Behavior Rating Inventory of Executive Function® Adult Version

Self-Report Interpretive Report

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Client name :	Sample Client
Client ID :	321
Gender :	Female
Age :	27
Education (Years)	-Not Specified-
Test date :	05/01/2013
Test form :	BRIEF-A Self-Report Form
Test description:	-Not Specified-

This report is intended for use by qualified professionals only and is not to be shared with the examinee or any other unqualified persons.

Version: 2.10.043

Introduction

The Behavior Rating Inventory of Executive Function®–Adult Version (BRIEF®-A) is a standardized rating scale developed to provide a window into everyday behaviors associated with specific domains of the executive functions in adults ages 18 to 90 years. The BRIEF-A consists of equivalent Self-Report and Informant Report Forms, each having 75 items in nine non-overlapping scales, as well as two summary index scales and a scale reflecting overall functioning (Global Executive Composite [GEC]) based on theoretical and statistical considerations. The Behavioral Regulation Index (BRI) is composed of four scales: Inhibit, Shift, Emotional Control, and Self-Monitor. The Metacognition Index (MI) is composed of five scales: Initiate, Working Memory, Plan/Organize, Task Monitor, and Organization of Materials. There also are three validity scales: Negativity, Infrequency, and Inconsistency. The BRIEF-A can serve as a screening tool for possible executive dysfunction, as an index of the ecological validity of laboratory or clinic-based assessments, and as an indicator of individuals' awareness of their own self-regulatory functioning, particularly when both Self-Report and Informant Report Forms are used. The Informant Report Form provides information about an individual's functioning in the everyday environment based on an informant's observations. The Self-Report Form provides an understanding of the individual's perspective with respect to their own difficulties in self-regulation - information that can be critical to the development of interventions. Explicitly assessing, valuing, and providing feedback about an individual's viewpoint can facilitate rapport and the development of a collaborative working relationship that can, in turn, serve as a starting point for intervention. Determining the degree to which an individual is aware of their executive dysfunction can be helpful in gauging the amount of support he or she will require. For those who possess a high degree of awareness, as well as motivation, the intervention process can be facilitated. For those with limited awareness, a greater degree of external support may be required. Although response patterns on self-report behavior rating scales such as the BRIEF-A can range from strong agreement with other informants to complete denial of any problems, rich clinical information can be gleaned from directly assessing self-reported opinions.

The clinical information gathered from an in-depth profile analysis on the BRIEF-A is best understood within the context of a full assessment that includes (a) a detailed history of the individual; (b) performance-based testing; (c) reports on the BRIEF-A from informants; and (d) observations of the individual's behavior. By examining converging evidence, the clinician can confidently arrive at a valid diagnosis and, most importantly, an effective treatment plan. A thorough understanding of the BRIEF-A, including its development and its psychometric properties, is a prerequisite to

interpretation. As with any clinical method or procedure, appropriate training and clinical supervision is necessary to ensure competent use of the BRIEF-A.

This report is confidential and intended for use by qualified professionals only. This report should not be released to the individual being evaluated or to informants. If a summary of the results specifically written for the rated individual and/or his or her informants is appropriate and desired, the BRIEF-A Feedback Report can be generated and given to the interested parties, preferably in the context of verbal feedback and a review of the Feedback Report by the clinician.

T scores (M = 50, SD = 10) are used to interpret the individual's level of executive functioning on the BRIEF-A. These scores are transformations of the raw scale scores. T scores provide information about an individual's scores relative to the scores of respondents in the standardization sample. Percentiles represent the percentage of adults in the standardization sample who fall below a given raw score. Traditionally, T scores at or above 65 are considered clinically significant. In the process of interpreting the BRIEF-A, review of individual items within each scale can yield useful information for understanding the specific nature of the individual's elevated score on any given clinical scale. Although certain items may have considerable clinical relevance for the individual being evaluated, placing too much interpretive significance on individual items is not recommended due to lower reliability of individual items relative to the scales and indexes.

