifying routines during which the behaviors most commonly occur (e.g., when, where, and with whom). The last section is completed by asking the respondent to provide the interviewer with the student's daily schedule including activities, individuals present during different activities, the specific problem behaviors elicited at different times, and the likelihood of these behaviors occurring during these times, which is rated on a scale from 1 (low) to 6 (high). Up to three routines are then selected for further assessment in Part B based on similar behaviors being likely to occur during certain conditions.

During Part B, each routine identified during Part A is examined separately. Therefore, up to three Part B assessments may be conducted for the individual. After identifying which routine will be examined during each specific Part B assessment, more details regarding the problem behavior are gather through open-ended questions (e.g., operationally defining the behavior, frequency, duration, and intensity). Next, predictors/antecedents and then consequences are explored with many options being made available as well as giving the respondent the opportunity to include self-identified predictors and/or consequences. A summary of the behavior is then compiled, which integrates the antecedents, behavior, and consequences. This information is later used for development of a treatment plan. The respondent rates their confidence in the compiled summary statement on a scale of 1 (not very confident) to 6 (very confident). Lastly, strategies previously and/or currently used for preventing and treating the problem behavior are named.

Functional Assessment and Intervention Program

The Functional Assessment and Intervention Program (FAIP) is a computer-based functional behavioral interview program originally developed for use in school settings (University of Utah, Utah State University, & Utah State Department of Education, 1999 as cited in Hartwig, Tuesday Heathfield, & Jenson, 2004). The program guides the interviewee through five sections pertaining to a specific individual and his/her targeted challenging behavior. In the first three sections, the interviewee is asked to provide information regarding identifying and setting information, antecedents, and consequences. Prior to continuing, the interviewee is then prompted to confirm or disconfirm all antecedents and consequences the program has identified based on the information provided. In the fourth section, the program integrates the identified antecedents and consequences to formulate hypothesized functions. Up to four possible functions may be elicited from the program: gain attention, obtain access to tangibles, escape/avoid demands, and sensory stimulation. At this time, the interviewee either confirms or disconfirms each hypothesized function. In the last section, the interviewee is given function-based and research-supported interventions that are specific to the individual based on identifying information provided earlier. The interviewee is then able to choose from these options.

Student Interviews

Although the majority of functional behavioral assessment interviews rely on parents, caregivers, or teachers as informants, a more recent development in the field has incorporated gathering information from students/individuals engaging in challenging behaviors. Being able to derive information from this source allows clinicians better insight into challenging behaviors including the potential for a wider breadth of data. To date, several variations of a student-guided functional assessment interview exist which are commonly adapted from one another.

Student-Assisted Functional Assessment Interview

The *Student-Assisted Functional Assessment Interview* (Kern, Dunlap, Clarke, & Childs, 1994) was the first interview of its kind. The interview is divided into four sections and takes approximately 20–30 min to administer. The first section contains 12 questions regarding the student's schoolwork and classroom to which the student can respond "always," "sometimes," or "never." In the second section, open-ended questions are posed to the student to assess why and when the targeted challenging behavior occurs, what changes could be made within the school setting to alleviate the student's difficulties and to identify rewards/activities that the student enjoys. Next, the student is asked to rate all of their classes in terms of how much they enjoy the subject using a Likert scale with ratings 1–5 where 1 indicates "not at all" and 5 corresponds to "very much." In the final section, what the student likes and dislikes about each subject is explored through a series of open-ended questions.

Student-Guided Functional Assessment Interview

The *Student-Guided Functional Assessment Interview* (Reed, Thomas, Sprague, & Horner, 1997) was developed for use in school settings when children are engaging in challenging behaviors within the classroom, mainly talking out of turn, teasing/bullying, not following directions, and not completing work. The interview is broken down into multiple sections and typically administered to both the student and teacher. First, the individual is asked to define the target behaviors. Next, problematic settings and/or classes are noted by instructing the individual to complete a daily schedule. The schedule contains each class or other activity the student participates in throughout the day as well as the instructor for that class or activity. The individual is then asked to rate the likelihood and intensity of the student engaging in the target behavior during that class or activity on a scale of 1 (least difficult) to 6 (most difficult). A blank diagram is then presented to be completed by the individual with respect to events surrounding the target behavior

(e.g., class demands, teacher demands, receiving attention, and noise/distractions). Events are documented in the order in which they occur before or after the target behavior. Lastly, a support plan is developed in a similar diagram where setting events and predictors are manipulated, replacement behaviors are contrived, and consequences are given for engagement in the challenging behavior versus the desired behavior.

Direct Observation Methods

Although interviews provide clinicians with a wealth of information, best practice suggests that multiple methods of functional behavioral assessment be integrated to determine the function(s) of challenging behaviors. Observation methods are yet another option frequently incorporated into comprehensive functional behavioral assessments. While observations certainly involve direct examination of the individual, it is important to understand that observation methods are not synonymous with EFA. However, in contrast to EFA, direct observations occur within the natural environment of the individual thus allowing clinicians the ability to assess situations in which challenging behaviors actually occur. Furthermore, unlike alternative methods of functional behavioral assessment, direct observations do not rely on retrospective report or memory, thereby eliminating confounds associated with such reports.

