

Understanding Challenging Behaviors of Children with TBI

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Introduction

One of the most difficult problems parents, teachers, and individual with brain injury themselves face following traumatic brain injury (TBI) is the occurrence of challenging behaviors – behaviors that interfere with family relationships, performance at school, and social interactions. Do the following examples of challenging behaviors sound familiar to you?

- T.J., age 15, shoves his books off his desk in math class and swears.
- Anna. Age 10, refuses to turnoff the TV and start her homework.
- When Chris, age 6, plays soccer on the playground, he picks up the ball and won't give it back. The other children don't want to play with Chris anymore.

Behaviors such as these are displayed frequently by children and adolescents with and without disabilities. However, research (e.g. Swift & Wilson, 2001) indicates that many people don't understand the factors that influence the behavior of individuals with TBI and may assume children have more control over their own behavior following TBI than they actually have. Consequently, interventions to reduce challenging behaviors in children/adolescents with TBI may be ineffective.

Causes of Challenging Behavior in Children/Adolescent with TBI

Traumatic brain injury leads to alterations on brain functioning, physical capacities, and psychological health that can influence behavior (e.g., Begali, 1992; Savage & Wolcott, 1994; Swift & Wilson, 2001). Some of these alterations are temporary and resolve over time; others persist and contribute to long-lasting challenging behavior. As a result of TBI children/adolescents may experience:

- *slower speed of processing*, leading to misalignment between what is happening now and what the student is processing.
- *memory difficulty*, particularly for new information such as classroom instruction, parent requests, expectations, and consequences.
- *limited executive functions* needed to plan and carry out goal-oriented activities (such as studying for a test or carrying out a multi-step project).
- *hypersensitivity* to sound, light, touch, or temperature.
- *impulsivity* due to limited inhibitory systems.
- *irritability* related to loss of specific skills, increased sensitivity to sensory stimuli, or reduced impulse control and frustration tolerance.
- *reduced attention and concentration* due to slower processing, memory difficulties, fatigue, impulsivity, or irritability.
- *disinhibition* or decreased control over emotions and behavior causing, e.g., inappropriate language or emotional response or risk taking.



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- *awareness or denial deficits* leading some children/adolescents to be unaware of the ways in which they are different following traumatic brain injury and others to suffer psychological distress, such as anxiety or depression, due to the awareness of losses.
- *skill deficits relate to area of injury*, such as the ability to read facial expressions or social cues.
- *psychological disturbances* such as depression or anxiety which may lead to risky behaviors, withdrawal, agitation, or aggression.

Physiological and psychological sequelae of TBI such as these can contribute to challenging behaviors. For example:

- T.J.'s slower processing of information in math class, limited memory for instruction, and awareness of his poor math performance might have contributed to frustration, which led to disruptive behavior.
- Anna might not understand the limitations she experiences as a result of her TBI, leading her to avoid homework, which is now difficult for her.
- Chris may be impulsive, which causes him to pick up the ball in soccer, even though he can recite the rules.

Examining Behavior in Context

Most experts today agree that behavior occurs as a result of the interaction between what is happening in the environment – both before and after the behavior – and what is happening within the individual. Even small changes in the individual, such as fatigue, hunger, or irritability, or small changes in the environment, such as the number of people around or level of noise, can produce significant changes in behavior. Do you ever notice that on some days you are a more patient driver than on other days? Behavior is variable, and even seemingly small factors can alter our behavior from one day to the next or one setting to another.

Functional Behavior Assessment

Rather than acting in predictable ways across situations, we act differently depending on the context or situation. *Functional behavioral assessment* (FBA) is a tool used to identify factors that influence the occurrence of behavior; FBA assists us in identifying the specific factors within a specific situation that influence whether a specific behavior will occur (Gresham & Noell, 1999). The use of FBA has become frequent in schools in part because the Individuals with Disabilities Education Act (IDEA) Amendments of 1997 require that FBA be conducted to address the needs of students receiving special education who exhibit challenging behaviors that result in school removals or change of placement. According to Information Update Bulletin 00.01, the Wisconsin Department of Public Instruction, “FBA is a continuous process (not a one-time event) for identifying (1) the purpose or function of the behavior; (2) the variables that influence the behavior; and (3) components of an effective behavioral intervention plan (BIP)” (May, 2000).

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FBA can assist in determining factors, including slow and fast triggers, consequences, and functions of behaviors, which may increase the likelihood that a behavior will occur.

Slow triggers or setting events. Slow triggers (Tilly, Knoster, & Ikeda, 2000) are events/factors that are removed from the challenging behaviors itself but influence whether the behavior occurs. Slow triggers may include external factors (such as people, tasks, requests, or settings) and internal factors (such as moods, fatigue, hunger, or disability). TBI itself can be considered a slow trigger because of the effects of TBI, such as slowed rate of processing, memory difficulty, or impulsivity, may predispose a child/adolescent to exhibit challenging behavior. For example:

- T.J.'s slowed processing, memory difficulties, and possible depression about his performance might influence his classroom behavior. Each of these factors could be "slow triggers" which increased the chance that disruptive behavior would occur.
- In addition of her lack of understanding of the difficulties she faces now, Anna might be too tired at night to complete homework, creating a slow trigger contributing to her defiance.
- Chris, T.J. and Anna may be more irritable and impulsive since their injuries – significant slow triggers.

Fast triggers or antecedents.

