Behavior Rating Inventory of Executive Function®

Self-Report Version

BRIEF®-SR

Interpretive Report

Developed by

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Client Information

Client Name :	Sample Client
Client ID :	SC456
Gender :	Male
Grade:	10th
Age :	15
Birthdate :	03/15/1992
Test Date :	02/29/2008
Test Description :	Asperger's Disorder

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Version: 3.01.007

Introduction

The Behavior Rating Inventory of Executive Function®–Self-Report Version (BRIEF®-SR) is an 80-item standardized self-report measure developed to capture older children's and adolescents' (aged 11 to 18 years with a fifth grade or better reading level) views of their own executive functions, or self-regulation, in their everyday environment. The BRIEF-SR was intended to complement parent and teacher ratings of the adolescent's executive function on the BRIEF® Parent and Teacher Forms in order to meet the need for capturing adolescents' views of their own self-regulatory strengths and weaknesses. In addition to a more comprehensive assessment, an understanding of the adolescent's perspective with respect to difficulties in self-control is critical when considering intervention strategies. Explicitly assessing, valuing, and providing feedback about his viewpoint can facilitate rapport and the development of a collaborative working relationship that can, in turn, serve as a starting point for interventions. Indeed, the adolescent's level of self-understanding and awareness becomes an important factor in gauging the amount of support he will require. For those who possess a high awareness of their executive/regulatory difficulties and who are eager to ameliorate their struggles, the intervention process can be facilitated. For those who lack awareness or acceptance, a much higher degree of external support may be required. While response patterns on self-report behavior rating scales such as the BRIEF-SR can range from strong agreement with other informants to aggressive denial of any problems, rich clinical information can be gleaned from directly assessing their opinions.

As is the case for all measures, the BRIEF-SR should not be used in isolation as a diagnostic tool. Instead, it should be used in conjunction with other sources of information, including detailed history, parent and/or teacher ratings on the BRIEF®, clinical interviews, performance test results, and, when possible, direct observation in the natural setting. 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-SR, 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-SR.

This report is confidential and intended for use by qualified professionals only. This report should not be released to the parents or teachers of the adolescent being evaluated or to the adolescent himself. If a summary of the results specifically written for parents and teachers is desired, the BRIEF-SR Feedback Report can be generated and given to the interested parents and/or teachers. If a summary of the results specifically written for the responding adolescent is desired and clinically appropriate, the BRIEF-SR Adolescent Feedback Report can be generated and given to the adolescent, preferably in the context of verbal feedback and a review of the Adolescent Feedback Report with the clinician.

T scores are used to interpret the adolescent's self-reported level of executive functioning on the BRIEF-SR rating form. These scores are linear transformations of the raw scale scores (M = 50, SD = 10). *T* scores provide information about an individual's scores relative to the scores of respondents in the standardization sample. Percentiles, which are also presented within the BRIEF-SP, represent the percentage of children in the standardization sample who fall below a given raw score. Traditionally, *T* scores at or above 65 are considered clinically significant; however, in the case of the BRIEF-SR, *T* scores between 60 and 64 on any of the clinical scales or indexes, may warrant clinical interpretation. In this report, such scores are described as "mildly elevated."

In the process of interpreting the BRIEF-SR, review of individual items within each scale can yield useful information for understanding the specific nature of the adolescent's elevated score on any given clinical scale. While certain items may be particularly relevant to specific clinical groups, 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 completed the Self-Report Version of the Behavior Rating Inventory of Executive Function (BRIEF-SR) on 02/29/2008. There are no missing item responses in the protocol. Responses are reasonably consistent. The respondent's ratings of his own self-regulation do not appear overly negative. In the context of these validity considerations, Sample's ratings of his everyday executive function suggest some areas of concern.

