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BEHAVIORAL ISSUES

Tutorial: Anger & Anger Management

WHAT ARE ANGER AND ANGER MANAGEMENT TECHNIQUES?

Anger is an emotional state that can be expressed as irritation, at one extreme, or as out-of-control rage at the other extreme, with many shades of behavior falling in between. As with other emotions, there are physiological changes associated with anger, including increased heart rate, flushed face, elevated blood pressure and increased volume of verbal output. Adrenaline may flow with its associated surge in strength. This anger system has value in that it helps people to fight off legitimate threats. However, anger and responses to anger often lead to trouble under everyday circumstances.

Many different events can result in an individual experiencing anger, including both internal events (e.g., perceived failure, frustration, perceived injustice) and external events (e.g., loss of an object or privilege, teasing or threats from others). Anger can result in externalizing behaviors (e.g., lashing out, verbal aggression, tantrums) or internalizing behaviors (e.g., shutting down, withdrawing, sulking, increased depression) or both. Most commonly, individuals respond to anger with aggression, since the biological function of anger is to enable us to fight off threats.

Anger management refers to techniques that individuals can use to regulate their feelings of anger and modulate their responses to those feelings. It also includes techniques that others can use to help the individual avoid situations that elicit or trigger anger and to help calm the person down once angered. These techniques are discussed below.

WHY ARE ANGER AND ANGER MANAGEMENT IMPORTANT FOR SOME STUDENTS AFTER TBI?

Anger and anger management are important issues for many students. However, they are particularly important for students with brain injury for several reasons. First, the part of the brain that modulates our emotional responses – the bottom sides of the prefrontal parts of the brain – is vulnerable to damage following a in brain injury. As a result, a situation that might make most students at most irritated may well result in a rapid and uncontrolled escalation of anger for the student after the brain injury.

Second, students with brain injury often have reduced ability to correctly "read" social situations and the intent of others' behavior. When social cues are misread – for example, if a student perceives someone making an insulting remark when none was intended – the student may understandably feel anger, and based on this an incorrect interpretation, may respond with what seems as excessive or inappropriate levels of anger at the behavior of others.

Third, students with brain often have real losses that they are angry about. For example, they may not do things as well as they are accustomed to doing them; they may have restrictions on their activities that are frustrating; they may have lost friends. In some combination, these changes can easily result in the student feeling heightened levels of frustration and anger.

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WITH BRAIN INJURY WHO NEED HELP WITH ANGER MANAGEMENT STRATEGIES?

Supports for students to address anger management include proper identification of the anger, behavioral strategies modeled or taught by adults and clinical support for the student in order to learn how to address limitations in a successful fashion. Each of these areas is addressed below:

1. Understanding the Problem: Identification of Anger. The first step in dealing with anger is to ensure that it is truly anger that we are dealing with. Sometimes aggression is interpreted as an anger response, when in fact it is attention seeking or serves

some other purpose. It is important to be certain that the observed responses are truly the student's response to the feeling of anger.

2. Environmental Management: Implementation of Anger Management Approaches by Adults in Authority

a. Removing Clear Provocation for Anger: Teachers and parents should know what the people or events are that typically provoke anger in the student (i.e., "triggers") and attempt to remove these provocations proactively from the student's daily routines. As the student become aware of these triggers, removal or minimization of triggers can be gradually turned over to the student to monitor.
[See Tutorial on Behavior Management: Prevention Strategies.]

b. Using Calm Times Wisely: When the student is in an emotionally calm state, adults should find opportunities to talk about difficulty the students have in controlling anger and about the limits that this might impose on what the student can do. These conversations should be balanced with talk of things that are going well, with plans for success, and with opportunities for the student to engage in positive roles that do not involve anger or aggression. Adults can also highlight the positive behavior of others and talk about how they have learned to control their anger and therefore become more successful.

c. Facilitating a Self-Concept Associated with Effective Anger Management: Some students develop a sense of self that includes aggression as a positive component. The student may come to think of himself or herself as a "tough guy" or "tough girl", and resist efforts at anger management because "that's not me; I'm a tough guy." In these cases, it is critical to address the self-concept issue while also addressing anger management. These student may be helped by counseling to develop a sense of self that is compelling, but that also includes control of anger and other emotions as a positive feature. Anger management must be seen as strength, not weakness.**[See Tutorial on Sense of Self.]**

3. Anger Management Procedures Acquired By Students In Collaboration With Others: Focused attention by school staff and/or involvement of professional counselors may be necessary to teach students adequate coping skills to deal with anger. Steps include the following:

a. Learning to be assertive versus aggressive: Dangerous responses to angry feelings lie on both ends of a continuum of responses. At one end, the student responds with aggression, lashing out at perceived threats or annoyance. This has obvious negative implications for the student and those around him. At the other end, the student suppresses angry feelings. This likely results in the anger being expressed covertly as passive aggression, cynicism, sarcasm, critical thinking about others – or internalized as either physical complaints or depression. Neither of these extreme responses at the ends of the continuum is likely to lead to positive outcomes, like friendship and peer acceptance.

Between these two extremes lie two positive responses to angry feelings, both of which should be fostered. First is assertive (not aggressive) expression of these feelings. The student who is appropriately assertive recognizes his anger and can state why he is upset. These assertions serve the additional purpose of having the student verify that the perceived reason for anger is valid. The assertive student then tries to deal with the anger in a problem solving manner, without losing control. Second, the student may learn techniques to calm himself when angered (discussed below), knowing that in the final analysis, we can only control ourselves..

b. Self-Monitoring: Many students, particularly young children, experience the physiological correlates of anger without knowing what the emotion is, without being able to attach a word to it – it is simply a nameless feeling that leads to negative behavior. Young students and older students with significant disability may need to learn that there is a name for these feelings and that we can understand them and even control them. Similarly, many students "catastrophize" small issues into major issues without realizing that they are doing this. They may use absolute or extreme terminology when describing their situation: "I never get a chance" "She always makes fun of me" "I never do anything right" and so on. With counseling, students can become more aware of this distortion in their thinking, the negative effects of their habit, and that "catastrophizing" makes a difficult situation much more difficult. Practice describing the realities of their situation in objective and accurate terms may be useful for these students.

c. Self-Calming: Particularly students who tend to over-react to even mild irritations, should developing a self-script in which they evaluate the seriousness of the situation. For example, students can be taught to ask themselves, "Is this really a big deal or a little deal?" and "Am I sure that what I am doing will help me?" These scripts of self-regulation can be internalized if they are used by others in the environment in a routine manner.**[See Tutorial on Self-Regulation]**

d. Learning that One Can Only Control Oneself: For many people, their primary source of anger is what other people do or don't do. They find the behavior of others to be disrespectful, unfair, unkind, or otherwise irritating, and they react angrily. The most important insight that these students can internalize is that they have no control over the behavior of others, only themselves. Furthermore, if the other person was in fact trying to hurt them in some way, then the anger response makes that other person the winner. Normally it is the student who reacts angrily who gets in trouble with authorities, or becomes very upset, or in some other way suffers a loss from the encounter. To be a winner is to refrain from reacting and therefore frustrating the other person – the source of the irritation.

4. Avoid "Letting It All Hang Out": While some say that it is therapeutic to express anger and just "let it all hang out", such expression is typically short term and most likely to be counter-productive in the long run. First, it does nothing to address the underlying problem of unmodulated responses to angry feelings. Second, people may be hurt and relationships irreparably damaged.

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Tutorial: Aggression (See also Tutorials on Behavior Management; Anger Management)

WHAT IS AGGRESSION?

The term "aggression" can refer to a variety of quite different – and differently motivated – social behaviors. Therefore, it has been popular to define it by listing types of aggression. Moyer's classification system is commonly used:

1. Predatory aggression: attack on prey by a predator.
2. Inter-male aggression: competition between males of the same species over access to females, dominance, status, and the like, common in adolescent males.
3. Fear-induced aggression: aggression associated with attempts to flee from a threat, such as a school assignment that seems impossible to complete successfully.
4. Irritable aggression: aggression directed towards an available target induced by some sort of frustration, such as difficulties in academics or social life.
5. Instrumental aggression: aggression directed towards obtaining some goal; possibly a learned response to a situation, such as getting out of the classroom by acting aggressively.
6. Territorial aggression: defense of a fixed space against intruders.
7. Maternal aggression: a female's aggression to protect her offspring from a threat.
8. Paternal aggression also exists.

What runs through these types of aggression is the intention to threaten or inflict damage on another person, either as an end in itself or as a means to an end. In some cases, aggression is a learned response (e.g., instrumental aggression) to be managed with the tools of applied behavior analysis (including positive behavior supports). **(See Tutorials on Behavior Management: Contingency Management; Behavior Management: Prevention Strategies; Positive Behavior Supports)**. In other cases, it is a natural response to difficult circumstances (e.g., fear-induced aggression; irritable aggression) to be managed with effective environmental/prevention strategies. In yet other cases, aggression can be a physiological response (e.g., predatory aggression) that might be triggered at unpredictable times in students with brain injury. Here again, careful environmental management (i.e., prevention) is crucial, possibly combined with pharmacologic intervention (i.e., medication). Prevention is crucial because of the deep biological factors underlying most episodes of aggression.

In a school context, aggression usually takes the form of (1) physical acts, like hitting and pushing (successfully completed or just attempted), directed at peers or adults, or (2) verbal acts, like threatening, cursing, taunting, and the like. Because of the need to protect children and adults alike and also the need to create a controlled environment for learning, aggression is not acceptable behavior in schools. Intervention for students who are aggressive is therefore a priority; aggression is simply not tolerated in schools and is a frequent cause of expulsion. For these reasons, it is important to understand aggression, properly identify the type of and motivation for aggression in individual cases, and implement well conceived intervention and support strategies based on an accurate understanding of the student's aggressive behavior.

WHY IS AGGRESSION IMPORTANT FOR MANY STUDENTS AFTER TBI?

In young adults with moderate to severe TBI, aggression has been found to be a common symptom. In one large study, about 25% of the participants were identified with aggressive behavior. Aggression was more common among the younger participants. Furthermore, it was more closely tied to depression and low satisfaction with life than to the nature and severity of the injury itself. Thus environmental interventions designed to enable the student to be successful and achieve reasonable satisfaction with life at school and at home would seem to be critical for this population.

Although there are no studies specifically of aggression as an outcome of childhood TBI, clinical experience suggests that it is common. Because young children frequently manifest depression by acting out rather than withdrawing, it is likely that aggression is even more common in children than in adults. Furthermore, the high demands on cognitive, behavioral, and social functioning that school imposes increase the likelihood of both irritable aggression (because of frequent failure in school) and instrumental aggression (e.g., aggression designed to escape difficult tasks). Thus aggression can be both a reaction to overwhelming circumstances and demands, and also a tool to escape the circumstances and avoid the demands.

Finally, because the parts of the brain responsible for inhibiting inappropriate aggressive behavior – the bottom sides of the prefrontal parts of the brain – are commonly injured in TBI, the likelihood of disinhibited aggressive behavior is quite high in children with TBI. Children with damage to this part of the brain often resemble young preschoolers in the difficulty the have inhibiting impulses. It is well known that toddlers and preschoolers frequently resort to aggression to get what they want and escape what they don't want. It is also common for older children with injury-induced impulse control problems to similarly resort to aggression.

Aggression more directly linked to the brain injury itself and brain function after the injury is also possible. In some cases, unusual stimulation of parts of the limbic system of the brain (specifically, the amygdala or hypothalamus) can cause uncontrolled aggressive responses in otherwise non-aggressive people. Similarly, temporal lobe seizures can cause uncontrolled aggressive outbursts in some cases. A careful assessment may be required to determine the possible usefulness of medications for these students.

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WHO ARE AGGRESSIVE?