Overview

Sample Client completed the Self-Report Form of the Behavior Rating Inventory of Executive Function-Adult Version (BRIEF-A) on 05/01/2013. There are no missing item responses in the protocol. Ratings of Sample Client' self-regulation do not appear overly negative. Items were completed in a reasonable fashion, suggesting that the respondent did not respond to items in a haphazard or extreme manner. Responses are reasonably consistent. In the context of these validity considerations, ratings of Sample Client' everyday executive function suggest some areas of concern. The overall index, the Global Executive Composite (GEC), was elevated (GEC T = 71, %ile = 95). The Behavioral Regulation Index (BRI) was within normal limits (BRI T = 63, %ile = 85) and the Metacognition Index (MI) was elevated (MI T = 73, %ile = 97).   Within these summary indicators, all of the individual scales are valid. One or more of the individual BRIEF-A scales were elevated, suggesting that Sample Client reports difficulty with some aspects of executive function. Concerns are noted with her ability to sustain working memory, plan and organize problem-solving approaches, attend to task-oriented output, and organize environment and materials. Sample Client' ability to inhibit impulsive responses, adjust to changes in routine or task demands, modulate

emotions, monitor social behavior, and initiate problem solving or activity is not described as problematic.

The overall profile suggests that Sample Client experiences difficulties with working memory and with planning and organization that interfere with her ability to complete everyday tasks at home or at work. Individuals with similar elevations on the Working Memory scale, and without significant elevations in the Behavioral Regulation Index scales, are often described as inattentive. Without appropriate working memory, the ability to sustain focus for adequate lengths of time may be compromised for these individuals. Further, individuals with similar profiles may have secondary difficulty developing and organizing a plan of approach for future-oriented problem solving. This profile is often seen in individuals with inattentive-type attentional disorders.
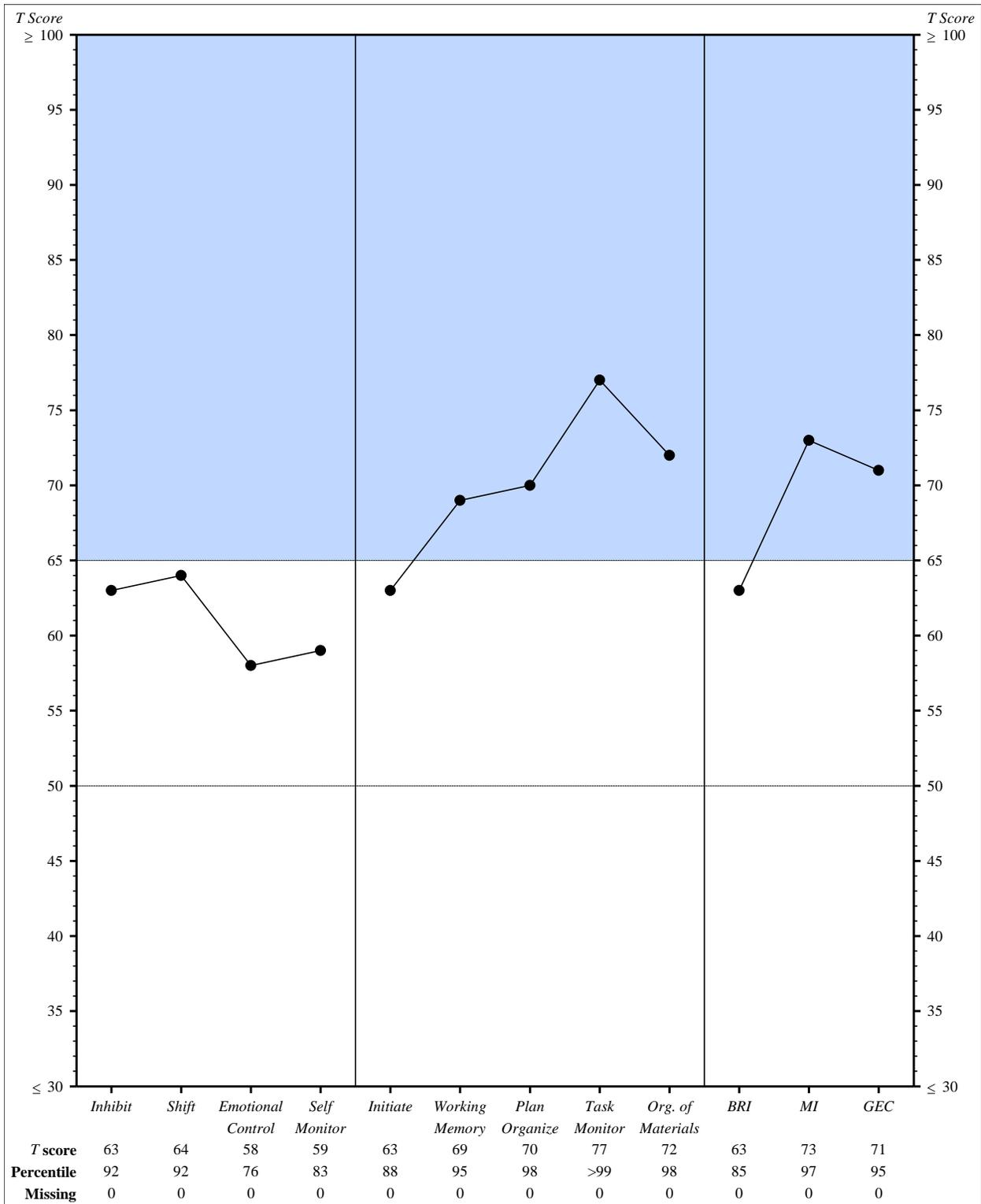
BRIEF®-A Score Summary Table