The overall index, the Global Executive Composite (*GEC*), was mildly elevated (*GEC T* = 63, %ile = 88). Both the Behavioral Regulation (*BRI*) and the Metacognition (*MI*) Indexes were mildly elevated (*BRI T* = 64, %ile = 90 and *MI T* = 61, %ile = 86).

Within these summary indicators, all of the individual scales are valid. One or more of the individual BRIEF-SR scales were at least mildly elevated, suggesting that Sample reports difficulty with some aspects of executive function. Concerns are noted with his ability to adjust to changes in routine or task demands (Shift *T* = 67, %ile = 95) and finish tasks such as homework or projects (Task Completion *T* = 65, %ile = 93). Sample describes his ability to inhibit impulsive responses (Inhibit *T* = 57, %ile = 77), modulate emotions (Emotional Control *T* = 64, %ile = 89), sustain working memory (Working Memory *T* = 61, %ile = 85), plan and organize problem solving approaches (Plan/Organize *T* = 56, %ile = 77), organize his environment and materials (Organization of Materials *T* = 55, %ile = 73), and monitor his own behavior (Monitor *T* = 61, %ile = 85) as not problematic.

BRIEF®-SR Score Summary Table

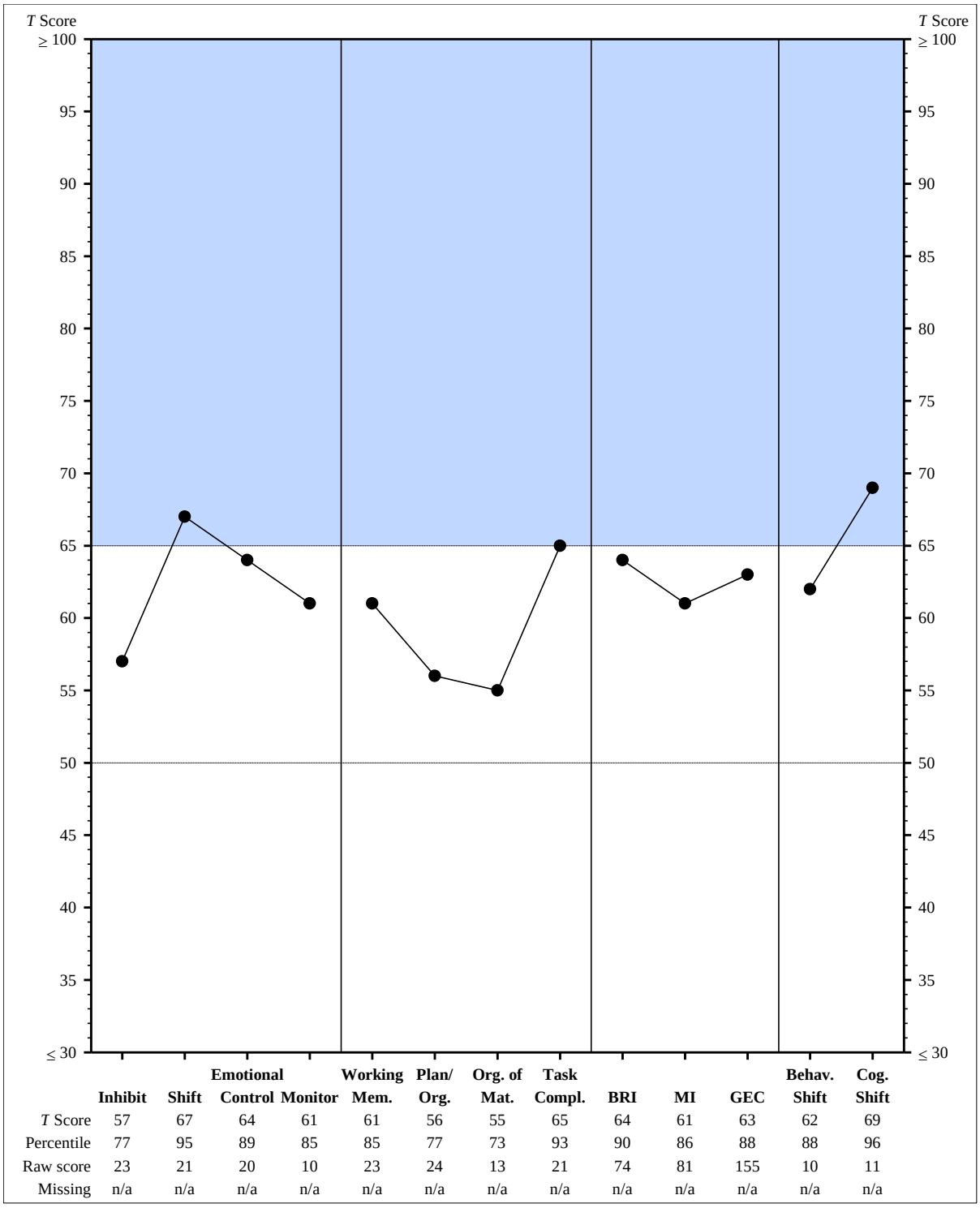
Index/Scale	Raw Score	*T* Score	Percentile	90% C.I.
Inhibit	23	57	77	54 - 60
Shift	21	67	95	64 - 70
Emotional Control	20	64	89	62 - 66
Monitor	10	61	85	59 - 63
Behavioral Regulation Index (BRI)	74	64	90	59 - 69
Working Memory	23	61	85	58 - 64
Plan/Organize	24	56	77	53 - 59
Organization of Materials	13	55	73	52 - 58
Task Completion	21	65	93	62 - 68
Metacognition Index (MI)	81	61	86	55 - 67
Global Executive Composite (GEC)	155	63	88	55 - 71