Understanding the Problem: The first step in dealing with aggression is to understand its source and function. In the relatively unlikely event that the aggression is a direct consequence of brain injury-related events in the limbic system, then environmental management is vital. **(See Tutorial on Behavior Management: Prevention Strategies.)** If aggression is a learned behavior that has come to serve a purpose in the student's life (e.g., escape from undesirable or difficult tasks), then a careful functional behavior assessment is required to identify the purpose(s) served by the behavior followed by a well conceived behavior management plan. Moreover, federal special education law mandates a clear process for functional behavior assessment and behavior plans for students with aggressive behavior. (See Individuals with Disability Education Act re-authorization for manifestation determination requirements.) If the aggression is an expression of emotional problems, then environmental management (e.g., facilitating success in school tasks and social interaction as a critical component of behavior management), possibly combined with counseling, may be needed.

ENVIRONMENTAL SUPPORTS: PREVENTION:

Whether the aggression is a direct result of the brain injury, a response to frustration, anxiety, or depression, a learned instrumental response, or some combination of these possibilities, prevention is the critical key to effective management, especially in a public school setting..

1. Create Positive Roles: Create positive roles and jobs for the student so that he experiences power and competence in positive ways rather than by using aggression. For example, the student can be assigned roles as the teacher's helper, peer support person, or other special contributory job.
2. Eliminate Triggers: Identify what environmental events or demands tend to elicit aggression and eliminate those triggers. See the five types of "child proofing" in the Tutorial, Behavior Management: Prevention Strategies.
3. Create Well Established Routines: Create everyday routines of activity and interaction that are well understood by the students and effectively supported, so that the students are comfortable and confident of success in their lives. **[See Tutorials on Instructional Routines; Organization]**
4. Provide Supports for Successful Performance: Make sure that the instructional routines are organized in such a way that the student is generally successful. **(See Tutorial on Instructional Routines.)** Provide meaningful praise for successful performance.
5. Anticipate Errors and "Precorrect": If you expect that the student will not be able to respond correctly, provide the correct response yourself in a non-punitive and non-threatening manner.
6. Generate Positive Behavioral Momentum: Before introducing stressful or difficult tasks, make sure that the student has experienced success with less difficult or less stressful tasks. Ideally the student will have experienced sufficient success that he enters difficult tasks with a reasonable level of confidence.
7. Ensure Clear Expectations: Ensure that instructions and expectations are clear. State them clearly, repeat them if necessary, and use concrete (e.g., graphic) organizational supports liberally. **[See Tutorials on Instructional Routines; Graphic Organizers]**

8. Expect impulsive and poorly regulated behavior from time to time, especially if the student is tired or stressed, there are changes in routine, the environment is overly stimulating, or demands are high. Remain calm. Adult anxiety and agitation increase the student's anxiety and agitation.

ENVIRONMENTAL SUPPORTS FOR DE-ESCALATION OR MANAGING A BEHAVIORAL CRISIS:

Seriously aggressive students may precipitate behavioral crises in which the student, peers, or adults are at risk. The following list of crisis management DOs and DON'Ts should be followed by all staff and parents.

CRISIS MANAGEMENT DOs

1. Remain Calm: It is never helpful for people to respond to a behavioral crisis by going into crisis themselves, which is unfortunately a common response. Anxiety tends to be infectious. An anxious person who engages in challenging behavior often transmits anxiety to other people in the environment, thereby reducing their effectiveness and reciprocally increasing the anxiety of the person originally in crisis. Conversely, a calm person tends to interrupt the spread of anxiety. It is often better to do nothing in a behavioral crisis than to act impulsively or react in anger. Therefore, critical competencies for people working with individuals with aggressive behavior include maintaining a "stoneface" during a crisis and always appearing to know what they are doing, even when angry, frightened or completely unclear about what to do. Repeating to oneself calming words like, "This too shall pass; this too shall pass" can help one through crises. The critical message to communicate to the student in crisis is, "I'm in control; I know what to do; I'm going to help you get through this and regain your control."

2. In the Early Stages of a Crisis, Use Redirection and Diffusion Procedures: Individuals who are escalating but not yet out of control may respond positively to redirection procedures. This is particularly true of students who are still generally confused after TBI and who tend to perseverate. They may begin to yell or act aggressively for no apparent reason, and then continue or escalate this behavior because of confusion rather than genuine anger. Abrupt redirection to a completely unrelated focus of attention may break this confused and perseverative set. However, good judgment must be exercised when using redirection. If an individual who is acting out is redirected to a highly preferred activity (e.g., eating ice cream), the redirection may have the positive immediate effect of terminating the acting-out behavior, but exacerbate the long-term problem by reinforcing that behavior (i.e., "I get it; when I threaten to hit people, I get ice cream"). Redirection should be to a neutral activity to avoid this unwanted consequence.

3. Keep Everybody Safe: In most cases, attacks on property (e.g., overturning chairs and tables; throwing objects against the wall) should not be considered matters of extreme concern, mandating physical intervention. However, people must be protected. In most cases, safety is ensured by people in the immediate environment moving away from the student in crisis. In extreme cases, that student may need to be physically restrained to prevent harm to himself or others. Physical intervention must always be guided by the principle of least intrusive intervention and by agency protocols and state regulations regarding nonaggressive physical intervention.

4. Present Yourself As a Helper: A few well chosen words like "What can I do to help?" or "Let's get through this" sometimes help the student in crisis regain control. At least this presentation is not likely to escalate the crisis, as do confrontations, threats, arguments, and physical interventions like physical restraint.

5. Help People in Crisis Identify The Facts of the Situation and Their Feelings: Students with memory and organizational impairments often have difficulty correctly identifying the facts of the situation. They may need an adult to calmly and objectively state what has occurred. In addition, students who are cognitively immature often have difficulty identifying their feelings. For example, a toddler may react the same way when excited and unhappy, requiring parents to comfort the child by saying something like, "Honey, it's OK. Your having fun! You got great presents. This is great -- no need for tears!". Students with cognitive impairment after brain injury sometimes have equal difficulty identifying their feelings and may react angrily when the emotion they are experiencing is really excitement or fear. In these cases, it is important to calmly attach words to the emotion that the person is feeling at the time. For example, staff may say to a student who is beginning to threaten aggression, "This is scary. You're a little scared, but it's going to be OK".

6. Speak Clearly and Simply: In an attempt to reduce the anxiety and agitation of the student in crisis, it is important to speak clearly, simply, and confidently. There should be no more than one spokesperson during a crisis. Repetition may be useful, but not if it appears to be nagging.

7. Choose Battles Wisely: Before trying to win a control battle with a student in crisis, determine (1) that the issue is worth fighting over and (2) that you can win. If you choose to engage in a battle and then lose, you seriously increase the likelihood of future battles. If you choose to engage in battles over trivial issues, you lose authority when major issues arise and you create a generally negative social environment.

8. Reset to Zero: In the event of ongoing behavioral crises with a student, it is wise to "reset to zero," that is, to acknowledge that whatever behavior plan is in place is not working and to start again, but only after attempting to eliminate the crises with artificial means if necessary. This may entail reducing work expectations and providing unusually high levels of support. Staff or parents who are frustrated with the student may not be pleased with this proposal; however, it is generally wise to implement a new behavior plan and rebuild normal expectations for performance from a platform of no crises. Resetting to zero also entails trying to eliminate anger, resentments, and grudges so that everybody can start with a clean slate.

9. Have a Plan that All Relevant Adults Can Implement as Problems Emerge: In working with potentially aggressive students, prevention and reaction plans must be designed and taught to all relevant adults in the environment. These plans may include specific scripts to be used under specific circumstances.

CRISIS MANAGEMENT DON'Ts

In addition to the above list of positive rules of thumb for managing behavioral crises, there are problematic responses to crises that should be avoided, however natural they may seem at the time.

1. Avoid Attempting to "Teach Lessons": After being threatened, hit, kicked, spat upon, or violated in some other way, it is tempting to say, "Look here, I'm about to teach you a lesson you'll never forget." Unfortunately, the history of punitive approaches to negative behavior – or aggressive approaches to aggressive behavior – is not promising. Furthermore, a time of crisis is not a time for efficient teaching and learning. Typically, if learning does occur, it is pure "limbic system learning", that is, the memories that are retained tend to be "You are a threat to me and I need to avoid you" or "I hate this place and must escape". This is not the sort of lesson that people with brain injury need to be taught.

2. Avoid Planting the Suggestion of a Problem Behavior: Instructions like "Do not hit me" or "Do not spit" easily have the effect of planting a suggestion in the mind of a student in crisis, or of laying down the gauntlet for a student who is angry and looking for the most damaging behavior possible on that occasion. That is, the angry student's response to "Don't you dare hit me!" is more likely to be "Oh, I hadn't thought of it, but thanks for reminding me" than "Sorry, how silly of me to consider hitting you." Suggestions can also be planted nonverbally, for example by attempting to protect things (e.g., one's earrings, glasses, papers on the desk) that had not yet been threatened.

3. Avoid Making Threats: Threatening to impose consequences as a result of behavior during a crisis is problematic for three importantly different reasons. First, it is rarely effective. Students in crisis are rarely in a position to control their behavior by reflecting on possible consequences of that behavior. Second, the threatened consequences are frequently not administered. This is particularly true if the theat is made by one person to be carried out by another (e.g., "If you do that, you will not get to go on the outing with Mr. Smith on Friday!" or "If you do that, your father will deal with you when he gets home!"). When threats are made, but not implemented, they quickly become empty words and the authority of the person who issues the empty threats is diminished. Finally, many students with TBI cannot remember the original infraction at the time of punishment, resulting in a negative experience unrelated to the behavior that the punishment is supposed to eliminate.

4. Avoid Climbing Ladders: Often staff members and parents, particularly those who are insecure and easily threatened by loss of control, precipitate behavioral crises by engaging the student in control battles that escalate out of control. Often the first rung of the ladder is a relatively innocent exchange, such as an instruction to finish the vegetables, followed by refusal. The adult interprets the refusal as a challenge to his or her authority, and ups the ante by repeating the command firmly, possibly with a threatened consequence. The student with a history of behavior problems rises to the challenge and heightens his resistance, possibly with colorful language. The ladder continues to be climbed until the process reaches its inevitable

conclusion, with both combatants falling off the ladder, locked in the grip of a behavioral crisis. “Avoid climbing ladders” is closely connected to the positive rule, “choose battles wisely.”

5. Avoid Pleading: Pleading may take the form of explicit pleas (e.g., “John, please settle down”) or more subtle pleas, often in the form of tag questions (e.g., “John, put that down right now, OK?”). In either case, pleading tacitly communicates to the student in crisis that he or she is in control of the situation, not you.

6. Avoid Confusion: Too much talk, more than one person talking, conflicting messages, and general commotion all conspire to escalate crises, rather than diffuse them. If people in the environment are not needed, they should be invited to leave the area. Teams of staff members should know in advance who will do the talking during a crisis. And the language that is used should be clear, to the point, positive, and not excessive, with adequate pause time for processing. **(See Tutorials on Errorless Learning; Positive Behavior Supports.)**

A PACKAGE OF INTERVENTIONS AND SUPPORTS FOR STUDENTS WHO ARE AGGRESSIVE:

In most cases, students with TBI who act aggressively do so for a combination of reasons, including their history of reinforcement, cognitive problems, self-regulatory problems, emotional frustration, and environmental triggers. Therefore, interventions must be packaged together to address all of the problems. What follows is one such package that has been used successfully with young student as well as adolescents.