Contingency Event Recording (A–B–C Data/Recording)

Contingency event recording, more commonly referred to as Antecedent–Behavior–Consequence (A–B–C) data/recording, is by far the most prevalent form of nonexperimental observation methods used in functional behavioral assessment. This method was actually one of the first functional behavioral assessment techniques introduced in applied settings and was developed by Bijou, Peterson, and Ault (1968). Contingency event recording involves direct observation of the individual being assessed in their natural environment. While conducting this observation, real-time data is recorded, thereby eliminating the biased effects of retrospective report. Contingency event recording was originally developed to be completed in an unstructured format where data is collected by documenting the date, time, antecedent event(s), target behavior (i.e., the challenging behavior), and consequent event(s) in separate columns. Antecedents refer to the events occurring prior to the display of the target behavior, while consequent events are those occurring after the individual has already begun engaging in the target behavior. The data is descriptive in nature detailing the sequence of events in the observer's own words; therefore, it is commonly dubbed the *descriptive* or *narrative* recording format (Cooper, Heron, & Heward, 2007; Miltenberger, 2001). Additional columns may be included depending on the goal of the assessment with data in other categories related to the challenging behavior, such as other individuals present at the time of the challenging behavior or the location in which the behavior occurred, being recorded (Rojahn, Schroeder, & Hoch, 2008). For an example of a blank A–B–C recording sheet of this kind, refer to Appendix A.

Subsequently, contingency event recording was expanded to include A–B–C checklists, also known as structured A–B–C data collection. The premise of the data collection is synonymous with the original A–B–C recording sheets except that now narrative report for the antecedent event(s), target behavior, and consequent event(s) is replaced with options for the observer to simply check-off based on occurrence. An example of an A–B–C checklist is presented in Appendix B. One such checklist was developed by O'Neill and colleagues (1997), named the *Functional Assessment Observation Form* (FAOF). This specific observation form contains eight sections. First, the individual being observed and dates of observation are noted, with the possibility of observations spanning over more than just 1 day. Next, predetermined time intervals are decided upon and labeled on the form. These time intervals are dependent on the individual being observed and may coincide with specific activities throughout the day, similar to scatter plot

data collection which will be discussed shortly. This form actually differs from traditional contingency event recordings by including this component. The next sections (i.e., behaviors, predictors, perceived functions, and actual consequences) are presented in a checklist format. All targeted challenging behaviors are listed followed by predictors, also known as antecedents. The perceived functions section, which also differs from typical contingency event recordings, prompts the observer to endorse which listed function he/she believes to have brought about the behavior. Finally, in the actual consequences section, the observer checks the column aptly describing what occurred following the individual engaging in the targeted challenging behavior. The authors encourage clinicians to first conduct an interview to choose which behaviors, predictors, perceived functions, and actual consequences should be displayed as options on the data collection form. With more recent advances in technology, additional contingency event recording strategies using a structured format have become available. For example, similar to A–B–C checklists documenting information on paper, personal data assistants have been used to electronically collect observational data (Tarbox et al., 2009). When using these devices, antecedents, behaviors, and consequences are documented similar to a paper-and-pencil checklist format.

Both contingency event recording formats have advantages and disadvantages that clinicians should be aware of prior to choosing which specific data collection method to utilize. Ideally, individuals with a strong background in functional behavioral assessment will be called upon for the collection of behavioral data. Unfortunately, this is seldom possible in practice, and parents and teachers are commonly required to collect the appropriate data. Therefore, one of the more immediate considerations should be the competency of the observer who will be collecting the data. When using the unstructured, narrative format, observers are able to describe in their own words what events occurred prior to and following the target challenging behavior. This eliminates the confound of the observer not understanding specific terms commonly located on A–B–C checklists, and it also provides the observer with the ability to describe all of the events regardless of their perceived effect on the target behavior. However, structured checklists may cue the observer to notice specific antecedents or consequences that they may have otherwise overlooked or considered irrelevant to the situation. Another clearly positive property of checklists is that they are easy and quick to complete. If an observer collecting A–B–C data is also working with the individual who is exhibiting the challenging behavior, which is quite common since parents, teachers, and therapists are often those collecting the data, it may not be feasible to expect the observer to provide a narrative on the events. This would be especially true if there is a greater frequency of the challenging behavior.

Despite the advantages and disadvantages of each A–B–C data collection method, very little research has yet to examine the differences between structured and unstructured A–B–C data. Based on the results of one study assessing the accuracy and preference of both formats among 16 special education teachers and paraprofessionals, the structured format yielded slightly greater accuracy and was more preferred among teachers (Lerman, Hovanetz, Strobel, & Tetreault, 2009). Overall, the accuracy of data collected across both methods was only modest due to the teachers' lack of knowledge regarding functional behavioral assessment. Therefore, further training in functional behavioral assessment is necessary for teachers, especially those working with children who display behavioral difficulties.

Contingency event recording data is commonly interpreted in one of two ways. The simplest method is based on a correlational visual inspection of the frequencies of the antecedents and consequences related to specific challenging behaviors (Tarbox et al., 2009). If the antecedents and consequences serve the same function for the same behavior, it is sufficient to say that the occurrence of the behavior served that single function. Then, the most frequently occurring of those functions for that specific behavior may be hypothesized to maintain the behavior. If antecedents and consequences do not coincide during a single occurrence of a behavior, the interpretation

becomes more complicated. In these cases, the behavior may be maintained by multiple functions or irrelevant correlating antecedents and consequences may be coinciding with the behavior. As such, interpretations should be made with caution. On the other hand, contingency event recording data may also be analyzed by calculating conditional probabilities (Lerman & Iwata, 1993; Mace & Lalli, 1991). First, the proportion of times the target behavior followed each antecedent out of all of the times the target behavior occurred is calculated. In addition, the percentage of times each consequence followed the target behavior is also calculated. As will be discussed in the next section, conditional probabilities may also be calculated for continuous event recording with additional calculations possible.