Scale/Index	Raw score	*T* score	Percentile	90% CI
Inhibit	16	63	92	55 - 71
Shift	12	64	92	56 - 72
Emotional Control	19	58	76	53 - 63
Self-Monitor	11	59	83	51 - 67
Behavioral Regulation Index (BRI)	58	63	85	59 - 67
Initiate	16	63	88	55 - 71
Working Memory	17	69	95	62 - 76
Plan/Organize	22	70	98	63 - 77
Task Monitor	15	77	>99	68 - 86
Organization of Materials	21	72	98	66 - 78
Metacognition Index (MI)	91	73	97	69 - 77
Global Executive Composite (GEC)	149	71	95	68 - 74

Validity scale	Raw score	Cumulative %	Protocol Classification
Negativity	1	0 - 98.3	Acceptable
Infrequency	0	0 - 97.3	Acceptable
Inconsistency	4	0 - 99.2	Acceptable

Note: Age-specific norms have been used to generate this profile.
For additional normative information, refer to the Appendixes in the BRIEF®-A Professional Manual.

Profile of BRIEF®-A *T* Scores

	Inhibit	Shift	Emotional Control	Self Monitor	Initiate	Working Memory	Plan Organize	Task Monitor	Org. of Materials	BRI	MI	GEC
***T* score**	63	64	58	59	63	69	70	77	72	63	73	71
Percentile	92	92	76	83	88	95	98	>99	98	85	97	95
Missing	0	0	0	0	0	0	0	0	0	0	0	0

Note: Age-specific norms have been used to generate this profile.

For additional normative information, refer to the Appendixes in the BRIEF®-A Professional Manual.

Validity

Before examining the BRIEF-A profile, it is essential to carefully consider the validity of the data provided. The inherent nature of rating scales brings potential bias to the scores. The first step is to examine the protocol for missing data. With a valid number of responses, the Negativity, Infrequency, and Inconsistency scales of the BRIEF-A provide additional validity information.

Missing Items

The respondent completed 75 of a possible 75 BRIEF-A items. For reference purposes, the summary table for each scale indicates the actual rating for each item. There are no missing responses in the protocol, providing a complete data set for interpretation.

Negativity

The Negativity scale measures the extent to which the respondent answered selected BRIEF-A items in an unusually negative manner. Items composing the Negativity scale are shown in the summary table below. A higher raw score on this scale indicates a greater degree of negativity, with less than 1% of respondents endorsing six or more of the items as Often in the clinical sample. *T* scores are not generated for this scale. The Negativity score of 1 is within the acceptable range, suggesting that Sample Client' view of herself is not overly negative and that the BRIEF-A protocol is likely to be valid.