1. **Positive Roles and Meaningful Jobs:** Positive roles and jobs for the student are designed so that he experiences power and competence in positive ways rather than by using aggression. For example, the student can be assigned roles as the teacher’s helper, peer support person, or other special contributory job.
2. **Daily Routine: Negotiation and Choice:** Daily routines are analyzed collaboratively by the instructional staff (or parents) and student. Decisions about the minimum amount of work to be accomplished and plans for achieving the goals (within limits set by general classroom routines) are made collaboratively with the student. Specific time demands (e.g., “You must finish these 10 problems in 5 minutes”) are eliminated from the routine, because they frequently evoke oppositional behavior.
3. **Behavioral Momentum:** Staff ensure that the plan includes relatively easy tasks with a guaranteed high level of reinforcement before difficult work is introduced, and if possible, a student-preferred activity precedes every mandated activity.
4. **Reduction of Errors:** In addition to eliminating time demands and negotiating amount of work to be completed, instructional staff and parents are trained to provide sufficient modeling and assistance so that the students experience few errors (which tend to evoke negative behavior and interfere with learning).
5. **Escape Communication:** Because functional behavior assessments often indicate that aggressive behavior serves to communicate a need to escape a task or place, students are taught positive communication alternatives as replacement behaviors (e.g., “I need a break”). Staff and parents are trained to encourage these alternatives at natural transition times and when the students begin to appear anxious or upset, and to reward the students’ use of positive escape communication. **(See Tutorial on Teaching Positive Communication alternatives to Negative Behavior.)**
6. **Adult Communication Style:** Instructional assistants and parents are trained to (1) increase their frequency of supportive and reinforcing interactions with the students, (2) anticipate students’ difficulties and offer assistance or model escape utterances, and (3) avoid “nagging” (as perceived by the students). To establish a positive style, specific scripts may be necessary for adults in their interaction with students with challenging behavior.
7. **Graphic Advance Organizers:** Because of significant organizational impairment, students are provided with photograph cues or printed outlines or other visual guides. Staff and parents work with the students to choose the content of the photographs or other organizers, which could include the student engaged in the activity with or without staff, critical materials, important places, and the like. **(See Tutorial on Organization.)**
8. **Goal-Obstacle-Plan-Do-Review Routine:** The students are given a graphic “map” that represents the general sequence of activities from an self-regulation/executive function perspective: Goal (i.e., “What are you trying to accomplish?”); Identification of difficulty level or obstacle (i.e., “Is this going to be hard or easy?”); Plan: (i.e., “How do you plan to get this done? What do you need? What are the steps? How long will this take?); Do; Review (i.e., “What were you trying to accomplish? How’d it work out? What worked for you? What didn’t work? What was easy? difficult?”). These interactions with staff are brief and collaborative (versus a performance-oriented quiz). **(See Tutorial on Self-Regulation Routines.)**

9. **Consequence Procedures:** The antecedent control procedures described above generally result in the students' successful performance (which is intrinsically reinforcing for the student) as well as praise from staff or parents. When the students engage in targeted negative behaviors, staff and parents respond with a verbal prompt ("You're not ready to …") and remove the activity materials. Students are also reminded of the supports available to them to ensure successful completion of the task (on the assumption that their escape communication is motivated by anxiety about their ability to be successful). Staff or parents then wait until the student is ready, at which time they return to the activity they were working on at the time of the difficulty. Additional consequence strategies may not be necessary.

Procedures used in anger management may also be relevant for students who are aggressive. **See the Tutorial on Anger Management for details.**

These include:

Anger Management Procedures Used By the Student

1. Learning to be assertive versus aggressive
2. Self-monitoring
3. Self-calming
4. Self-relaxation
5. Joining sports teams, clubs, and the like
6. Learning that one can only control oneself

Anger Management Procedures Used by Adults in Authority

1. Removing Clear Provocation for Anger
2. Using Calm Times Wisely
3. Facilitating a Self-Concept Associated with Effective Anger Management

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Tutorial: Teaching Positive Communication Alternatives To Negative Behavior

(See also Tutorials on Behavior Management: Prevention Strategies; Behavior Management: Contingency Management; Positive Behavior Supports.)

WHAT ARE POSITIVE COMMUNICATION ALTERNATIVES TO NEGATIVE BEHAVIOR?

All behaviors potentially communicate something to someone. Communication does not require words. For example, smiles and hugs can communicate positive messages of approval and fondness. Frowns and threatening gestures communicate negative messages. Nonverbal behavior may or may not carry an intended message. For example, when one person continues to sit silently when another enters a room, the message communicated might be lack of interest even though there was no intent to send that message.

Often students with behavior problems communicate (intentionally or not) their desires and needs with negative behaviors. These behaviors may include physical aggression, running out of the room, using threatening language, and the like. Sometimes a behavior may begin as other than intentionally communicative (e.g., a student covers his ears when a loud noise is present). However if the behavior has a positive effect (e.g., somebody eliminates the loud noise), then the behavior (hands over ears) may become part of that student's communication repertoire. In this way, aggressive behavior, for example, may become a way of communicating a desire to escape a difficult task. That is, if the aggressive act leads to removal from the task, then aggression may come to communicate, "Remove me from this task!"

Because most negative behaviors communicate in this sense, it is a mistake to call them maladaptive behaviors. Aggression, withdrawal, or self-injury may be quite adaptive in that they successfully communicate what the student wishes to communicate. – and achieve the student's (conscious or unconscious) goals of communication. For example, if hitting or screaming results in removal from math class – and removal is what the student wants – then hitting must be seen as successful and adaptive for that student.

One of the procedures used to eliminate or reduce such negative behavior is to teach an alternative behavior that communicates the same message, but is a positive form of communication. For example, if a student screams or hits to communicate a need to escape a difficult task, a positive alternative would be a polite request for a break. Most negative behaviors communicate a desire to escape (e.g., escape a person, place, activity, or demand) or to acquire or gain access (e.g., gain access to a person, place, activity, thing, attention, or approval). More complex messages may also be communicated with negative behavior. For example, an aggressive behavior may mean, "I interpret what you have done or said to me as disrespectful and I will not tolerate disrespect."

WHY ARE POSITIVE COMMUNICATION ALTERNATIVES TO NEGATIVE BEHAVIOR IMPORTANT FOR MANY STUDENTS WITH TBI??

Effective management of behavior is important for all children, especially in a school context, because compliance and orderly behaviors are critical in creating an effective learning environment. Following severe TBI, students may experience an extended period of time in which usual behavioral expectations have been suspended. For example, in a hospital or rehabilitation setting – or even after return to school – disruptive or resistive behaviors may be tolerated more than in a typical school setting. The student may become accustomed to short work sessions and to controlling activities more than is generally allowed in school. More specifically, the student may be inadvertently trained to use negative behavior to communicate basic intentions, such as a need to escape an activity or a desire to acquire something. For example, screaming may have the effect of ending a stressful physical therapy session in the hospital or in school. For these reason, a consistent and well implemented behavior management system, possibly including the teaching of positive communication alternatives to negative behavior, may be particularly important for the student with TBI in the school setting.

Well implemented behavior management systems are additionally important because behavioral difficulties are a common consequence of brain injury. Among the most common concerns after TBI are difficulties with impulsiveness and risk taking. This is particularly true of students who are injured at a young age and who subsequently fail to mature adequately in the areas of impulse control and safety judgment. Students with damage to the bottom parts of their frontal lobes typically think and act impulsively – much like young children or children who experienced their TBI early in life. They often present with increasing challenges in this domain as they age. Their impulsive behavior naturally leads parents and teachers to worry about effective disciplinary practices. **(See Tutorial on Discipline.)**

WHAT ARE THE MAIN THEMES IN TEACHING POSITIVE COMMUNICATION ALTERNATIVES TO NEGATIVE BEHAVIOR?

Three important themes dominate the teaching of positive communication alternatives to negative behavior. First, careful assessment is required to identify the meaning (i.e., function) of the student's negative behavior. Second, most of the student's everyday communication partners, including staff at school and parents at home, need to be involved in the planning and implementation of the intervention. The student is unlikely to switch from negative behavior to a positive communication alternative unless the positive alternative is reasonably effective across many contexts of his life. If not well oriented to the plan, communication partners may unintentionally trigger negative behavior with inappropriate demands or interaction (on the antecedent side) or unintentionally reinforce negative behavior with ill-advised responses, like removing a disruptive child from an undesirable task (on the consequence side). Third, communication partners in the student's life need to commit themselves to both phases of the intervention plan, described below.

Functional Behavior Assessment: Systematic assessment is required to identify the meaning (function) of the negative behavior. This involves both systematic observation (i.e., what are the stimuli (antecedents) and responses (consequences) that are associated with the undesirable behavior in varied everyday contexts?) and active experimentation with hypotheses regarding the meaning or function of the negative behavior. For example, if communication partners routinely reward polite verbal requests for a desirable activity, does the challenging behavior disappear? If so, the meaning or function of the negative behavior was probably: "I want that activity!"

Pre-Teaching Decisions: Before the teaching process begins, staff and parents must collaboratively make two important decisions. First, if the function of the negative behavior is to access something desirable or escape something undesirable, they must decide when escape and/or access are acceptable. For example, if the goal of intervention is to substitute "I need a break" for hitting as the person's way of communicating the need to escape a task, then communication partners must agree on what tasks can be escaped (at least temporarily) and what tasks cannot be escaped. Similarly, if the goal is to substitute the sign for "want" as a substitute for grabbing desired objects or foods, then communication partners must agree on the objects and foods that can be legitimately accessed. Battles must be chosen wisely. It is important to avoid control battles, particularly those that communication partners are unlikely to win. The worst situation is one in which the adult refuses to honor the positive communication alternative followed by the student resorting to the negative behavior which then is ultimately rewarded.

Second, staff and parents (and possibly the student) must collaboratively select a positive communication alternative to the negative behavior. The communication alternative should have the following characteristics:

- *Easy to produce:* If the alternative is harder for the student to produce than the negative behavior it is intended to replace, it is unlikely to be adopted.
- *Satisfying:* The positive communication alternative should fit the student's personality and communication milieu. For example, excessively polite verbal requests may not be acceptable to tough adolescents with a history of behavior problems.
- *Effective:* The alternative must be at least as effective for the student as the negative behavior it is replacing.
- *Promtable:* There is sometimes an advantage to selecting physically promptable communication alternatives (e.g., signing, gesturing, pointing to a picture on a board) versus those that are not physically promtable (e.g., talking) in the initial stages of teaching.
- *Interpretable:* The communication alternative must be interpretable by all relevant communication partners.

TEACHING PHASE 1: TEACHING THE POSITIVE COMMUNICATION ALTERNATIVE

Staff and parents should collaboratively ensure many successful positive communication routines daily in a variety of communication contexts. Opportunities for the positive communication alternative can be both naturally occurring and contrived. by communication partners. The initial goal should be a high ratio of positive communication alternatives to challenging behavior (say, 10:1), using prompts and other supports as necessary. Prompts and other supports should then be gradually reduced as it becomes possible to do so. The goal is to create communication routines that will be automatically accessed by the student when needed.

As always, good judgment is required. For example, it is not always necessary for staff and parents to honor "I need a break" if that is to be the alternative to aggression for escaping a task. There are times when staff or parents might say, "C'mon, we can get through this; I'll help." The point of the training is to create a habit of using positive communication as an alternative to negative behavior as a means of communicating a need or desire.

TEACHING PHASE 2: SYSTEMATICALLY RE-INSTATE NORMAL EXPECTATIONS FOR WORK AND COMPLIANCE

When the positive communication alternative has largely replaced the negative behavior, normal demands for work and compliance should then be gradually re-instated. The student may have grown comfortable with his ability to escape (temporarily) undesirable tasks with the positive communication alternative. In this case, the entire repertoire of behavioral procedures listed in the tutorial on Positive Behavior Supports may be needed as staff and parents attempt to re-instate normal expectations for work and compliance. For example, communication partners may need to pay special attention to building positive behavioral momentum before introducing a difficult or stressful task that the student would otherwise reject. If procedures of this sort are not used, the student may resort to the negative behavior that was once successful in enabling him to escape a difficult task.