Continuous Event Recording

Based on Bijou and colleagues' (1968) original work on contingency event recording, continuous event recording was subsequently developed (Mace, Lalli, & Lalli, 1991). Data collection begins by an individual first compiling a list of possible antecedents, challenging behaviors, and consequences during observation periods. All categories may be broad or narrow depending on the specific individual being assessed. Then predetermined time intervals for data collection are established and divided into equal time segments for data collection. Mace and colleagues suggest that 15–60-min observation periods be used with 10-s time intervals. Therefore, if the designated observation period is 15 min, the entire period can be divided into 90 10-s time intervals. During the direct observation periods, observers use a partial-interval recording procedure. If any of the antecedents or behaviors occur during a 10-s period, the appropriate box is marked. This is the distinguishing difference between contingency and continuous event recording – all antecedents are recorded regardless of if they are following by engagement in the target behavior. Consequences are documented somewhat differently; only consequences occurring up to 30 s following challenging behaviors are documented. Once again, the 30-s window is a suggestion which may be modified. As was discussed with respect to interpretation of contingency event recording data, conditional probabilities may also be calculated for continuous event recordings. Also, due to the nature of continuous event recording data collection allowing for additional variables to be collected, other calculations may also be possible. For example, intervals during which a specific antecedent preceded the target behavior divided by the number of intervals containing that specific antecedent can also be calculated since all antecedents are documented regardless of whether they are antecedents to the target behavior. Therefore, this data allows the clinician to determine how often the target behavior actually followed the antecedent—perhaps the antecedent occurred frequently without a subsequent occurrence of the target behavior. Information of this kind can be quite valuable.

Scatter Plot Analysis

While slightly less direct than data collected through contingency or continuous event recordings, scatter plot analysis is yet another observational method of collecting data related to the function(s) of challenging behavior. To collect this type of data, predetermined time intervals are decided upon before beginning data collection (Touchette, MacDonald, & Langer, 1985). Although these time intervals can be as simple as hour or half-hour blocks of time throughout the day, it is strongly suggested that the time periods represent different activities occurring during the day or even other changes in the environment, such as staff shift changes. Recording data according to differing environmental aspects will allow for easier interpretation of the data. Scatter plot data is simpler to collect in comparison to contingency or continuous event recording data because its collection only requires that an individual denote whether the target behavior occurred during the specified time interval rather than supply a descriptive narrative account or determine the antecedents or consequences of the behavior. Data collection can be implemented in

two ways: either frequency data can be collected with a tally mark being placed in the time period during which the target behavior occurred or data can be plotted on a grid during the observation period. If the tally mark method is chosen, the data is later compiled into a graph with the time period along the *X*-axis and the frequency of the challenging behavior along the *Y*-axis similar to the visual presentation of the grid data collection method. This method may also be more feasible in settings where training in data collection is limited since frequency data is often collected to monitor progress regardless of its inclusion in a scatter plot.

Utilizing the grid option eliminates the need for two steps in the scatter plot process; however, it requires greater time investment during actual data collection. On the grid, successive days are presented along the *X*-axis, while the time periods are displayed on the *Y*-axis. Then for each time period over the course of each day, the appropriate block is shaded accordingly. Typically, an empty cell indicates that the target behavior was absent, while a filled cell marks presence of the behavior. However, depending on the frequency of the target behavior, variations of this method can be used (Kahng et al., 1998; Touchette et al., 1985). For example, a blank cell may represent an absence of the behavior, while a shaded cell denotes low frequencies of the behavior and a filled cell indicates high frequencies of the behavior. The difference between low and high frequencies of the behavior would be based on predetermined criteria. Although more than three different codes can be used, some have found this to compromise the interpretability of the data (Touchette et al.).

Interpretation of scatter plot data involves inspection of the visual display to determine time periods, which correlate with specific events, during which the target behavior is more likely to occur. Although some researchers find scatter plots to be advantageous in that they are easily interpreted visually, simple visual interpretation of scatter plot data does not always arrive at a conclusion regarding temporal periods during which the target behavior is most likely to occur (Kahng et al., 1998). However, this is not to say that these conclusions cannot be derived from scatter plot data. When Kahng et al. were unable to decipher a temporal pattern from several visual displays of scatter plot data, the authors constructed a control chart (Pfadt & Wheeler, 1995) for each scatter plot to statistically interpret the data. Control charts are commonly used as one of many statistical procedures to improve industrial organization production. However, Pfadt and Wheeler suggest that these statistical procedures may also be applied to the behavioral sciences to analyze behavior patterns. The statistical analysis aims to identify patterns of variability that are considered "out of statistical control." That is, they are statistically sufficiently deviant from the mean so as to be significantly different. Applying this statistical analysis to the same 15 sets of data which had been impervious to scatter plot analyses resulted in a temporal pattern being identified for 12 of the 15 data sets. Although Kahng et al. state that needing to apply this statistical analysis to scatter plot data compromises one of the main advantages of scatter plot analysis (i.e., being able to visually interpret the data with ease), its addition still allows clinicians to identify temporal patterns of behavior, which is the goal of scatter plot analysis.

Psychometric Properties of Interview and Direct Observation Methods

Since the current chapter focuses on two functional behavioral assessment methods (i.e., interviews and direct observations), and these two methods are often compared to one another in studies, data regarding the reliability and validity of the aforementioned methods will be discussed in a similar fashion. First, some examples of studies only addressing one form of functional behavioral assessment will be presented. Subsequently, examples of studies examining multiple functional behavioral assessment strategies will be reviewed. Please note that the review of psychometric properties presented is not an all inclusive compilation of studies regarding the specific assessment method, but rather a demonstration of recent research.