Item	Content	Response
1	I have angry outbursts	Sometimes
8	*Remaining item content redacted for sample report*	Sometimes
19		Never
21		Sometimes
22		Sometimes
23		Sometimes
29		Never
36		Sometimes
39		Sometimes
40		Often

Infrequency

Scores on the Infrequency scale indicate the extent to which the respondent endorsed items in an atypical fashion relative to the combined normative and clinical samples. For example, marking Often to Item 10 ("I forget my name") is highly unusual, even for adults with severe cognitive impairment. Items composing the Infrequency scale are shown in the summary table below. Because unusual responding on the five Infrequency items is not always indicated by the same extreme response (that is, Never or Often), the infrequent response also is shown for each item. *T* scores are not generated for the Infrequency scale. Instead, the number of items endorsed in an atypical, or an infrequent, manner is summed for a total score (i.e., the Infrequency score) and classified as "Acceptable" or as "Infrequent." Less than 1% of respondents in the combined mixed clinical/healthy adult and normative samples had Infrequency scores of 3 or higher. The Infrequency score of 0 is within the Acceptable range, suggesting that there is no clear evidence of atypical responding.

Item	Content	Response (Infrequent Response)
10	I forget my name	Never (Often)
27	*Remaining item content redacted for sample report*	Sometimes (Never)
38		Never (Often)
48		Sometimes (Never)
59		Sometimes (Never)

Inconsistency

Scores on the Inconsistency scale indicate the extent to which similar BRIEF-A items were endorsed in an inconsistent manner relative to the combined normative and mixed clinical/healthy adult samples. For example, a high Inconsistency score might be associated with marking Never in response to Item 33 ("Overreacts to small problems") and simultaneously marking Often in response to Item 72 ("Gets upset quickly or easily over little things"). Item pairs composing the Inconsistency scale are shown in the summary table below. *T* scores are not generated for the Inconsistency scale. Instead, the raw difference scores for the 10 paired items are summed and the total difference score (i.e., the Inconsistency score) is used to classify the protocol as either "Acceptable" or "Inconsistent." Less than 1% of respondents in the combined mixed clinical/healthy adult and normative samples had Inconsistency scores of 8 or higher. The Inconsistency score of 4 is within the Acceptable range, suggesting that responses were reasonably consistent.

#	Content 1	Score 1	#	Content 2	Score 2	Diff
2	I make careless errors when completing tasks	2	41	*Remaining item content redacted for sample report*	3	1
25		3	49		3	0
28		2	42		2	0
33		2	72		2	0
34		2	63		2	0
44		2	61		2	0
46		2	56		1	1
52		3	75		2	1
60		3	74		3	0
64		2	70		3	1

Composite and Summary Indexes

Global Executive Composite

The Global Executive Composite (GEC) is an overarching summary score that incorporates all of the BRIEF-A clinical scales. Although review of the Behavioral Regulation Index (BRI), Metacognition Index (MI), and individual scale scores is strongly recommended for all BRIEF-A profiles, the GEC can sometimes be useful as a summary measure. In this case, the two summary indexes are not substantially different, with T scores separated by 10 points. Thus, the GEC adequately captures the nature of the overall profile. With this in mind, Sample Client' T score of 71 (%ile = 95) on the GEC is elevated as compared to the scores of her peers, suggesting significant perceived difficulty in one or more areas of executive function.

Behavioral Regulation and Metacognition Indexes

The Behavioral Regulation Index (BRI) captures the ability to maintain appropriate regulatory control of one's own behavior and emotional responses. This includes appropriate inhibition of thoughts and actions, flexibility in shifting problem-solving set, modulation of emotional response, and monitoring of one's actions. It is composed of the Inhibit, Shift, Emotional Control, and Self-Monitor scales. Appropriate behavioral regulation is likely to be a precursor to appropriate metacognitive problem solving. It enables the metacognitive processes to successfully guide active and systematic problem solving, as well as more generally supporting appropriate self-regulation.

The Metacognition Index (MI) reflects the individual's ability to initiate activity and generate problem-solving ideas, to sustain working memory, to plan and organize problem-solving approaches, to monitor success and failure in problem solving, and to organize one's materials and environment. It is composed of the Initiate, Working Memory, Plan/Organize, Task Monitor, and Organization of Materials scales.

Examination of the indexes reveals that the Metacognition Index is elevated (T = 73, %ile = 97) and the Behavioral Regulation Index is within the average range (T = 63, %ile = 85). This suggests that Sample Client demonstrates difficulties with initiation, working memory, planning, organizing, and/or the ability to monitor task-oriented problem solving, but also suggests relatively preserved ability to inhibit impulses, modulate emotions, shift problem-solving set, and monitor her behavior.