OBSTACLES TO TEACHING COMMUNICATION ALTERNATIVES

1. Staff and family member insularity: The success of this teaching depends on all or most everyday communication partners being on the same page. To achieve this goal, staff should try to include all relevant adults in the student's school and home environments in the initial functional assessment. Furthermore, the intervention plan should be negotiated so that all relevant communication partners people agree that it is reasonable and do-able.

2. Concern about contributing to the behavior problem: Many staff and family members express concern that rewarding positive escape behavior (e.g., saying "I need a break") or access-motivated behavior will turn the student into an "escape monster" or an "access monster". This concern should be addressed by pointing out that research and experience both show that this natural fear is unfounded if both phases of the teaching are implemented correctly. Behavior and communication specialists should emphasize that normal demands will be reintroduced once the negative behavior is substantially eliminated.

3. Concern that some activities are mandatory, others forbidden: Clearly there are some things and activities that cannot be escaped (e.g., taking medication) and some things and activities that cannot be accessed. Communication partners should try to achieve agreement about those few activities that are mandatory (e.g., taking medication, going to school) and those that are forbidden (e.g., harming others, interacting with dangerous materials, placing oneself at risk). In addition, staff and parents may need to be reminded that improving behavior and communication in students with significant behavior problems is a high priority.

4. No choice times heavily outweigh choice times: Communication partners may find that "no choice times" occur more frequently than choice times, so the student has insufficient practice in producing positive communication alternatives that are rewarded. In this case, communication partners should create, artificially if necessary, a large number of choice occasions so that the student has many opportunities to practice and be rewarded for the positive communication alternative.

5. Behavior management is somebody else's job: Occasionally one encounters staff who believe that behavior problems should be dealt with by behavior specialists and not by all everyday communication partners. In this case, the intervention team should ensure that all relevant communication partners are involved in identifying the need for behavior change, in implementing the functional analysis of behavior, and in modifying everyday routines of communication so that the individual has many opportunities to practice positive communication alternatives.

6. Difficulty with timing: Whoever is responsible for coordinating the team should ensure that all communication partners know that they must respond to the positive communication alternative promptly - knowing that if they wait, the student is likely to revert to the negative behavior, and then will likely be unintentionally rewarded for that negative behavior.

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Tutorial: Behavior Management: Contingency Management

(See also Tutorials on Behavior Management: Prevention Strategies; Discipline; Noncompliance; Motivation; Positive Behavior Supports)

WHAT IS CONTINGENCY MANAGEMENT?

Contingency management is based on the principle that behavior is a function of its consequences. That is, what people do – how they behave – is related in a predictable way to the consequences of their behavior. For example, if an action is followed by a positive consequence (positive for that person), then the individual is likely to repeat that action. In contrast, if an action is followed by a negative consequence (negative for that person), then the individual is unlikely to repeat the action. Negative consequences include both no response (e.g., the person's action is ignored) and punishing responses.

From this perspective, behavior management of students with or without diagnosed behavior problems is largely the well-planned organization and implementation of consequences. Behavior specialists who rely heavily on contingency management do not neglect the antecedents of behavior. **(See Tutorials on Behavior Management: Prevention Strategies; Positive Behavior Supports.)** However, primary emphasis is placed on organizing the consequences of behavior with the goal of changing the student's behavior.

There are four categories of consequences (contingencies) that can influence behavior. Positive and negative reinforcement increase the likelihood of the behavior being repeated. Extinction and punishment decrease that likelihood.

Positive Reinforcement

Positive reinforcement is a response that follows a behavior and has the effect of increasing the likelihood of that behavior occurring again – by providing a positive experience as a consequence.

Examples:

- Giving a child food or a toy for a job well done (assuming that the food or toy is desirable in that context).
- Giving a child praise or a hug for a job well done (assuming that the praise or hug is desirable in that context).
- Giving a student a good grade for excellent work (assuming the student wants to succeed in school).

Potential Advantages:

1. Appropriate schedules of reinforcement have been shown to facilitate acquisition of many types of behavior in many types of people.
2. Shaping behavior with reinforcement for success rather than punishment for failure involves less risk of backfiring and creates a generally more positive learning and communication environment.

Potential Dangers:

1. When children (or adults) receive "payment" for virtually every positive behavior, they may learn to expect and grow dependent on such payment, thereby reducing the likelihood of engaging in positive behavior for other reasons (e.g., because the positive behavior is intrinsically rewarding; because of a sense of obligation; etc.). **(See Tutorial on Motivation.)**
2. When the reinforcer is NOT natural and logical in relation to the behavior (e.g., a sticker or "Good talking, Johnnie" as a reward for producing a good sentence), then the student may fail to link the behavior with its natural and logical consequences. The natural and logical consequence of a request is that the request is honored., not "Good talking, Johnnie" or an M&M. The natural and logical consequence of an intelligible question is an answer, not a sticker. Failure of generalization or transfer is often the combined consequence of teaching out of context and using reinforcers that are not real-world, natural and logical consequences.
3. When students feel that the reinforcement is meaningless or childish – or they object in general to being manipulated by a system of externally imposed consequences – the actual results of reinforcement may be the opposite of their intended results.

Negative reinforcement

Negative reinforcement is a response that follows a behavior and has the effect of increasing the likelihood of that behavior occurring again – by removing a negative stimulus.

Examples:

- A student receives help when he requests help after struggling with a problem.
- A student reduces anxiety and panic by asking for and receiving an extension on a paper.

Potential advantages and potential dangers: See positive reinforcement

Noncontingent reinforcement refers to rewarding experiences that are not dependent on the student engaging in any target behavior. For example, compliments, hugs, presents, pleasurable activities, and the like – when presented randomly and not as a "payment" – can have the effect of creating a generally positive culture, facilitating feelings of trust and affection, and increasing the individual's confidence.

Extinction

Extinction occurs when a behavior is followed by no response, which decreases the likelihood of the behavior occurring again.

Examples:

- John is disruptive in class and is placed in a time-out room where he cannot be rewarded for disruption.
- A therapist gives no response to the student's errors.
- A mother ignores her child's whining requests for candy in the supermarket line.

Potential Advantages

1. Ignoring undesirable behavior can have the effect of reducing the likelihood of that behavior, assuming the behavior was intended (consciously or unconsciously) to have an effect on others.
2. When undesirable behavior is not ignored, it often increases, especially if the child receives attention for undesirable behavior and no attention for desirable behavior.

Potential Dangers

1. Often what is called "no response" is actually a reinforcing response. For example, "time-out from reinforcement" is often misused in this way. Time out MAY actually be negative reinforcement (e.g., removing a disruptive child from an undesirable activity from which he wants to be removed, as in school suspension) or positive reinforcement (e.g., having the child spend time with a friendly aide or in a time-out room with friends). In both cases, the actual result is the opposite of the intended result. That is, the negative behavior increases in frequency because the consequence is unintentionally reinforcing.
2. It is very hard to ignore a child's irritating or aggressive behavior. If an authority figure tries to ignore the behavior – but finally loses patience and reacts – the result may be the very worst possible result. That is, the child is rewarded for persisting with undesirable behavior.

Punishment

Punishment is a response that follows a behavior and has the effect of decreasing the likelihood of that behavior by providing an undesirable experience as a consequence.

Examples:

- A convicted thief is imprisoned for robbery.
- A mother yells at her child for misbehavior.
- A principal expels a student for serious infractions of school rules.

Potential Advantages

1. If the punishment is natural and logical (e.g., being forced to clean up a room after trashing it), the individual learns about the relation between behavior and its predictable consequences in the real world.

Potential Dangers

1. Apparent punishment (e.g., parental spanking; expelling a student who does not want to be in school anyway) may in fact be reinforcing if the child receives desirable attention, relief from stress, or some other reward as a result. This is one of the reasons that punishment is rarely a successful behavior management procedure in the long run.
2. Many types of punishment, corporal or psychological, are illegal in many settings (e.g., school) in many states.

WHY IS CONTINGENCY MANAGEMENT IMPORTANT FOR MANY STUDENTS AFTER TBI?

Effective management of consequences (contingencies) is important for all children, especially in a school context. Compliance and orderly behavior are critical in creating an effective learning environment. Following severe TBI, students may experience an extended period of time during which usual behavioral expectations have been suspended or reduced. For example, in a hospital, rehabilitation setting, or even in school, disruptive or resistive behaviors, particularly during the early recovery after TBI, may be tolerated more than in a typical school setting. In addition, the student may become accustomed to short work sessions and to controlling activities more than is allowed in school. For this reason, a consistent and well implemented behavior management system, including careful management of consequences, is particularly important when the student returns to school and resumes a normal school schedule.

Well implemented behavior management systems are additionally important because behavioral difficulties are a common consequence of brain injury. Among the most common concerns after TBI are difficulties with impulsiveness and risk taking. This is particularly true of students who are injured at a young age and who subsequently fail to mature adequately in the areas of impulse control and safety judgment. Students with damage to the bottom parts of their frontal lobes typically think and act impulsively – much like young children or children who experienced their TBI early in life. They often present with increasing challenges in this domain as they age. Their impulsive behavior naturally leads parents and teachers to worry about effective disciplinary practices. **(See Tutorial on Discipline.)**

However, caution must be exercised in using contingency management procedures with students with TBI. Many students with TBI have difficulty benefitting from feedback or learning from the consequences of their behavior. This difficulty results from damage to the bottom parts of the prefrontal lobes of the brain, commonly injured in TBI. This neurological problem makes behavior management a difficult issue. Most adults believe that consequences are the primary instrument of discipline. That is, if a student misbehaves, he should receive some sort of punishing consequence so that he will learn not to engage in that behavior again. However, this form of behavior management assumes relatively intact capacity to learn from prior consequences – precisely what many students with brain injury are (relatively) incapable of doing. The student might learn on an "intellectual" level that behaving in a certain way leads to negative consequences, but knowing this intellectually and guiding ones behavior with that knowledge are two very different matters. Students with frontal lobe injury are known to have difficulty guiding their behavior with their intellectual knowledge. **[See Tutorials on Positive Behavior Supports; Behavior Management: Prevention Strategies.]**

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT ASSOCIATED WITH CONTINGENCY MANAGEMENT?

Three important themes dominate behavior management. First, careful assessment is required to ensure that the problem is behavioral and not medical, cognitive, emotional, or some other sort of problem. The hypothesis-testing guides on this web site should help with this determination. If it is determined that the problem is behavioral, then the same hypothesis-testing

procedures are used to identify the meaning (i.e., function) of the student's negative behavior. Second, the student's functioning and injury profile should be understood so that staff are in a position to know if contingency management procedures hold the promise of being effective.

Third, most of the student's everyday communication partners, including staff at school and parents at home, need to be involved in the planning and implementation of the intervention. The student is unlikely to change behavior patterns unless the behavior plan is implemented across many contexts of his life. If not well oriented to the plan, communication partners may unintentionally trigger negative behavior with inappropriate demands or interaction (on the antecedent side) or unintentionally reinforce negative behavior with ill-advised responses, like removing a disruptive child from an undesirable task (on the consequence side).