Interviews

FACTS

An excellent review completed by McIntosh et al. (2008) provides a wealth of information on the psychometric properties of the FACTS. The review aggregated the results of nine separate studies assessing the properties of the FACTS in a total of 41 children attending public preschools, elementary schools, and middle schools. The test–retest reliability was found to be strong with respect to antecedents, functions, and total behavioral hypotheses, while the test–retest reliability for setting events was moderate. Inter-rater reliability was also moderate across respondents. In terms of validity, convergent validity has been most commonly explored by comparing the FACTS to either direct observations or an EFA. Complete agreement between the FACTS and direct observations reached 90%, while the FACTS and EFA agreed on functions for 53% of the cases. However, it should be noted that there were some instances in which there was partial agreement between assessment methods. For example, for 5% of validation cases between the FACTS and direct observations, the direct observations pointed toward multiple functions, one of which was consistent with the function identified by the FACTS. Similarly, for 24% of the validation cases between the FACTS and EFA, the EFA indicated multiple functions, one of which was also indicated by the FACTS. Validity based on treatment utility was also explored for 15 students. All treatment plans developed based on the identified function from the FACTS resulted in a decrease in targeted challenging behaviors. The majority of students experienced at least a 50% reduction in problem behaviors.

FAIP

A sample of 59 school psychologists, social workers, and teachers participated in the standardization of the FAIP using a sample of children in the third through sixth grades who engaged in challenging behaviors within the classroom setting (Hartwig et al., 2004). For inter-rater reliability, 19 pairs of participants were asked to complete the FAIP on 19 separate students. Inter-rater reliability for the entire FAIP averaged 63.9% agreement, while inter-rater reliability for the derived functions averaged 70.96% agreement across participants. Test–retest reliability was calculated by having one set of 19 participants complete the FAIP for a second time, approximately 30 days following its first administration. Test–retest reliability averaged 72.66% for the entire FAIP and 81.4% agreement for the derived functions. Concurrent validity was assessed by having multiple respondents complete the FAIP, MAS, and FAIF. There was 69.44% agreement between the FAIP and MAS, and 76.34% agreement between the FAIP and FAIF. The clinical utility of all three assessments was also measured, with results indicating that professionals most preferred the FAIP overall when compared with the MAS and FAIF.

Student-Guided Functional Assessment Interview

Reed and colleagues (1997) assessed the inter-rater reliability of the *Student-Guided Functional Assessment Interview* by administering the interview to ten students in the fifth through eighth grades, and their corresponding teachers, who had a history of exhibiting challenging behaviors within the school setting. All interviews were administered first to teachers and then to the corresponding students within 3 days of the original interview. When conducting interviews with the students, prompting questions were frequently incorporated as students often needed guidance throughout the assessment. These were used as follow-up questions to the main questions asked during the interview and were standard for all interviews with students.

Taken collectively, there was 60% teacher–student agreement on the entire functional behavioral assessment portion of the interview. When breaking down the results according to the different aspects of the functional behavioral assessment section, agreement was variable. Teachers and students demonstrated agreement on 81.5% of challenging behaviors, with students identifying more behaviors than did teachers. The behaviors that were reported only by the students and not the teachers appear to be those that were not necessarily

observable to teachers within the classroom setting (e.g., possession of inappropriate items), thus at least minimally explaining the discrepancy. While there was 77% agreement for predictors and consequences of challenging behaviors, there was only 23% agreement on setting events. Overall, there was 38% agreement on the support plan portion of the interview, with agreement varying between 25% and 48% across prevention strategies, teaching strategies, consequences, and setting changes. However, consistency between the functional assessment and support plan portions for teacher and student interviews was 78% and 70%, respectively, suggesting that there was moderate to good ability on behalf of the informants to develop treatment plans consistent with their hypothesized functions. Taken collectively, there was a 22% agreement across the entire interview between teachers and students.

Direct Observations

Continuous Event Recording

Lerman and Iwata (1993) investigated the ability of continuous event recordings to identify the function of self-injurious behaviors in six adults with profound intellectual disability. For five of the individuals, continuous event recordings were completed for a total of 24 h. For one individual, assessment was conducted for a total of 48 h to determine whether a lengthier assessment period would clarify the results. In addition, EFAs were completed for all participants independent of the continuous event recording results. While EFAs were found to identify the maintaining variables of self-injurious behavior in all of the participants, continuous event recordings appeared to be successful only in differentiating social versus nonsocial functions. Whether attention, escape, or another social contingency maintained the behavior could not be discerned through the descriptive assessment. Additionally, a lengthier assessment period did not prove effective in further clarifying the results of a descriptive assessment. However, it should be noted that EFA was held as the gold standard in this assessment and its results were not validated. Therefore, it is possible that the results derived through the EFAs were similarly invalid.

Scatter Plot Analysis

Touchette and colleagues (1985) reported excellent inter-rater reliability between observers in collection of data that was used in scatter plot analyses for three individuals with ASD. For two of the three children assessed, functions maintaining the challenging behavior were identified through scatter plot analysis, thereby causing function-based interventions to be implemented. A subsequent reduction in challenging behaviors was observed for all clients.

Symons, McDonald, and Wehby (1998) used scatter plot analysis in two behavior management classrooms in Canada for two boys who engaged in challenging behaviors frequently throughout the day (i.e., more than 10 times per day). Each of the two classroom teachers was instructed to collect frequency data for each 30-min interval throughout the school day. During the study, the first author (Symons) collected interobserver agreement data with each teacher for a minimum of 20% of school days to ensure inter-rater reliability; the average agreement was 93.0%. The first author then made a scatter plot visual display of each student's behavior data using symbols to denote low, medium, and high frequencies of the behavior based on preestablished criteria for each individual student. These scatter plots were updated on a weekly basis. To assess the validity of scatter plot data, team meetings were held approximately once each week with the first author, teacher, and teacher's aide present to analyze the data and identify time periods of concern, if any. Once one or more time periods of concern were noted, hypotheses regarding the elevation in the presence of the target behavior during these time periods were proposed, and an appropriate intervention was then implemented for one of the time periods based on this hypothesis. For both students, implementation of an intervention based on scatter plot analysis resulted in a moderate decrease in challenging behaviors, thereby supporting the effectiveness of scatter plot analysis in functional behavioral assessment within the classroom setting.