Subscale	Raw Score	*T* Score	Percentile	90% C.I.
Behavioral Shift	10	62	88	60 - 64
Cognitive Shift	11	69	96	67 - 71

Scale	Raw Score	Cumulative Percentile	Protocol Classification
Negativity	0	≤ 98	Acceptable
Inconsistency	0	≤ 98	Acceptable

Note: Male, age-specific norms have been used to generate this profile.
For additional normative information, refer to the Appendix in the BRIEF®-SR Professional Manual.

Profile of BRIEF®-SR *T* Scores



	Inhibit	Shift	Emotional Control	Monitor	Working Mem.	Plan/ Org.	Org. of Mat.	Task Compl.	BRI	MI	GEC	Behav. Shift	Cog. Shift
T Score	57	67	64	61	61	56	55	65	64	61	63	62	69
Percentile	77	95	89	85	85	77	73	93	90	86	88	88	96
Raw score	23	21	20	10	23	24	13	21	74	81	155	10	11
Missing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: Male, age-specific norms have been used to generate this profile.
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Validity

Before examining the BRIEF-SR 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 Inconsistency and Negativity scales of the BRIEF-SR provide additional validity indexes.

Missing items

Sample completed 80 of a possible 80 BRIEF-SR items. There are no missing responses in the protocol, providing a complete data set for interpretation.

Inconsistency

Scores on the Inconsistency scale indicate the extent to which Sample answered similar BRIEF-SR items in an inconsistent manner relative to the combined normative and clinical samples. For example, a high Inconsistency score might be associated with marking *Never* in response to the item "I have angry outbursts" while at the same time marking *Often* in response to the item "I have outbursts for little reason." *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 as "Inconsistent." The Inconsistency score of 0 falls within the Acceptable range, suggesting that Sample was reasonably consistent in his responses.

Negativity

The Negativity scale measures the extent to which the respondent answered selected BRIEF-SR items in an unusually negative manner relative to the clinical sample. A higher raw score on this scale indicates a greater degree of negativity, with less than 1% of respondents scoring above 5 in the clinical sample. As with the Inconsistency scale, *T* scores are not generated for this scale. The Negativity score of 0 falls within the acceptable range, suggesting that Sample's view of himself is not overly negative and that the BRIEF-SR protocol is likely to be valid.