Difficulty Learning From Consequences

Many students with brain injury experience behavioral difficulties while in the rehabilitation hospital and also upon return to home and school. The tradition of behavior intervention in both hospitals and schools focuses on contingency management and consequence-focused learning. As stated above students with brain injury often do not respond to this continency management and consequence-focused behavior management approach. This difficulty is the direct result of damage to the frontal lobes, vulnerable in TBI. Frontal lobe damage results in a variety of behaviors that make learning from consequences difficult for these students. Therefore behavioral management strategies need to shift from consequences to antecedents to address these student's needs **(See Tutorial on Positive Behavior Supports.)**

Emphasis on Positive Consequences: Reinforcement

If consequence-oriented behavior management (contingency management) systems are used, the emphasis should be on rewarding positive behavior rather than on extinguishing or punishing negative behavior. Reward systems create a more positive culture for students and adults alike. Systems that rely on ignoring or punishing negative behavior create a more negative culture and tend to backfire.

Strengthening Positive Behaviors

Reinforcement (reward) procedures can be used to strengthen already positive behaviors or to teach alternatives to negative behavior. (See Tutorial on Teaching Positive Alternatives to Negative Behavior.) In strengthening positive behaviors, teachers and parents make a point of rewarding positive behavior (e.g., completing homework) with praise or some other desirable consequence. Whether or not adults choose to make primary use of contingency management procedures, reinforcement for positive behavior should be a salient component of the classroom and home cultures.

Teaching Alternative Behaviors

Reinforcement procedures can also be used to teach positive alternatives to negative behavior. These procedures are referred to as differential reinforcement of incompatible behaviors (DRI), of alternative behaviors (DRA), or of other behaviors (DRO). The general idea is to provide a rewarding consequence for behaviors designed to replace the student's negative behavior. For example, if a student requests a break rather than being disruptive or aggressive, then that request is followed by praise and a break. **(See Tutorial on Teaching Positive Alternatives to Negative Behavior.)**

Natural Versus Artificial Rewards

See the Tutorial on Motivation for dangers of artificial rewards. Artificial rewards often create dependence on the rewards and reduce the student's intrinsic motivation. For students who are distractible, artificial rewards (e.g., stickers and toys) have the added danger of causing off-task behavior.

Systematically Reducing Negative Behavior

Negative behavior can be targeted with extinction or punishment procedures (see below). They can also be targeted with a reinforcement procedure called differential reinforcement of low rates of negative behavior. That is, the student is rewarded for systematically decreasing the frequency of negative behavior. For example, a student who frequently talks out of turn may be

rewarded for a small number of disruptions during an academic period. Typically this number would be negotiated in advance. This procedure may not be effective for students with TBI because of their need for more immediate consequences and for the general reason that consequences may not have an enduring impact on their behavior.

Time Out Procedures

"Time out" is short for "time out from reinforcement." Time out can either mean time out on the spot ("TOOTS") or removal to a special time-out room or other special place. In time out on the spot, adults simply remove their attention from a student who has misbehaved and ensure that there are no other reinforcing events occurring at the time. Use of a time-out room requires removal of the student from an activity following negative behavior.

Time-out procedures are intended to be extinction or "no response" procedures, thereby reducing the frequency of the negative behavior. However, as stated above, often what is called "no response" is actually a reinforcing response. Time out may actually be negative reinforcement (e.g., removing a disruptive child from an undesirable activity from which he wants to be removed) or positive reinforcement (e.g., having the child spend time with a friendly aide or in a time-out room with friends). In some cases, the interaction involved in moving the student to a time-out place can itself be reinforcing. In all of these cases, the actual result is the opposite of the intended result. That is, the negative behavior increases in frequency because the consequence is unintentionally reinforcing.

Punishment Procedures

Most forms of punishment, including both physical and emotional punishment, are prohibited by law or school policy. Furthermore, behavior management systems that rely on punishment are dangerous for many reasons. First, they focus attention on negative behavior which can paradoxically be reinforcing for some students (thereby increasing the frequency of negative behavior) and, for others, cause a deterioration in their fragile sense of self. Second, they fail to target the development of alternative positive behaviors. Finally, they create a generally negative school culture in which the avoidance of punishment is valued over attempts to engage in positive behavior.

Response-Cost Procedures: Response-cost behavior management systems are used in many elementary schools and programs for students with behavior disorders. The student begins the day or a period within the day with a certain number of points (or stars, etc.) and then loses points for specified misbehavior. The number of points at the end of the day (or period) dictates the nature or magnitude of a reward at that time. This is a punishment procedure in that a negative consequence (loss of a point) follows a negative behavior.

Response-cost systems have been shown to be useful for some students, but are dangerous for many students with TBI, including those who seek attention and those who respond only to immediate consequences. For attention-seeking students, the interaction with the adult around loss of points is in fact reinforcing of the negative behavior. For students who require immediate consequences, the long wait for the pay-off makes response-cost systems ineffective. In general, response-cost systems should be avoided for students with brain injury.

EVIDENCE SUPPORTING THE USE OF BEHAVIORAL INTERVENTION PROCEDURES FOR CHILDREN AND ADOLESCENTS WITH TBI

This summary of evidence is written for teachers and others who may be required to support their intervention practices with evidence from the research literature or who may simply be curious about the state of the evidence. This summary was written in 2007. Evidence continues to accumulate.

Ylvisaker and colleagues (2007) reviewed the available evidence for behavioral interventions used with children and adults with TBI. Their search yielded 65 published reports with a total of 172 participants, 54 of whom were under age 18. (The studies of children and adolescents are listed in the Resources section of this web site.) Their conclusion was that the evidence is sufficiently strong to support a clinical guideline, namely that well selected behavioral interventions and supports should be used with children and adults with behavior disorders after TBI in both acute and post-acute settings. Both traditional contingency management procedures and positive behavior intervention and support procedures (antecedent-focused procedures) were labeled evidence-based clinical options. **(See Tutorials on Positive Behavior Supports and Behavior Management: Prevention Strategies.)**

All 65 of the studies yielded positive results. However, only two of the studies were Class I randomized controlled clinical trials. Most were either Class III single-subject experiments or Class IV case studies. Therefore it is difficult to generalize the findings to all individuals with behavior disorders after TBI, or even large sub-groups within that population. Nevertheless the single-subject experiments do offer strong evidence for their conclusion – that the intervention improved functioning in the individual who received it – and can be used judiciously to support clinical decisions about individuals who substantially resemble the participant in the single-subject study.

Both of the randomized controlled trials in this review, one of which was a pediatric study, used positive behavior intervention and support procedures (i.e., antecedent-focused procedures versus near exclusive reliance on manipulation of consequences). Shari Wade and her colleagues (2006) implemented a family-centered proactive problem-solving intervention program to assist children with TBI to participate effectively and prevent problem behaviors. The procedures that families learned included many of the support procedures listed in the **Tutorials on Behavior Management: Prevention Strategies and Positive Behavior Supports**. The families spoke highly of the intervention and the effects on the children were positive.

The traditional contingency management procedures discussed in the current tutorial have a long history of supportive research with many disability groups. Selected contingency management procedures have also been used effectively with some children with problematic behavior after TBI.. However the review by Ylvisaker and colleagues demonstrated a strong shift from primary use of contingency management strategies in the 1980s to primary use of proactive antecedent-focused strategies in recent years. A possible explanation for this shift is the mounting evidence that damage to the undersides of the frontal lobes (common in TBI) creates inefficiency in learning from the consequences of behavior (Damasio, 1994; Rolls, 1998; Schlund, 2002). Contingency management procedures assume reasonable efficiency in learning from consequences. Therefore antecedent-focused procedures may have a neurological rationale for many children with TBI.

Like TBI, ADHD designates a population of students with executive function/self-regulatory impairments associated with possible pathology in frontal lobe structures. The ADHD intervention research literature is much larger than the TBI literature and can, therefore, be used with discretion as a guide to successful interventions for students with TBI. Zentall (2005) summarized a large number of studies demonstrating the effectiveness of environmental support and task modification procedures to increase the likelihood of successful academic performance and behavioral self-regulation for students with ADHD. Many of these studies are individually summarized in her 2006 book. Although these procedures were not specifically discussed as "behavior management" procedures, any approach that increases the student's successful engagement in activities can be considered behavior management, especially in the case of impulsive, oppositional, or otherwise poorly regulated students.

Russell Barkley has frequently reviewed the research on behavioral interventions for students with ADHD (e.g., Pfiffner, Barkley, & DuPaul, 2006). Most of the interventions that have been studied with that population have been delivered within the framework of traditional contingency management (e.g., point systems, response-cost procedures, and the like). Barkley typically concludes that these procedures can be used to control behavior, but the contingencies (i.e., rewards and punishments) need to be more salient (i.e., powerful), consistent, and immediate than one might otherwise expect for a student of that age. Furthermore, maintenance of the treatment effect over time or transfer to other contexts is unlikely. This is another reason to explore the usefulness of proactive, antecedent-focused procedures.

Regardless of the state of evidence in the research literature for specific behavioral procedures, the selection of such procedures in the case of a specific student should be made on the basis of a functional behavior analysis. Chandler and colleagues (1999) showed that teams of educators in a classroom context can successfully implement both functional behavior analyses and positive behavior supports.

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Tutorial: Behavior Management: Prevention Strategies

(See also Tutorials on Contingency Management, Noncompliance, Motivation)

WHAT ARE PREVENTION STRATEGIES?

In the context of behavior management, prevention strategies are the procedures that individuals use to keep others from engaging in negative behavior. We often use prevention strategies with one another as adults. For example, when a coworker arrives at work physically or emotionally drained, we tend to offer support, reduce demands, and expect less productivity. This is plain common sense when we know that somebody will have a difficult time dealing with environmental demands.

Prevention strategies are also used extensively with young children. For example, most parents remove breakable objects when they have a toddler in the home, knowing that toddlers explore everything and are likely to break the valuable objects. Similarly plugs are placed in electric outlets, clasps are placed on cabinet doors that should not be opened, gates are placed in front of stair cases, and the like. These strategies are common sense "child proofing" procedures that parents use when there is an impulsive child in the house. All of these strategies are used with students with TBI.

WHY ARE PREVENTION STRATEGIES IMPORTANT FOR MANY STUDENTS AFTER TBI?

Many students with TBI, as well as many with other disabilities, such as ADHD, have damage in the parts of the brain associated with impulse control (bottom sides of the frontal lobes). In these cases, the student may have the physical and intellectual attributes of a 5 or 10 or 15 year old, but have the capacity for impulse control of a much younger child. These students may be frustrating for teachers and parents because it is hard to understand why a student who looks and thinks like a mature student cannot control impulses any better than a very young child.

In addition to impulse control problems, students with brain injury may have chronic pain, ongoing frustrations associated with their disability, chronic sadness associated with loss of friends and favored activities, and other nagging problems. These conditions lower the threshold of frustration tolerance, so that it is easier for the student to lose control and act in ways that are uncomfortable for others.

Finally, many students with brain injury have damage to the parts of the brain associated with the ability to learn from consequences (bottom sides of the frontal lobes). For this reason, trying to manage and modify their behavior through rewards and punishments (i.e., contingency management) is predictably ineffective. For all of these reasons, prevention of negative behavior and facilitation of positive behavior is the strategy of choice for these students.

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WHO HAVE IMPULSE-CONTROL PROBLEMS, DO NOT LEARN EFFICIENTLY FROM CONSEQUENCES, OR WHO FOR OTHER REASONS BENEFIT FROM PREVENTION PROCEDURES?

(See also Tutorials on Positive Behavior Supports; Discipline; Instructional Routines, Video Introduction to Positive Behavior Supports Illustrations Video Re-enactment: Positive Behavior Supports Video Illustration: Positive Behavior Supports

Understanding the Problem: The first and perhaps the most important step in helping these students is to understand that their difficulty with impulse control is, at least in part, neurological. If adults do not understand the source of the difficulty, they will experience frustration in trying to manage the student, they will probably use ineffective behavior management procedures, and the student will probably not improve.