Maas, Didden, Bouts, Smits, and Curfs (2009) used scatter plot analysis to determine the temporal characteristics of excessive daytime sleepiness and disruptive behaviors in seven adults with Prader-Willi Syndrome. Frequency data were collected by parents and/or caregivers across a 4-week period between normal waking hours. Time periods were broken down into 2-h intervals, and within the 2-h time period the presence of behaviors was rated across two separate situations—activities versus no activities. Each behavior received one of three scores; 0 indicated not sleepy/no disruptive behavior, 1 indicated somewhat sleepy/somewhat disruptive behavior, and 2 indicated very sleepy or asleep/severe disruptive behavior. All codes were operational defined for the observers. Interobserver agreement for data collection was deemed good. Separate scatter plots for excessive daytime sleepiness and disruptive behaviors were then constructed for each participant during activities and during the absence of activities. The time intervals were segmented vertically with activity and non-activity periods separated, and successive days were segmented horizontally. Scatter plot analysis indicated that individuals with Prader-Willi Syndrome exhibited excessive daytime sleepiness more commonly during the late afternoon and evening hours, especially when no activities were planned. Excessive daytime sleepiness was also more common on Saturdays, also increasing when there was no activity involvement. A less distinct pattern emerged for disruptive behaviors; engagement in disruptive behavior was relatively consistent across days and activity involvement. However, there was a slight elevation during weekends when no activities were provided. The results of this study have many implications for the use of scatter plot analysis. First, as the authors themselves point out, more concrete results may have been obtained through the use of shorter time intervals (e.g., Touchette et al., 1985). Secondly, since the authors based much of their analysis on the hypothesis that the targeted behaviors would increase during periods of inactivity, the information obtained through the analysis was somewhat limited. Specific activities were not considered nor were other possible influential factors, such as staff preference.

Comparisons of Multiple Assessment Methods

Arndorfer, Miltenberger, Woster, Rortvedt, and Gaffaney (1994) used a multi-assessment method to assess the maintaining variables of challenging behaviors in five children ages 2–13 years who had varying levels of intellectual impairment, developmental delays, and/or other psychological disorders. The first phase of the study was termed the "descriptive assessment" and included assessment methods such as administration of the MAS and FAIF, as well as contingency event recording data collected through direct observations independently by the parents and researchers. For one child, all four assessments arrived at the same function. For the remaining four children, the FAIF and A–B–C data indicated identical functions while the MAS was inconsistent. The descriptive assessment data was then compiled for each child, so that hypotheses regarding the function(s) of the challenging behaviors could be made, with the hypothesized function being chosen as the one supported by the most assessments. As such, the FAIF's and A–B–C data's identified function was always the one chosen for manipulation. EFAs were then completed to assess the validity of the hypothesized functions derived through the descriptive assessments. All children's descriptive assessment results were validated through 90–120 min EFAs. Functional Communication Training (FCT), a treatment protocol frequently implemented to teach individuals to appropriately communicate to achieve the same function their challenging behavior had been maintained by, was then implemented for two of the children according to the validated function. Teaching these children to verbally request the attention or tangible they desired significantly decreased the rate of their challenging behaviors. Thus, implementation of FCT further validated the results of both these children's descriptive assessments and EFAs. Therefore, both the results of the FAIF and contingency event recordings were validated through the findings in this study.

Cunningham and O'Neill (2000) conducted a similar study with three boys aged 3–5 years who were diagnosed with an ASD. Each child engaged

in challenging behaviors to include biting self, physical aggression, and tantrums. Four functional behavioral assessment techniques were compared: EFA, an interview (FAIF), contingency event recording (FAOF), and a scaling method (MAS). While multiple functions were identified for each child, all four assessment methods arrived at the same primary function for two of the children. For the third child, the EFA and FAIF arrived at the same primary function, while contingency event recording and the MAS arrived at another identical primary function. In this example, the secondary function identified by the EFA and FAIF was also the same and served as the primary function identified by contingency event recording and the MAS, and vice versa. Therefore, although the sample size within the study was quite small, a limitation that will be discussed later, these findings suggest that the aforementioned functional behavioral assessment methods were able to reliably identify the same function albeit at different rankings.

Alter, Conroy, Mancil, and Haydon (2008) implemented four different functional behavioral assessment techniques with four children who were at risk for emotional and behavioral disorders. The FAIF, MAS, and A–B–C recordings were all compared to EFA, which was designated as the most valid method of assessment. When compared, the FAIF, MAS, and A–B–C recording methods all demonstrated low agreement with one another. Furthermore, the FAIF and MAS also demonstrated low consistency with EFA. Therefore, within this sample, the FAIF was not deemed a valid assessment of maintaining variables of challenging behaviors. On the other hand, A–B–C recordings were designated as the only assessment method which corroborated the findings of an EFA for all four children. Therefore, although contingency event recording does not involve experimental manipulation of variables present within the individual's immediate environment as does EFA, this study indicated that the results of these two assessments are quite similar.