Tilly et al. (2000) describes "fast triggers" as events that directly precede a behavior and influence that behavior. For example:

- A "fast trigger" in T.J.'s case might have been his teacher's announcement of a surprise math quiz.
- Anna's "fast trigger" might have been her mother's request to turn off the TV before Anna's favorite television program was over.

Consequences. What happens after a behavior occurs often plays a large role in determining whether a behavior will be repeated. Some consequences are obvious; others may be less apparent or may be unintended. For example:

- After T.J. shoved his books off his desk and swore, his teacher helped T.J. with the math quiz.
- Anna's mother felt badly that Anna was upset, so she let Anna watch her TV program.
- After Chris picked up the soccer ball, his classmates ran after him to try to get it back.

These consequences may influence whether these behaviors occur again.

Functions of behavior. Determining the function or purpose of behavior is a critical step in conducting the FBA. Behavior is meaningful – it is a form of communication. It often tells us what children/adolescents are not able to tell us through words. Generally, the purpose of challenging behavior is either to access something or to avoid something. Tilly et al. (2000) have identified the most common functions of behaviors as:



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- 1) to gain access to social interaction;
- 2) to gain access to activities or objects;
- 3) to terminate or avoid unwanted situations; and
- 4) to gain access to stimulating events.

- T.J. may be trying to (3) terminate an unwanted situation (his math quiz), (4) gain access to a stimulating event (expressing his frustration), or (1) gain access to social interaction (help from his teacher).
- Anna may be trying to (4) gain access to stimulating event (her television program) or (3) avoid an unwanted situation (her homework).
- Chris is likely trying to (1) gain access to social interaction, (2) gain access to activities, or (4) gain access to stimulating events.

Conducting the FBA

The steps in conducting an FBA include:

- 1. Defining the problem.** Define the problem behavior clearly and specifically. What do you see happening? *Example: When the math teacher announced that there would be a quiz, T.J. shoved his books onto the floor and said an unacceptable word.*
- 2. Collecting information.** Collect information about the setting events, antecedents, and consequences that might influence whether the behavior occurs. It is important to collect information from multiple sources to be sure you have a clear picture of what is happening. *Direct assessment* includes observing the child/adolescent to see examples of the behavior. *Indirect assessment* includes reviewing records, interviewing the child/adolescent or individuals who witness the behavior (such as parents, teachers, or peers), or asking them to complete rating scales regarding the behavior.
- 3. Developing hypotheses about functions of behavior.** What is the child/adolescent getting or avoiding that influences the behavior? State your hypothesis: *When T.J., who experiences memory limitations, slowed processing, and impulsivity since his TBI, was given a surprise quiz in math class, he became frustrated and communicated his frustration and need for help by swearing and shoving his books.*

Developing a Behavior Intervention Plan

Often, attempts to address the challenging behaviors of children/adolescents following a TBI focus solely on consequences. For example, a teacher might make T.J. apologize for swearing or a parent might now allow Anna to watch TV the next day. While these might be appropriate *pieces* of an intervention plan, they don't address all the factors that might influence the behavior and they don't teach the child/adolescent *what to do*. Having T.J. apologize for his behavior won't address his depression (slow trigger), his difficulty in math (slow trigger), his need to communicate frustration (function), or his need for teacher assistance (function). Taking TV away from Anna won't address her fatigue (slow trigger), her need to communicate her frustration at having to turn off the TV mid-program (function), or her desire to avoid homework (function). To address challenging behaviors, begin by

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determining what you want the child/adolescent to do *instead of* the challenging behavior. For example, goals for T.J. might include:

- T.J. will express himself with appropriate words.
- When angry or frustrated, T.J. will choose among several specific strategies to handle his frustration (e.g., seek help from teacher or peers, leave the room for a brief cool-down, put on headphones with calming music for 2-3 minutes, go to a predetermined place for help.) Specific pieces of the intervention to help T.J. accomplish these goals must address the slow and fast triggers, consequences, and functions of this behavior identified through the FBA.

For example, to address *slow triggers*:

- Be sure the rate of presentation and level of instruction are appropriate.
- Provide T.J. with support in math to help him learn the skills that are challenging for him.
- Provide T.J. with memory strategies and aids to help him remember math instruction.
- Provide T.J. with counseling (and medical intervention if needed) to help him understand the effects of TBI and to assist in dealing with his depression.

To address *fast triggers*:

- Provide routine when possible. When giving a quiz, give T.J. warning in advance.
- Cue T.J. to use specific strategies to express frustration or calm down.

To address *consequences*:

- Determine whether T.J. can control his behavior to earn positive consequences and if he can *remember* consequences. If so, use incentives for appropriate behavior.
- If T.J. cannot remember consequences or is too impulsive to control behavior, rely on preventive strategies (addressing slow and fast triggers).
- Avoid rewarding T.J. with teacher or peer attention for disruptive behavior.

To address *functions* of T.J.'s behavior:

- Provide T.J. with appropriate support in math class.
- Teach T.J. acceptable ways of expressing his anger or frustration. Support him as he learns to use these; provide practice.
- Provide escape options for T.J. when he is frustrated.

Challenging behavior can be one of most difficult results of TBI in children and adolescents. Thoughtful planning to address these behaviors and the purposes they serve can improve the functioning of many children/adolescents with TBI. However, some challenging behaviors persist, even when interventions are carefully planned. In such cases, medication under the supervision of a qualified physician is an important adjunct to treatment.

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