Understanding, not Excusing: Highlighting the importance of understanding is not the same as excusing. Hitting and other negative behaviors are **not excusable**. Inexcusable behavior is inexcusable, even if the student is impulsive. Students need to he held accountable for their actions. However, understanding the student's neurologically-based impulsiveness should lead to

systems of management that place primary emphasis on **preventing negative behavior** in the future rather than simply reacting to that negative behavior when it occurs.

"A pound of prevention for every ounce of reaction": Particularly with impulsive children, it is critical to focus primary effort on preventing negative behavior rather than simply reacting to that negative behavior. This is common sense when dealing with toddlers who are famous for being impulsive. Parents try hard to "child proof" the environment so that they do not have to spend their days reacting to the difficulties that an impulsive child will inevitably get into. Many children with brain injury, ADHD, and other diagnoses are like young children with respect to impulsiveness. Thus prevention is the key. **[See Positive Behavior Supports]**

"**Childproof" the environment:** (See five types of "child proofing" below).

Create **everyday routines** of activity and interaction that are well understood by the students and effectively supported, so that the children experience success in their lives. **[See Instructional Routines; Organization]**

Expect impulsive and poorly regulated behavior from time to time, especially if the student is tired or stressed, there are changes in routine, the environment is overly stimulating, or demands are high. Remain calm. Adult anxiety and agitation increase the student's anxiety and agitation.

Don't expect immature students to routinely regulate their behavior effectively – control impulses and defer gratification – in relation to a **distant goal** (e.g., control impulses now in order to get a reward or avoid a punishment at the end of the day) or an **abstract rule** (e.g., "Think about others' needs, not just your own").

Use behavior management procedures that are **proactive, positive, and supportive**. That is, set the student up for success rather than reacting to the student's failures. Negativity and punishment usually breed a downward cycle of more negativity and punishment with developmentally young students. **[See Positive Behavior Supports]**

Positive behavioral momentum: Before introducing stressful or difficult tasks, make sure that the student has experienced success with less difficult or less stressful tasks. Ideally the student will have experienced sufficient success that he enters difficult tasks with a reasonable level of confidence. **Video Illustration of Positive Behavioral Momentum**

Use an **interactive and teaching style** that is positive and supportive (versus threatening and "testing"). **[See Apprenticeship Teaching]**

Use everyday **conversational routines** of interaction that are designed to become internalized by the students as their own self-regulatory system. **[See Self-Regulation Routines]**

Ensure that **instructions and expectations are clear**. State in structions clearly, repeat them as often as necessary, and use concrete (e.g., graphic) organizational supports liberally. **[See Advance Organizers]**

Help the child develop **a sense of self** that includes competence and a desire for self-regulation. **[See Sense of Self]**

"CHILDPROOFING"

In a school setting, childproofing the environment has the following components:

1. **Childproof the physical environment:** Make sure the students are not exposed to dangerous situations; make sure that they are not overly tempted by readily accessible and highly desirable things, activities, or people that predictably distract them from the task at hand or elicit impulsive or negative behavior.
2. **Childproof the activity environment:** Make sure that the students are capable of doing all that is expected and requested of them. **(See Apprenticeship Teaching)** If the adult is the student's collaborator (i.e., partner or team member – versus tester or drill master), then the students will always be able to complete the task – and can become more independent as they gain competence.

3. **Childproof the social environment:** Make sure that students are with other students with whom they are reasonably compatible. Prevent social interactions that are threatening or cause agitation. Make sure that trained and supportive adults are with the students during predictably difficult times and tasks.
4. **Childproof the expectation environment:** Make sure that expectations for the student's performance and participation are appropriately adjusted relative to abilities, stressors, moods, illness, tough times, and the like. For example, parents of two-year olds try hard to make these adjustments – and it is important in school as well, in the case of children who are particularly immature in self-regulation.
5. **Childproof the known stressors, such as transitions and changes in routine:** Students with self-regulatory weakness are notorious for having difficulty with transitions (even apparently simple transitions from, say, snack back to work) and changes in routine. Try to insulate the student from such known stressors with good preparation and special support during the transition and at times of change in routine.

EVIDENCE SUPPORTING THE USE OF BEHAVIORAL INTERVENTION PROCEDURES FOR CHILDREN AND ADOLESCENTS WITH TBI

This summary of evidence is written for teachers and others who may be required to support their intervention practices with evidence from the research literature or who may simply be curious about the state of the evidence. This summary was written in 2007. Evidence continues to accumulate.

Ylvisaker and colleagues (2007) reviewed the available evidence for behavioral interventions used with children and adults with TBI. Their search yielded 65 published reports with a total of 172 participants, 54 of whom were under age 18. (The studies of children and adolescents are listed in the Resources section of this web site.) Their conclusion was that the evidence is sufficiently strong to support a clinical guideline, namely that well selected behavioral interventions and supports should be used with children and adults with behavior disorders after TBI in both acute and post-acute settings. Both traditional contingency management procedures and positive behavior intervention and support procedures (antecedent-focused procedures) were labeled evidence-based clinical options. **(See Tutorials on Positive Behavior Supports and Behavior Management: Contingency Management.)**

All 65 of the studies yielded positive results. However, only two of the studies were Class I randomized controlled clinical trials. Most were either Class III single-subject experiments or Class IV case studies. Therefore it is difficult to generalize the findings to all individuals with behavior disorders after TBI, or even large sub-groups within that population. Nevertheless the single-subject experiments do offer strong evidence for their conclusion – that the intervention improved functioning in the individual who received it – and can be used judiciously to support clinical decisions about individuals who substantially resemble the participant in the single-subject study.

Both of the randomized controlled trials in this review, one of which was a pediatric study, used positive behavior intervention and support procedures (i.e., antecedent-focused procedures versus near exclusive reliance on manipulation of consequences). Shari Wade and her colleagues (2006) implemented a family-centered proactive problem-solving intervention program to assist children with TBI to participate effectively and prevent problem behaviors. The procedures that families learned included many of the support procedures listed in the **Tutorials on Behavior Management: Prevention Strategies and Positive Behavior Supports.** The families spoke highly of the intervention and the effects on the children were positive.

A series of nine single-subject studies reported by Feeney and Ylvisaker (1995, 2003, 2006, in press) demonstrated the effectiveness of several support-oriented behavioral procedures for both young children and adolescents with serious behavior problems after TBI. The following proactive procedures were used: (1) developing positive momentum before difficult tasks, (2) ensuring the doability of the tasks, (3) providing advance organization, including advance graphic organization, before complex tasks, (4) ensuring positive communication from communication partners, (5) providing the children with as many opportunities for choice and control as possible. In each case, the students' negative behaviors decreased in frequency and intensity while their academic productivity increased.

Traditional contingency management procedures **(See Behavior Management: Contingency Management)** have a long history of supportive research with many disability groups. Selected contingency management procedures have also been used effectively with some children with problematic behavior after TBI.. However the review by Ylvisaker and colleagues demonstrated a strong shift from primary use of contingency management strategies in the 1980s to primary use of proactive antecedent-focused strategies in recent years. A possible explanation for this shift is the mounting evidence that damage to the undersides of the frontal lobes (common in TBI) creates inefficiency in learning from the consequences of behavior (Damasio, 1994; Rolls, 1998;

Schlund, 2002). Contingency management procedures assume reasonable efficiency in learning from consequences. Therefore antecedent-focused procedures may have a neurological rationale for many children with TBI.

Like TBI, ADHD designates a population of students with executive function/self-regulatory impairments associated with possible pathology in frontal lobe structures. The ADHD intervention research literature is much larger than the TBI literature and can, therefore, be used with discretion as a guide to successful interventions for students with TBI. Zentall (2005) summarized a large number of studies demonstrating the effectiveness of environmental support and task modification procedures to increase the likelihood of successful academic performance and behavioral self-regulation for students with ADHD. Many of these studies are individually summarized in her 2006 book. Although these procedures were not specifically discussed as "behavior management" procedures, any approach that increases the student's successful engagement in activities can be considered behavior management, especially in the case of impulsive, oppositional, or otherwise poorly regulated students.

Russell Barkley has frequently reviewed the research on behavioral interventions for students with ADHD (e.g., Pfiffner, Barkley, & DuPaul, 2006). Most of the interventions that have been studied with that population have been delivered within the framework of traditional contingency management (e.g., point systems, response-cost procedures, and the like). Barkley typically concludes that these procedures can be used to control behavior, but the contingencies (i.e., rewards and punishments) need to be more salient (i.e., powerful), consistent, and immediate than one might otherwise expect for a student of that age. Furthermore, maintenance of the treatment effect over time or transfer to other contexts is unlikely. This is another reason to explore the usefulness of proactive, antecedent-focused procedures.

Regardless of the state of evidence in the research literature for specific behavioral procedures, the selection of such procedures in the case of a specific student should be made on the basis of a functional behavior analysis. Chandler and colleagues (1999) showed that teams of educators in a classroom context can successfully implement both functional behavior analyses and positive behavior supports.

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Tutorial: Discipline

(See also Tutorials on Behavior Management; Positive Behavior Supports; Parenting Styles

WHAT IS DISCIPLINE?

In the context of child development and school policy, the term "discipline" refers generally to the practices that adults use to teach children rules of conduct and to enforce those rules. Disciplinary practices include creation and discussion of rules and expectations, reminders of rules, positive consequences for adhering to rules, and negative consequences for breaking rules. In discussions with students, rules can be referred to as expectations – "If we want to get along and get our work done, we expect that all of us will follow these simple rules. This is what we all expect from one another."

Experts describe at least four different approaches to discipline.

Inductive Discipline Orientation: The term "inductive discipline" is commonly used by psychologists to refer to the most effective type of parental or adult discipline of children. Inductive or positive discipline is designed to avoid power battles, arbitrary use of parental authority, and other forms of negative interaction around discipline. This approach to discipline is often associated with "authoritative parenting", which is the positive middle ground between extreme permissiveness, on one side, and extreme arbitrariness or "authoritarian parenting" on the other.

"Authoritative" parents maintain their proper role as their child's authority figure, but also discuss and negotiate with their children and turn over decision making to children when it is proper to do so. When children behave in ways that are considered positive, they receive positive reinforcement and the reason for the reinforcement is clearly explained. For example, "John, You've done a great job of keeping your room neat and your things in order. That means that I don't have to nag or spend time cleaning up after you. That saves me time, so we can go to the ball game this weekend." Or in the case of negative behavior: "John, your room is a mess after you told me you would clean it up. Now we're both going to have to spend extra time getting your room ready for guests… so we won't be able to go to the ball game. That's what happens when you don't do the little things that you promise to do."

Parents who use inductive or positive discipline also listen to their children and invite them to explain why they did what they did. Discussion is frequent. Parents are understanding, but also consistent in their enforcement of the important rules of the house.

Because of the clear explanations, children come to understand that there are clear rules for them to follow, good reasons for the rules, and natural and logical consequences that follow behavior that is consistent with the rules and or that is in violation of the rules. When homes are organized around inductive or positive discipline – with more positive reinforcement than punishment – children recognize the orderly organization of life around them and develop better self-regulation than children who live in any of the following three types of homes. Children who are raised in these homes tend to have better self-regulation later in childhood and adolescence than children whose parents rely on less positive styles of parenting. In effect, children "internalize" reasonable rules of conduct and their rationale – and come to use these principles as their own decision-making system. Children develop positive self-regulation in part because they have lived in a world that is organized and predictable, including well understood rules of conduct.

Deductive Discipline Orientation: In homes and schools characterized by "deductive discipline", rules are created and then enforced by parents and teachers with punishments and rewards. The child is expected to "deduce" or figure out the rules by seeing how his behavior is rewarded or punished. There are few clear explanations given for rewards or punishments. Although enforcement might be consistent, punishment may come to be seen by the child as arbitrary, rather than a natural and logical consequence of violating a clearly understood rule. Power battles may be common.