Murdock, O'Neill, and Cunningham (2005) assessed the reliability and validity of teacher interviews, student interviews, and contingency event recordings. Eight boys ages 12–15 participated in the study, all of which were receiving services for a behavior disorder. The teacher and student interviews were developed specifically for the study, while the FAOF was used to collect contingency event recording data. The interviews were administered separately to groups of teachers and individual students, and they solicited information regarding the behaviors, their antecedents, and their consequences. Summary statements were then derived based on the information collected, and teachers and students were then individually asked to rank these statements as to which scenarios were the most problematic, thus the most likely to be maintaining the challenging behavior. With respect to data collected through the FAOF, rankings were made similarly by calculating the percent occurrence of each function across all observations. Interobserver agreement was also calculated for the direct observations, with an average agreement of 80%. Results indicated a significant discrepancy between the challenging behaviors identified by teachers and students with only a 30% rate of agreement. Much like the study conducted by Reed and colleagues (1997), teachers were less likely to identify behaviors that were not easily observable within the classroom setting. Overall, there was a 64% agreement across all three functional behavioral assessment methods (i.e., teacher interview, student interview, and contingency event recording) with respect to accuracy of identified function as well as rank order of that function with respect to other noted functions. The remaining 36% of cases displayed agreement between teacher interviews and contingency event recording data but not with student interviews.

Newcomer and Lewis (2004) investigated the validity of descriptive assessment methods (i.e., teacher interviews, student interviews, scatter plots, and A–B–C recordings) in three children ages 9–11 years old attending public elementary schools who were displaying behavioral difficulties putting them at risk for failure that school year. Assessment occurred in three phases—the first phase explored functions utilizing the aforementioned descriptive assessment methods, the second phase generated hypotheses based on the descriptive assessment methods, and an EFA was conducted during the third phase to confirm the hypotheses generated. Across all

three children, the A–B–C recordings, scatter plots, student interviews, and EFA demonstrated convergent validity. The teacher interview, which was conducted using an adapted FAIF, corroborated the findings for two of the three children, while the third child's FAIF indicated the child's primary function as his secondary one. Therefore, taken together, it appears that all of the descriptive assessment methods were valid in identifying the maintaining variable of these three children's challenging behaviors. Based on these maintaining variables, function-based treatments and nonfunction-based treatments were implemented. For all children, function-based treatments resulted in a significant decrease in challenging behaviors when compared with baseline. Nonfunction-based treatments were met with increases and significant variability in challenging behaviors for two of the students, and a slight decrease in one student. However, for the student who experienced decreases in challenging behaviors both during function- and nonfunction-based treatments, the gains were greater with the former.

Mueller and Kafka (2006) completed a comprehensive functional behavioral assessment for a 4-year-old girl who engaged in object mouthing within the classroom setting. Techniques employed included parent and teacher interviews, contingency event recording, and EFA. The interviews conducted were not according to a specified protocol, but did elicit information regarding antecedents and consequences of object mouthing. Taken together, the parent and teacher interviews were relatively inconclusive in identifying specific antecedents likely to precede object mouthing. However, an attention function was hypothesized based on information acquired regarding consequences since the consequence to mouthing was always a verbal reprimand. Based on contingency event recordings, mouthing was only potentially maintained by attention in the form of verbal reprimands, but most likely maintained by a nonsocial function as it occurred across various situations without discrimination. Finally, an EFA was conducted with attention and alone conditions to distinguish whether object mouthing was maintained by attention or nonsocial variables. No discernable pattern of object mouthing was seen across conditions, thereby confirming the results of contingency event recordings in that the behavior was maintained by nonsocial variables.

Ervin, DuPaul, Kern, and Friman (1998) utilized a teacher interview, student interview (*Student Assisted Functional Assessment Interview*), and direct observations to formulate hypotheses regarding the function of two teenage boys' off-task behavior within the classroom. Both boys met diagnostic criteria for attention-deficit/hyperactivity disorder and oppositional defiant disorder at the time of the study. Based on the cumulative results of the descriptive assessments, which all pointed toward identical functions, function-based intervention plans were implemented for both of the boys. A significant decrease was seen in the off-task behavior of both boys during intervention phases with an increase in the behaviors occurring during reversal procedures. Therefore, the cumulative results of the comprehensive functional behavioral assessment appeared valid in identifying the variables maintaining both of the boys' off-task behavior, allowing for appropriate interventions to be put in place.

Overview of Interviews in Functional Behavioral Assessment

Given that interviews are among the most popular method of functional behavioral assessment, attention needs to be given to their potential use in identifying maintaining variables of challenging behaviors and aiding in implementation of appropriate interventions. To date, minimal research has been conducted on the psychometric properties of various interviews, and the results of studies that have been completed are relatively inconsistent with one another. While some have found parent, caregiver, and/or teacher interviews to be quite beneficial in identifying the function of challenging behaviors (e.g., Cunningham & O'Neill, 2000; McIntosh et al., 2008; Newcomer & Lewis, 2004), others tend to find that these assessment methods are invalid (e.g., Alter et al., 2008).

Many variables may play a role in the differences found between studies. O'Neill and colleagues (1997) assert that the FAIF should be administered by a professional with training in functional assessment. Although this is a relatively undisputable claim with respect to all functional assessment methods, it appears appropriate to say that this may hold even more truth for functional assessment interviews, as opposed to rating scales, due to the unstructured nature of the assessment process as well as the clinical judgment needed to interpret the results. While the FAIF and other interview methods are exceedingly thorough, they produces a much more complex set of data when compared with rating scales due to the open-ended format of the interview as well as the lack of a scoring algorithm (Sturmey, 1994). Therefore, it is possible that the findings of studies differed based on the training of those administering the interviews. In fact, despite its popular use, research has also identified interviews to be the assessment method with which clinicians have had the least amount of training (Ellingson et al., 1999). Furthermore, when asked to rate how easy different functional behavioral assessment strategies were to use, interviews were rated as being more difficult to use than scaling methods and direct observations. Interviews were also rated less effective in determining the function(s) of behavior and less useful when compared with EFA and direct observation, but to be more effective and more useful in comparison to rating scales. In addition to these concerns about interviews overall, another major limitation of interviews is that they rely on retrospective report.