Clinical Scales

The BRIEF-A clinical scales measure the extent to which the respondent reports problems with different behaviors related to the nine domains of executive functioning captured within the BRIEF-A. The following sections describe the scores obtained on the clinical scales and the suggested interpretation for each individual clinical scale.

Inhibit

The Inhibit scale assesses inhibitory control and impulsivity. This can be described as the ability to resist impulses and the ability to stop one's own behavior at the appropriate time. Sample Client' *T* score of 63 (%ile = 92) on this scale is within the non-elevated range as compared to her peers. This suggests that she views herself as typically able to resist impulses and consider consequences before acting, and generally as "in control" of herself.

Item	Content	Response
5	I tap my fingers or bounce my legs	Sometimes
16	*Remaining item content redacted for sample report*	Sometimes
29		Never
36		Sometimes
43		Sometimes
55		Often
58		Sometimes
73		Sometimes

Shift

The Shift scale assesses the ability to move with ease from one situation, activity, or aspect of a problem to another as the circumstances demand. Key aspects of shifting include the ability to (a) make transitions; (b) tolerate change; (c) problem-solve flexibly; (d) switch or alternate attention; and (e) change focus from one mindset or topic to another. Sample Client' score on the Shift scale is within the average range as compared to like-aged peers (*T* = 64, %ile = 92), suggesting typical behavioral and/or cognitive flexibility.

Item	Content	Response
8	I have trouble changing from one activity or task to another	Sometimes
22	*Remaining item content redacted for sample report*	Sometimes
32		Sometimes
44		Sometimes
61		Sometimes
67		Sometimes

Emotional Control

The Emotional Control scale measures the impact of executive function problems on emotional expression and assesses an individual's ability to modulate or control his or her emotional responses. Sample Client' score on the Emotional Control scale is within the average range as compared to like-aged peers ($T = 58$, %ile = 76). This suggests that Sample Client views herself as adequately able to modulate or regulate emotions overall. She generally describes herself as reacting to events appropriately, without outbursts, sudden and/or frequent mood changes, or excessive periods of emotional upset.

Item	Content	Response
1	I have angry outbursts	Sometimes
12	*Remaining item content redacted for sample report*	Sometimes
19		Never
28		Sometimes
33		Sometimes
42		Sometimes

Self-Monitor

The Self-Monitor scale assesses aspects of social or interpersonal awareness. It captures the degree to which an individual perceives herself as aware of the effect that her behavior has on others. Sample Client' score on the Monitor scale is not elevated, suggesting no perceived difficulty with monitoring the impact of her own behavior in social settings ($T = 59$, %ile = 83).

Item	Content	Response
13	I don't notice when I cause others to feel bad or get mad until it is too late	Never
23	*Remaining item content redacted for sample report*	Sometimes
37		Never
50		Sometimes
64		Sometimes

Initiate

The Initiate scale reflects an individual's ability to begin a task or activity and to independently generate ideas, responses, or problem-solving strategies. Sample Client' score on the Initiate scale is within the average range as compared to like-aged peers (T = 63, %ile = 88). This suggests that she is generally able to begin, start, or "get going" on tasks, activities, and problem-solving approaches appropriately.

Item	Content	Response
6	I need to be reminded to begin a task even when I am willing	Sometimes
14	*Remaining item content redacted for sample report*	Sometimes
20		Never
25		Often
45		Never
49		Often
53		Often
62		Never

Working Memory

The Working Memory scale measures "on-line representational memory;" that is, the capacity to hold information in mind for the purpose of completing a task, encoding information, or generating goals, plans, and sequential steps to achieving goals. Working memory is essential to carry out multistep activities, complete mental manipulations such as mental arithmetic, and follow complex instructions. Sample Client' score on the Working Memory scale is elevated as compared to like-aged peers ($T = 69$, %ile = 95). This suggests that Sample Client experiences substantial difficulty holding an appropriate amount of information in mind or in "active memory" for further processing, encoding, and/or mental manipulation. Further, elevations on this scale suggest difficulties sustaining working memory, which has a negative impact on the ability to remain attentive and focused for appropriate lengths of time. Individuals with fragile or limited working memory may have trouble remembering things (e.g., phone numbers, instructions) even for a few seconds, keeping track of what they are doing as they work, or may forget what they are supposed to retrieve when sent on an errand. Such individuals may miss information that exceeds their working memory capacity, such as instructions for an assignment.