Arbitrary Punishment Orientation: In homes that use arbitrary punishment, parents punish their children in ways that are not clearly related to any rules or standards. Often punishment is physical. Punishment can be imposed for whatever reason the parent decides on the spot is a good reason for punishment. There is no consistency or obvious standard. Rules and standards are not discussed with the children. There is little negotiation or respect for child decision making. Children may be confused about what they are supposed to do and come to fear their parents. Power battles or other forms of parent-child conflict are common.

This type of punishment is usually associated with poor child outcomes and, in particular, poorly self-regulated children. If physical punishment is used, the lesson learned by children is to use physical power over others if you are bigger than they are. Peer relations are often poor among children who come from homes in which physical punishment is used.

Permissive Orientation: In contrast to homes in which arbitrary punishment is used frequently, permissive homes are characterized by very few rules and few disciplinary practices. Children's choices, including impulsive behaviors, are largely respected and accepted. Few boundaries are placed around the child's behavior. Although on the surface, this may appear to be a "child-centered" home, the children may not experience the regularity and organization they need to learn how to think for themselves and make good decisions. Because there are no boundaries, the children may feel insecure and confused. Children develop positive self-regulation in part because they have lived in a world that is organized and predictable, including well understood rules of conduct.

WHY IS DISCIPLINE IMPORTANT FOR MANY STUDENTS AFTER TBI?

Behavioral difficulties are a common consequence of brain injury. One of the most common concerns focuses on issues of impulsiveness and risk taking as the student ages with a TBI. Students with damage to the bottom parts of their frontal lobes typically think and act impulsively – much like children who experienced their TBI at a young age they often present with increasing challenges in this domain as they age. Their impulsive behavior naturally leads parents and teachers to worry about effective disciplinary practices.

Students with brain injury may also behave in unacceptable ways due to other cognitive difficulties secondary to their injuries. For example, they might be rigid and /or react negatively to unexpected changes or deviations in their routines. **[See Tutorial on Flexibility.]** They may not be able to "read" others' communication accurately and therefore act strangely because of misinterpretation. **[See Tutorial on Social Perception.]** They may have difficulty initiating behavior and therefore fail to do what they know they should do. **[See Tutorial in Initiation.]**

Many students with brain injury have particular weakness in the part of the brain that enables people to benefit from feedback or learn from the consequences of their behavior. This neurological problem makes discipline a difficult issue. Most adults believe that consequences are the primary instrument of discipline. That is, if a student misbehaves, he should receive some sort of punishing consequence so that he will learn not to engage in that behavior again. However, this form of discipline assumes relatively intact capacity to learn from prior consequences – precisely what many students with brain injury are incapable of doing. The student might learn on an "intellectual" level that behaving in a certain way leads to negative consequences, but knowing this intellectually and guiding ones behavior with that knowledge are two very different matters. **[See Tutorials on Positive Behavior Supports; Behavior Management: Prevention Strategies.]**

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WHO MAY BE DIFFICULT TO DISCIPLINE (See Behavior Management)

1. Understanding, not excusing: When a student engages in negative behavior as a result of neurologically-based impulsiveness, lack of initiation, inability to recall the appropriate response, or reduced "reading" of social cues and situations, parents and teachers must first understand the source of the difficulty. However, understanding is not the same as excusing. Inexcusable behavior is inexcusable even if it is in part a product of the student's neurological difficulties. Rather than excusing behavior, parents and teachers should redouble their efforts to help the student avoid the negative behavior in the future. **[See Tutorials on Positive Behavior Supports; Behavior Management: Prevention Strategies]**

2. Clear and explicit rules with reasons: At home and at school, the rules and expectations should be very clear. They may need to be posted and reminders may need to be frequent. Written reminders in a student's organizer and reminders to review these notes are often necessary. There may need to be frequent review and discussion of the reasons for the rules. These discussions should take place when the student and adults are calm – not during a time of behavioral crisis. This includes both general rules, like "Raise your hand if you have a question", and specific instructions, like "Please complete all of the problems on this page. You'll know you're done when it looks like this." Encouraging the student to have written record of such instructions will ultimately empower the student to become his own advocate.

3. Rules stated positively: What To Do versus What Not To Do: In a classroom or home, rules should be formulated positively, in terms of what adults want the students to do versus what they want them to avoid. For example, a rule might be, "Speak nicely to your sister," not "Don't yell at your sister!"; or "Pack you back pack the night before and be ready for your bus", not "Don't dawdle in the morning"; or "Say goodbye and leave quietly, please," not "Don't bang the door when you leave!"

4. "A pound of prevention for every ounce of reaction": Particularly with impulsive children, it is critical to focus primary effort on preventing negative behavior rather than reacting to that negative behavior. This is common sense when dealing with toddlers who are famous for being impulsive. Parents try hard to "child proof" the environment so that they do not have to spend their days reacting to the difficulties that an impulsive child will inevitably get into. Many children with brain injury, ADHD, and other diagnoses are like young children with respect to impulsiveness. Thus prevention is the key. **[See Tutorials in Behavior Management: Prevention Strategies; Positive Behavior Supports]**

Video Illustration of Positive Behavior Momentum

5. A pound of positive for every ounce of negative: When students behave in ways that are difficult to live with, it is easy to fall into the trap of attending only to the negative behavior. But even students with severe behavior problems act in acceptable ways most of the time. It is critical to pay attention to positive behavior, call attention to it, and reward it with praise or some other reward. Otherwise the student will learn that he only comes to the attention of adults when misbehaving, and may also develop a sense of personal identity associated with negative behavior. This can easily create a cycle of negative behavior followed by negative consequences, breeding more negative behavior, and so on. Parents and teachers should work to create opportunities for positive behavior, which can then be highlighted and rewarded.

6. Consistent implementation: Complete consistency in implementing behavior or discipline programs from person to person, from and time to time, and across teachers and parents is a desirable goal, but fraught with limitations and sure to lead to frustration. However, it is important for all teachers and parents to "be on the same page" with respect to rules, their implementation, and consequences for violations. Substantial inconsistencies will likely lead to increased behavior problems.

7. Discussion of rules and disciplinary practices: Students should have a clear understanding of why specific rules exist and why specific consequences are associated with violations. For example, presentations like the following may need to be frequent: "It's important for students to raise their hands and wait to be called on; if everybody talks out of turn, we won't understand anybody and won't get anything done." "John, when you talk out of turn, you'll have to do your work alone. We have to make sure that when students work in a group, they work together." These discussions should occur during periods of calm, not during a behavioral crisis, and should be available in written format for the student to use as a cue in future task assignments.

8. Natural and logical consequences: Many students with brain injury do not learn efficiently from the consequences of their behavior. Therefore, their behavior management plans are primarily focused on antecedent (advance) supports to prevent negative behavior. Nevertheless, when they do behave in negative ways, there should be consequences so that the student learns that certain behaviors are followed by specific consequences. These consequences may not modify the behavior, but at least the student learns about how the world works. Ideally these consequences are naturally and logically related to the behavior so that they make sense to the student. For example, if a student trashes his room, a natural and logical consequence is having to clean it up. It is not a natural and logical consequence, for example, to be forced to sit in a punishment chair for an hour.

9. No punishments during times of extreme anger: When the student or the adult or both are extremely upset, it is not the time to administer punishments. Under these emotionally charged circumstances, the net effect of punishment is to increase anger, not to learn anything. The goal when students are in crisis or emotionally upset is simply to end the crisis and reduce the emotionality of the situation without anybody getting hurt. Thus, the most immediate action is to remove the student from the environment or stop the environmental stimulation. The time to discuss the consequences of negative behavior is later when the student is calm. Again, prevention is the key to minimizing aggressive or angry outbursts.

10. No power battles: When it is necessary to discipline a child, this should be done calmly and quickly with the child removed from other children. There should be no conflict over who is in control; the focus is on rule violation only. Adults must choose their battles wisely so that they know that they will successfully administer discipline if it is required.

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Tutorial: Positive Behavior Supports

(See also Tutorials on Behavior Management: Contingency Management; Behavior Management: Prevention Strategies; Noncompliance; Discipline; Motivation)

WHAT ARE POSITIVE BEHAVIOR SUPPORTS?

"Positive Behavior Interventions and Supports" (PBIS) refers to an environmental, antecedent, support-oriented approach to helping individuals with problem behavior. The approach has developed within the tradition of Applied Behavior Analysis (ABA) and shares with that tradition the following features.

- systematic observation of behavior
- an understanding of behavior as a result of its antecedents and consequences
- objective analysis of behavior, using both (1) correlational observation of the behavior's antecedents (what occurs before the behavior) and consequences (what occurs after) and (2) systematic experimentation based on hypothesized causes of the behavior
- systematic teaching procedures, including modeling, prompting/cuing, shaping, chaining, and the like

PBIS differs from traditional ABA in the following respects:

- The focus of intervention is not just on problem behaviors that need to be eliminated, but rather on broader life style and environmental changes that would make the problem behavior irrelevant.
- The focus is largely (but not entirely) on changing the events that precede the problem behavior (antecedents) rather than largely on reacting to the problem behavior with consequences. If the antecedents are effectively modified, then the problem behavior may become irrelevant, that is, non-functional and unnecessary for the person.
- The focus is on environmental changes, including changes in the communication style and support behaviors of relevant communication partners in the environment.
- The focus is on teaching skills, including positive communication skills, that may replace the problem behavior. (This is also a focus in many applications of ABA.)
- The focus is on real-world contexts, for both assessment and intervention. A foundational principle of PBIS is that behaviors and the interventions that are designed to address behavioral difficulties are contextually bound. It is unlikely that there will be long term, sustainable behavior change (i.e., generalization and maintenance) if the interventions are not implemented in the contexts in which the individual lives and develops.
- The focus is on self-regulation, self-determination, and person-centered planning in order to develop individualized behavior supports. That is, the person is as involved as possible in developing the plan. Furthermore, the plan targets *self-regulation of behavior*, not just behavior change resulting from environmental changes.

In summary, the focus is on preventing problem behavior rather than reacting to it, on teaching skills aimed at to replacing the problem behavior, and on self-regulation. Specific procedures associated with PBIS are listed below.

PBIS and Positive Reinforcement: Because they share the word "positive", PBIS as a behavioral framework is easily confused with positive reinforcement. To be sure, reinforcing students for accomplishments and positive behavior is an important part of any behavioral framework. However, PBIS – with its primary emphasis on prevention and control of antecedents – is very different in meaning from positive reinforcement.

WHY ARE POSITIVE BEHAVIOR SUPPORTS IMPORTANT FOR MANY STUDENTS AFTER TBI?

A. Difficulty Learning From Consequences

Many students with brain injury experience behavioral difficulties in the rehabilitation hospital and also upon return to home and school. The tradition of behavior intervention in both hospitals and schools focuses on contingency management and consequence-focused learning. [See Behavior Management: Contingency Management] Students with brain injury often do not respond to continency management and consequence-focused behavior management. This difficulty is a result of damage to

the frontal lobes, vulnerable in TBI. Frontal lobe damage results in a variety of behaviors that make learning from consequences difficult for these students:

1. **Impulsiveness:** Damage to front parts of the brain, common in TBI, results in impulse control problems. For example, a student might be 10 or 14 or 18 years old, and have relatively good recovery in most areas of functioning, but yet have significant impulse control issues during which their behaviors are more typical of a 2 or 3 year old. As with toddlers, impulsive behavior easily trumps whatever learning from past consequences may have occurred.
2. **Failure to Connect Memories of Consequences with Feeling States:** Contingency management assumes that the student is able to retain memories for the factual aspects of prior events (i.e., I did X and Y resulted) as well as connections between the feelings associated with those events and the memories of them (i.e., I did X and Y resulted and I did/didn't like that). These connections are made in the vulnerable front parts of the brain, making any changes in behaviors unlikely or unsustainable. As a result, consequences may have the effect of immediately suppressing behavioral difficulties but will have no long-term effects.
3. **Initiation Impairment:** Some students with TBI have damage in the part of the brain responsible for initiating behaviors (also located in the frontal lobes). These students may know that they should engage in a certain behavior, but not do it because of initiation problems.
4. **Social Perception Impairment:** Some students with TBI have difficulty accurately "reading" their social situation and the behavior of others. This difficulty is also associated with damage to the front parts of the brain, more right hemisphere than left. With this impairment, a student may know what to do in a specific social situation, but fail to do it because of misreading the social situation. For example, a male student may misidentify a neutral look on a girl's face as an invitation, and then use sexually inappropriate language as a result of this misreading.