The utility of interviews in functional behavioral assessment does not solely rely on the specific interview administered nor its psychometrics but also the respondent participating in the interview process. Borgmeier and Horner (2006) investigated the predictive validity of confidence ratings made by the respondents. A total of 63 teachers and staff participated in completing the FACTS for nine students. Five to eight teachers or staff completed the interview for each of the nine students, all of whom varied in their exposure to the student during the school day, exposure to the student during periods when the targeted challenging behavior most commonly occurred, and self-assessed experience with functional behavioral assessment. At the conclusion of the interview, the teachers and staff were asked to rate how confident they were that their interview had identified the correct function on a 6-point Likert scale ranging from 1 (not confident) to 6 (very confident). Then, an EFA was conducted to identify the function of the behavior.

Although the vast majority of informants reported possessing little to no experience with conducting a functional behavioral assessment or developing a treatment plan, it was found that 91.4% of respondents rated their confidence as a 4 or higher. However, the only significant finding was that those individuals who were highly confident and identified the correct function had significantly more exposure to the student both throughout the school day and during times in which the student engaged in the targeted behavior. Therefore, when choosing a respondent for a functional behavioral assessment interview, it seems appropriate that those being interviewed should be individuals who have considerable exposure to the student. However, exposure is not sufficient. The respondent must also indicate that they are confident in their ratings. Unfortunately, confidence ratings cannot be obtained until the interview is complete. Though this is without question a limitation of this finding, this information is still valuable in determining if the already administered interview is likely valid. Clearly, more research needs to be conducted to investigate this relationship. In the meantime, it is suggested that informants be those who are familiar with the individual both during and outside of behavioral challenges. Furthermore, if confidence ratings are later found to be weak, those conducting the interview are advised to interpret the results with caution or to weigh the results of other interviews more heavily.

Experience with functional behavioral assessment is another factor that may affect the validity of interview results. Although Borgmeier and Horner (2006) did not find a correlation between the validity of interview results and experience with functional behavioral assessment, a significant flaw with this finding is that the

experience of functional behavioral assessment was self-assessed on a Likert scale. Therefore, it may be that participants rated their experience and knowledge with functional behavioral assessment based on different factors. Other research has found that training informants on aspects of functional behavioral assessment actually does lead to an increased ability to accurately identify the functions of challenging behaviors (McNeill, Watson, Henington, & Meeks, 2002). Therefore, conducting interviews with informants who have at least some background in functional behavioral assessment would prove to be beneficial.

The strong suggestion to choose informants who have knowledge of functional behavioral assessment clearly speaks against the idea of including students or individuals engaging in the challenging behaviors in the interview process. However, this is not necessarily the case. Collecting information from those engaging in challenging behaviors may be quite beneficial, with students having the ability to identify intervention strategies that may assist them personally. Furthermore, as was commonly seen when conducting student interviews, students are likely to identify more behavior problems than teachers due to exposure limitations on the part of teachers (Murdock et al., 2005; Reed et al., 1997). Yet, there was some discrepancy between studies with respect to teacher and student interviews corroborating each other's findings (Ervin et al., 1998; Murdock et al.; Newcomer & Lewis, 2004; Reed et al.). Additionally, despite the possible advantages of including the student or individual engaging in the challenging behavior in the functional behavioral assessment interview process, this assessment method may not be appropriate for all populations. At present, research has only documented its use among individuals, primarily students, who have either a mild disability or no diagnostic label. Therefore, future research needs to explore whether individuals with intellectual and/or developmental disabilities would benefit from participation in this form of functional behavioral assessment. It is likely that deficits associated with intellectual and/or developmental disabilities may hinder the individual's ability to provide accurate information, thus causing this type of functional behavioral assessment to be deemed inappropriate. Therefore, it is highly suggested that although the effectiveness of student interviews should continue to be explored, they should not be used in isolation, even with individuals without intellectual impairments.

With respect to standard parent, teacher, and caregiver interviews, the FAI and FACTS both have moderate to strong research support with respect to their reliability and validity. At the same time, this is not to say that some research has not suggested otherwise or that a sufficient amount of research has been conducted as of yet. For example, all studies exploring these interviews have only included a small number of participants. Therefore, reliability and validity findings need to be interpreted with caution. However, although these interviews may be less systematic and have less research to support their psychometric reliability and validity, they are not without their advantages. As was previously stated, interviews do not require the individual in question to be present nor that the targeted behavior, which may pose danger to the individual and/or others, be exhibited. Interviews also require significantly less time to complete than EFAs. The majority of functional behavioral assessments likely include at least a minor interview regardless of its effectiveness in identifying functions. This is because interviews prompt informants to supply basic information that EFA, direct observations, and scaling methods do not. Most interviews, such as the FAIF and FACTS, require the respondent to operationally define the targeted behavior, a critical piece of information that other functional behavioral assessment methods do not incorporate. It is not that these alternative methods are overlooking the importance of this information, but rather that it is assumed that this information has already been gathered through an interview. Therefore, at least a brief interview should be mandatory when beginning a functional behavioral assessment as it may be seen as a starting point to any functional behavioral assessment, especially when the function(s) of behavior are elusive to the assessor.

Although very little research has been conducted on the FAIP to date, the results of the

preliminary study are exciting and provide initial evidence that the FAIP may be a useful interview assessment for use when conducting functional behavioral assessments. It differs from the majority of other interviews by interpreting the narrative reports from respondents, thus formulating hypotheses regarding the function(s) of behaviors. Since the lack of a scoring algorithm is one of the more prominent disadvantages to functional behavioral assessment interviews, the FAIP's built in scoring program is a major advantage. Not only does it sidestep the difficulty in interpretation of the results, but also it does not require significant expertise in the area of functional behavioral assessment. Furthermore, since the FAIP is administered by a computer as opposed to a professional, its use significantly reduces the need for personnel resources that may not be available. The cost of administering the FAIP is also another likely advantage of the interview due to less resources being needed and because a one-time fee would be in place as opposed to purchasing of multiple assessment measures. However, this is not to say that the FAIP is not without its disadvantages. Clearly, a great deal of more research is needed. Also, in contrast to other interviews which appear to be more broad based in nature, as they will probe about many different factors within the individual's environment that may be affecting his/her behavior, the FAIP narrows its results down to four general hypotheses. It should also be noted that although the FAIP makes a significant contribution to treatment by providing function- and research-based interventions, a professional is needed to implement and monitor the effectiveness of these treatments.