Item	Content	Response
4	I have trouble concentrating on tasks (such as chores, reading, or work)	Often
11	*Remaining item content redacted for sample report*	Sometimes
17		Sometimes
26		Sometimes
35		Often
46		Sometimes
56		Never
68		Sometimes

Plan/Organize

The Plan/Organize scale measures an individual's ability to manage current and future-oriented task demands. The scale consists of two components: plan and organize. The Plan component captures the ability to anticipate future events, to set goals, and to develop appropriate sequential steps ahead of time in order to carry out a task or activity. The Organize component refers to the ability to bring order to information and to appreciate main ideas or key concepts when learning or communicating information. Sample Client' score on the Plan/Organize scale is elevated as compared to like-aged peers (T = 70, %ile = 98). This suggests that Sample Client experiences difficulty with the planning and the organization of information, which has a negative impact on her approach to problem solving.

Item	Content	Response
9	I get overwhelmed by large tasks	Sometimes
15	*Remaining item content redacted for sample report*	Often
21		Sometimes
34		Sometimes
39		Sometimes
47		Sometimes
54		Sometimes
63		Sometimes
66		Sometimes
71		Often

Task Monitor

The Task Monitor scale reflects the ability to keep track of one's problem-solving success or failure, and to identify and correct mistakes during behaviors. Sample Client' score on the Task Monitor scale is elevated compared to like-aged peers (T = 77, %ile = >99). This suggests that Sample Client views herself as having difficulties keeping track of projects or as likely to make careless mistakes.

Item	Content	Response
2	I make careless errors when completing tasks	Sometimes
18	*Remaining item content redacted for sample report*	Sometimes

Organization of Materials

The Organization of Materials scale measures orderliness of work, living, and storage spaces (e.g., desks, rooms). Sample Client' score on the Organization of Materials scale is elevated relative to like-aged peers (T = 72, %ile = 98). Sample Client describes having difficulty keeping her materials and her belongings reasonably well-organized, and finding her belongings when needed. Individuals with significant difficulties in this area often do not function efficiently in school, at work, or at home because they do not have their materials readily available for use. Pragmatically, teaching Sample Client to organize her belongings can be a useful, concrete tool for enhancing task organization.

Item	Content	Response
3	I am disorganized	Sometimes
7	*Remaining item content redacted for sample report*	Often
30		Sometimes
31		Sometimes
40		Often
60		Often
65		Often
74		Often

Executive System Intervention
Overview

Executive dysfunction can significantly impact an individual's ability to function at home, at school, at work, or in the community. Several different approaches to executive function intervention have been developed by neuropsychologists, rehabilitation specialists, and others that are aimed at helping individuals cope with executive dysfunction. One type of intervention involves the application of cognitive remediation techniques that typically emphasize repeated practice with tasks, such as memory and attention tasks, that are intended to improve the deficient skill (Bell, Bryson, & Wexler, 2003; Cicerone, 2002; Sohlberg & Mateer, 2001; Stevenson, Whitmont, Bornholt, Livesey, & Stevenson, 2002). This form of intervention has demonstrated some success in treating people with executive dysfunction, such as individuals who

have traumatic brain injury (Cicerone et al., 2000; Cicerone et al., 2005). Another type of intervention involves teaching compensatory strategies. These strategies are designed to circumvent rather than directly improve deficits and also have demonstrated effectiveness in a number of patient populations (Dirette, 2002; Velligan et al., 2000; Wexler & Bell, 2005). Still others emphasize the interaction of the individual within the environment and how antecedent environmental modifications or accommodations can facilitate executive functions (Ylvisaker, Hanks, & Johnson-Greene, 2002; Ylvisaker, Jacobs, & Feeney, 2003). It should be noted, however, that these approaches to dealing with executive dysfunction need not be mutually exclusive and many intervention programs are characterized by a hybrid approach.

Compensatory strategies themselves can take several forms including using external aides (e.g., use of a notebook),

Remaining interpretive content redacted for sample report

*** End of Report ***