Composite and Summary Indexes

Global Executive Composite

The Global Executive Composite (*GEC*) is an overarching summary score that incorporates all of the BRIEF-SR clinical scales. Although review of the Metacognition Index, Behavioral Regulation Index, and individual scale scores is strongly recommended for all BRIEF-SR 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 3 points. Thus, the *GEC* adequately captures the nature of the overall profile. With this in mind, Sample's *T* score of 63 (%ile = 88) on the *GEC* is mildly elevated as compared to the scores of his peers, suggesting some difficulty in one or more areas of executive function.

Behavioral Regulation and Metacognition Indexes

The Behavioral Regulation Index (*BRI*) captures the adolescent's ability to shift cognitive set, modulate emotions and behavior via appropriate inhibitory control, and monitor his impact on

others. It is comprised of the Inhibit, Shift, Emotional Control and Monitor scales. Intact behavioral regulation is likely to be a precursor to appropriate metacognitive problem solving. Behavioral regulation enables the metacognitive processes to successfully guide active systematic problem solving; and more generally, behavioral regulation supports appropriate self-regulation.

The Metacognition Index (*MI*) reflects the adolescent's ability to sustain working memory, to plan and organize his problem-solving approaches, and to organize his materials and environment. It can be interpreted as Sample's ability to cognitively self-manage tasks. The *MI* relates directly to ability to actively problem solve in a variety of contexts and to complete tasks such as school work. It is composed of the Working Memory, Plan/Organize, Organization of Materials, and Task Completion scales.

Examination of the indexes reveals that both the Behavioral Regulation Index (*T* = 64, %ile = 90) and Metacognition Index (*T* = 61, %ile = 86) are mildly elevated. This suggests more global difficulties with self-regulation, including the fundamental ability to inhibit impulses, modulate emotions, flexibly problem solve, and monitor the impact of his behavior on others. These global difficulties extend to metacognitive functions, including the ability to sustain working memory, plan and organize, with resulting difficulty completing tasks such as school work.

Clinical Scales

The BRIEF-SR clinical scales measure the extent to which Sample reports problems with different behaviors related to the eight domains of executive functioning captured within the BRIEF-SR. 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's *T* score of 57 (%ile = 77) on this scale is within the expected range as compared to his peers. This suggests that he views himself as typically able to resist impulses and consider consequences before acting, and generally as "in control" of himself.

Shift

The Shift scale assesses the ability to move freely 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. Behavioral aspects of shifting, such as making transitions and tolerating change, are captured by the Behavioral Shift subscale, while cognitive aspects of shifting, such as problem solving flexibly, are captured by the Cognitive Shift subscale. Sample's score on the Shift scale is significantly elevated as compared to like-aged peers (*T* = 67, %ile = 95).Within the overall scale, both the Behavioral Shift (*T* = 62, %ile = 88) and the Cognitive Shift (*T* = 69, %ile = 96) subscales are elevated. This suggests that Sample is experiencing difficulty with both behavioral and cognitive flexibility. Difficulties with shifting can compromise the efficiency of problem-solving.

Individuals who have difficulty shifting are often described as somewhat rigid and/or inflexible. They often prefer consistent routines. In some cases, they are described as being unable to drop certain topics of interest or as unable to move beyond a specific disappointment or unmet need. In the assessment setting, children or adolescents who report disliking change may need additional time to prepare for the evaluation. Sample might benefit from scheduling the evaluation in advance and from being reminded as the time approaches of the appointment. If not possible, then additional "warm-up" time in the assessment setting might be helpful toward facilitating the adjustment to the new setting. On formal assessment, children or adolescents with difficulties shifting cognitively may have difficulty changing from one task to the next or sometimes from one question to the next. They sometimes require additional explanations or demonstration to grasp the demands of a novel task when first presented. They may also "carry over" a problem-solving approach, a response style, or information from a previous task that is no longer appropriate. This tendency to carry over can be seen as perseverating on content or response style from one item to the next within a task.