Overview of Direct Observation Methods in Functional Behavioral Assessment

Direct observation data, including contingency event recordings, continuous event recordings, and scatter plots, can greatly assist in the functional behavioral assessment process despite their status as correlational assessment methods. In comparison to EFA, these methods require considerably less resources. Relatively little training is required to collect and interpret the data, and supplies needed are of little or no cost. Furthermore, since direct observation data is collected during the individual's regular activities, it does not often require extra personnel or time to complete. Although direct observations are critiqued for only being able to identify correlations between behaviors and antecedents/consequences, a major limitation of EFAs, the fact that the behaviors are not occurring in the natural environment, is overcome by this method of assessment.

Despite the similarity in the overall method of collecting direct observation data, there are significant differences between the three methods discussed within this chapter that warrant consideration. Direct observations vary in their simplicity, range of data, and validity. While scatter plot data is the simplest to collect, its results are more ambiguous than either contingency or continuous event recordings since the presence of targeted behaviors is merely correlated with different time periods, which is in turn correlated with different activities occurring throughout the day. Though some have found the results of such analyses to be beneficial and helpful in formulating treatment plans, results are somewhat speculative in nature. On the other hand, contingency and continuous event recordings provide significantly more information to the clinician and can also actually integrate some aspects of a scatter plot analysis since the time of day can similarly be documented. However, contingency and continuous event recordings also require more training in the area of functional behavioral assessment to ensure that accurate data is being collected. Furthermore, these methods require more time and attention be given to data collection while conducting observations since significantly more documentation is required. Although continuous event recordings would appear to be superior over contingency event recordings, the former may be just as unreasonable to conduct as EFAs since it requires constant documentation throughout a predetermined

observation period. In fact, it is rather unlikely that staff working with an individual to be observed would be capable of completing a continuous event recording while working with the individual.

Based on the advantages and disadvantages of the three direct observation methods discussed here in comparison to one another, it is not surprising that contingency event recordings are often chosen in lieu of either of the other two methods. This, of course, means that there has also been less research conducted on either of the other two methods. The research that has been conducted on scatter plot analyses and continuous event recordings to date is at best inconsistent. However, the most common of the direct observation methods, contingency event recording, is also the direct observation method with the most evidence to support its use in functional behavioral assessment (e.g., Alter et al., 2008; Newcomer & Lewis, 2004). Although contingency event recording cannot be considered synonymous with EFA by any means, the results have repeatedly been found to corroborate those found through an EFA. Therefore, contingency event recordings should routinely be completed when conducting a functional behavioral assessment, especially if resources do not permit that an EFA or more comprehensive assessment be conducted.

Conclusion

EFA, which is often deemed the gold standard of functional behavioral assessment methods, is not always practical, safe, or even possible. Therefore, alternative functional behavioral assessment techniques are often deemed necessary. Within this chapter, various interview and direct observation methods commonly used to aid in functional behavioral assessment have been reviewed. All of these assessments have their own strengths and weaknesses, which have been addressed accordingly. Based on the information presented herein, it should be apparent that although many alternative functional behavioral assessment techniques exist, none are without their flaws. While each of these overall methods and their specific strategies have different advantages and disadvantages to consider prior to beginning any functional behavioral assessment, the key to a comprehensive functional behavioral assessment does not rely on only one method but rather a collaboration of different methodologies to assist in the treatment planning process. Furthermore, functional behavioral assessments should be individualized so that one set protocol is unlikely to be appropriate for all cases.

Didden (2007) suggests a seven-step plan for conducting a thorough functional behavioral assessment: (1) identify and operationally defined the targeted challenging behaviors, (2) utilize direct observation methods such as contingency event recordings and scatter plots, (3) administer interviews and scales to those familiar with the individual, (4) complete an EFA, (5) integrate results from functional behavioral assessment to formulate hypotheses regarding the function(s) of targeted challenging behaviors, (6) develop a treatment plan based on the derived function maintaining the targeted challenging behavior(s), and (7) monitor effectiveness of treatment interventions. Although this seven-step plan appears to be without question the ideal assessment, in most cases it is not practical. Therefore, in cases in which a comprehensive functional behavioral assessment involving an EFA or solely an EFA cannot be conducted, it is proposed that alternative, brief functional behavioral assessment strategies be used initially with a progression to more time-consuming and labor-intensive methods as deemed necessary (Vollmer et al., 1995). With this progression as the basis to functional behavioral assessment, a brief interview and some form of direct observation, preferably contingency event recordings, should undoubtedly be included with more intense methods being incorporated when needed. In this manner, the most parsimonious way of identifying functions maintaining challenging behaviors can be accomplished.

Appendix A

Date/ time	Antecedents (what happened right before?)	Target behavior	Consequence (what happened right after?)

Appendix B

Date/time									
Staff initials									
Behavior									
Physical aggression									
Out of seat									
Location									
Classroom									
Hallway									
Bathroom									
Cafeteria									
Playground									
Antecedents									
Direction given									
Preferred item removed									
Transition									
Denied request									
No staff attention									
Other (write on back)									
Consequences									
Verbal reprimand									
Redirection to current task									
Ignored									
Given tangible									
Allowed to escape activity									
Other (write on back)									

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