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's score on the Emotional Control scale is mildly elevated as compared to like-aged peers (T = 64, %ile = 89). This score suggests that he has some concerns about his own regulation or modulation of emotions. Sample may overreact to events and may demonstrate sudden outbursts, sudden and/or frequent mood changes, and excessive periods of emotional upset.

Monitor

The Monitor scale assesses *self-monitoring*, or interpersonal awareness. It captures the degree to which a child or adolescent perceives himself as aware of the effect that his behavior has on others. In this regard, it is somewhat more limited in scope than the Monitor scale included in the Parent and Teacher forms of the BRIEF, which capture self-monitoring as well as *task monitoring*. Sample's score on the Monitor scale is mildly elevated, suggesting some difficulty with monitoring his own behavior in social settings (T = 61, %ile = 85). Sample may be unaware of the impact his own behavior has on social interactions with others.

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's score on the Working Memory scale is mildly elevated as compared to like-aged peers (T = 61, %ile = 85). This suggests that Sample experiences some difficulty holding an appropriate amount of information in mind or in "active memory" for further processing, encoding, and/or mental manipulation. Further, Sample's score suggests difficulties sustaining working memory, which has a negative impact on his ability to remain attentive and focused for appropriate lengths of time. Caregivers or teachers often describe children or adolescents with fragile or limited working memory as having trouble remembering things (e.g., phone numbers or instructions) even for a few seconds, losing track of what they

are doing as they work, or forgetting 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. Clinical evaluators may observe that such students cannot remember the rules governing a specific task (even as he or she works on that task), rehearses information repeatedly, loses track of what responses he or she has already given on a task that requires multiple answers, and struggles with mental manipulation tasks (e.g., repeating digits in reverse order) or solving arithmetic problems that are orally presented without writing down figures.

Appropriate working memory is necessary to sustain performance and attention. Parents of children and adolescents with difficulties in this domain often report that he cannot "stick to" an activity for an age-appropriate amount of time and frequently switches tasks or fails to complete tasks. Although working memory and the ability to sustain it have been conceptualized as distinct entities, behavioral outcomes of these two domains are often difficult to distinguish.

Plan/Organize

The Plan/Organize scale measures a respondent's perceived ability to manage current and future-oriented task demands. The scale is comprised 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's score on the Plan/Organize scale is within the expected range as compared to like-aged peers (T = 56, %ile = 77). This suggests that Sample perceives himself as able to plan and organize his approach to problem solving appropriately and is able to grasp the overall structure or framework of novel information that facilitates learning and later recall.

Organization of Materials

The Organization of Materials scale measures orderliness of work and storage spaces (e.g., desks, lockers, and backpacks). Sample's score on the Organization of Materials scale falls within the average range relative to like-aged peers (T = 55, %ile = 73). Sample describes himself as being able to keep materials and belongings reasonably well organized, as having his materials readily available for projects or assignments, and as being able to find his belongings when needed.

Task Completion

The Task Completion scale reflects the ability to finish or complete tasks appropriately and/or in a timely manner, emphasizing difficulties with the production of work or performance output. Although "task completion" is not commonly considered an executive function, it represents the outcome of other executive difficulties including working memory, planning, organization, and inhibitory control. Sample's score on the Task Completion scale is significantly elevated compared with like-aged peers (T = 65, %ile = 93). This suggests that Sample views himself as having marked difficulties finishing homework or other projects in a timely fashion. Examination of other scales may reveal potential sources of difficulty completing tasks, including difficulties with working memory, planning, and organization, or ability to inhibit task-irrelevant actions.

Executive System Intervention

(This section removed for sample report purposes)

End of Report