B. Difficulty Transferring Skills from Training Context to Application Context

PBIS is a context-sensitive approach to intervention. Because many of the difficulties that individuals confront following brain injury are governed by the contexts in which they occur, any successful interventions and supports must be developed within these contexts. Many young people with brain injuries have been placed in specialized programs to address behavioral challenges outside of their everyday contexts. The results of these interventions are frequently positive in the short term (i.e., while the individual remains in a given setting). Unfortunately, the specialized settings rarely parallel the contexts in which the individual will live and therefore gains made in those settings are often lost within a short time after return to the typical settings.

C. Positive, Capacity-Driven Rather Than Disability-Focused Intervention

PBIS focuses on the development of capacity and ability, not on the disabilities that result from brain injury. It is an optimistic approach that recognizes that individuals may struggle after brain injury but that these struggles can be addressed in a positive manner. This optimistic, capacity-oriented approach to behavioral issues is important for students who may be struggling with all of the difficult and negative aspects of life after a brain injury.

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT ASSOCIATED WITH POSITIVE BEHAVIOR SUPPORTS?

The following intervention and support themes are critical to the PBIS framework:

1. Functional Behavior Assessment: As with all applied behavior analysis, assessment is aimed at identifying the reasons for or functions served by the student's problem behaviors. The search for functions of behavior takes into account the following:

a. the background "setting events" that influence behavior (e.g., a conflict at home earlier in the day; a general mood of sadness as a result of social isolation)

b. the immediate antecedents that may influence the behavior (e.g., the teacher's instruction; another student's teasing)

c. the behavior (e.g., hitting, yelling – described across observers)

d. the consequences or events that follow the behavior and that may increase or decrease the likelihood of the behavior occurring again in the future (e.g., acting out resulted in removal from an undesirable activity)

2. Prevention Plans: Behavior intervention and support plans highlight prevention of behavioral difficulties and early intervention when difficulties are emerging, rather than ongoing reaction to the student's negative behavior. For example, if the student uses negative behavior to escape difficult academic work, staff should find ways to make the work doable in the eyes of the student (e.g., more collaboration with the student in doing the work: "We can do this together") so that the negative behavior will be unnecessary.

3. Capacity and Skill: Intervention plans focus on building the student's skill and capacity in order to make problem behaviors irrelevant or unnecessary: For example, if a student uses negative behavior to escape certain tasks, Step 1 would be to teach a positive communication alternative to the negative behavior (e.g., saying "I need help" or "I need a break" rather than hitting). Step 2 would be to build capacity and tolerance so that the student could participate in the activities that he previously used negative behavior to escape.

4. Meaningful Participation: Intervention plans that focus on meaningful engagement in chosen life activities are a core element in order to prevent difficulties. Staff and families should analyze the student's schedule to ensure that there are ample opportunities for participation in activities that the student considers meaningful.

5. Context: As much as possible, the behavioral interventions and supports should be delivered in the settings and within the activities in which the student has behavioral difficulties.

6. Involvement of the Student and Relevant Everyday People: Intervention plans should include the involvement of all who have a stake in the outcomes, including the student, his family, relevant friends, support staff, and professional staff in collaborative decision making about and implementation of the plans.

7. Reactive Strategies: The behavior support plan should include strategies for reacting to the student's negative behavior that highlight redirection at the first sign of difficulty and early intervention that is as unobtrusive as possible and includes quick staff disengagement.

8. Errorless Learning Strategies: As much as possible, managing behavior and teaching new skills should be organized in such a way that the student makes few if any errors. [See Errorless Learning] Errorless learning has a cognitive rationale (e.g., students with memory problems often remember and repeat errors) and also a behavioral rationale. Students who experience considerable failure (errors) tend to become discouraged, which increases the likelihood of negative behavior. **Video Illustration of Errorless Learning**

Specific Intervention and Support Procedures Associated with PBIS

Video Introduction to Positive Behavior Supports Illustrations Video Re-enactment: Positive Behavior Supports Video Illustration: Positive Behavior Supports

1. Positive, negotiated, well-understood daily routines: To avoid difficult behaviors associated with confusion or general frustration, daily routines should be clear to the student, organized to maximize strengths, and ideally negotiated with the student. For students who are confused and disorganized, it is useful to have the daily routines at home and at school organized as either sequences of photographs for younger students or visual written schedules in a organizer for older students. These visual supports help make the routines more understandable and concrete.

2. Prevention of Negative Behaviors: A key to positive behavior support plans is prevention of negative behaviors versus reacting to negative behaviors.

- **Prevention: Eliminate Provocation:** One key to prevention is elimination of whatever tends to provoke negative behavior. For example, if seating next to specific students provokes negative behavior, then seating should be changed.
- **Prevention: Positive Communication from Communication Partners:** As much as possible, communication partners should use a positive and encouraging style of communication and avoid "nagging", scolding, and other triggers for negative behavior.

3. Self-control of Antecedents: Students as young as elementary school age can begin to take responsibility for controlling their own antecedents. For example, if it is known that a student engages in negative behavior when he reaches a certain level of frustration or agitation, then he can be taught to recognize his escalation of negative emotions and remove himself from the classroom when he reaches a danger zone.

4. Positive Communication Alternatives to Negative Behavior: A key to positive behavior support plans is teaching positive communication alternatives to negative behaviors that serve a communication purpose. For example, if a student routinely uses negative behavior to indicate a need for a break, she should be taught to use positive communication to achieve the same goal (e.g., "Break please").

5. Positive Setting Events: As much as possible, staff and parents should try to ensure that the background events in the student's life are as positive as possible before introducing difficult or stressful tasks. For example, parents might allow an hour of video games after school before demanding homework. Teachers might give the student an important and enjoyable job (e.g., deliver mail to the principal) before beginning a difficult academic period.

6. Positive Behavioral Momentum: As much as possible, staff and parents should try to ensure that the student has experienced success (i.e., is "on a roll") before introducing difficult or stressful tasks. When difficult tasks are introduced at a time when the student is already upset, the likelihood of negative behavior is high. **Video Illustration of Positive Behavioral Momentum**

7. Choice and Control: Parents and teachers should ensure that the student has as much choice and control as possible over the course of the day. Often negative behavior is an expression of a need for greater control. If that is the case, there should be many opportunities for legitimate control over the day at home and at school.

8. Interesting, Meaningful, Do-able Tasks: As much as possible, parents and teachers should ensure that the student has an ample number of tasks that are interesting, meaningful, and not overly difficult.

9. Cognitive Supports: To ensure do-ability of tasks, staff may need to provide cognitive supports, such as advance organizers or graphic displays to follow when attempting difficult tasks or use of collaborative versus solo work. **[See Organization]**

10. Pivotal Behaviors: Pivotal behaviors are those that trigger other learning or other successes. For example, learning to say "I need help" when tasks are difficult not only prevents negative behaviors that result from frustration, it also creates a large number of teaching/learning episodes that are meaningful for the student. Other pivotal behaviors include asking for clarification and achieving heightened motivation to engage in tasks.

11. Positive Roles and Scripts: Some students engage in negative behavior as a result of frustration that they lack the opportunity to play positive roles in their lives. If they can be given such positive roles in the school setting – particularly power roles – negative behaviors may decrease. Positive roles at school can include serving as the teacher's assistant, helping other students, and the like.

12. Recreation and Leisure: A critical part of any positive support plan is assurance that the student has ample opportunities for fun and recreational activities.

13. Community Mobility and Adjustment: Depending on their age, students should have access to community places and activities that are age-appropriate and that might increase the likelihood of peer interaction. These activities may enhance life satisfaction to a degree that reduces negative behavior. For example, involvement in cub scouts or 4-H clubs and the like may enhance life satisfaction to a degree that reduces negative behavior.

14. Satisfying Social Relationships: Friendship, understood as a reciprocal liking and mutual bond of interests, cannot be artificially created. However, the likelihood of satisfying social relationships can be increased by ensuring that the student has opportunities for creating such relationships. School or after school clubs might be a context for social enhancement. Having desirable activities at home (e.g., the latest video games) might increase the likelihood of peers enjoying visits with the student in his home.

15. Positive Sense of Self: Fundamental to a PBIS framework is the long-term goal of helping the student to have a positive sense of self and a sense of self that is associated with positive social behavior. **[See Sense of Self].**

The Role of Consequences in a Positive Behavior Support Plan

The PBIS framework emphasizes antecedents of behavior – preventing negative behavior and setting the student up for success. However, consequences also have a role in PBIS plans.

1. Positive reinforcement: It should go without saying that when students do things well, they should be praised and perhaps receive other natural and logical rewards for positive behavior. This is an important feature of any positive culture.

2. Natural and Logical Consequences for Negative Behavior: If a student engages in negative behavior – for example, trashes his room – then after cooling down, he should take responsibility for cleaning the room. This is a natural and logical consequence of trashing the room. For students who have difficulty modifying their behavior as a result of consequences, the goal of this consequence is NOT to modify the behavior. Rather the goal is to teach the student about how the world works – when rooms are trashed, they need to be cleaned.

3. Immediate Salient Consequences and Short-Term Behavior Change: Even students who do not learn efficiently from consequences may modify their behavior over the short run if offered immediate and valuable rewards for positive behavior. For example, a student may study for an exam if promised a new video game for a grade of B or better. However, it should not be assumed that a system of rewards of this sort will change behavior over the long run

EVIDENCE SUPPORTING THE USE OF BEHAVIORAL INTERVENTION PROCEDURES FOR CHILDREN AND ADOLESCENTS WITH TBI

This summary of evidence is written for teachers and others who may be required to support their intervention practices with evidence from the research literature or who may simply be curious about the state of the evidence. This summary was written in 2007. Evidence continues to accumulate.

Ylvisaker and colleagues (2007) reviewed the available evidence for behavioral interventions used with children and adults with TBI. Their search yielded 65 published reports with a total of 172 participants, 54 of whom were under age 18. (The studies of children and adolescents are listed in the Resources section of this web site.) Their conclusion was that the evidence is sufficiently strong to support a clinical guideline, namely that well selected behavioral interventions and supports should be used with children and adults with behavior disorders after TBI in both acute and post-acute settings. Both traditional contingency management procedures and positive behavior intervention and support procedures (antecedent-focused procedures) were labeled evidence-based clinical options. **(See Tutorials on Positive Behavior Supports and Behavior Management: Prevention Strategies.)**

All 65 of the studies yielded positive results. However, only two of the studies were Class I randomized controlled clinical trials. Most were either Class III single-subject experiments or Class IV case studies. Therefore it is difficult to generalize the findings to all individuals with behavior disorders after TBI, or even large sub-groups within that population. Nevertheless the single-subject experiments do offer strong evidence for their conclusion – that the intervention improved functioning in the individual who received it – and can be used judiciously to support clinical decisions about individuals who substantially resemble the participant in the single-subject study.

Both of the randomized controlled trials in this review, one of which was a pediatric study, used positive behavior intervention and support procedures (i.e., antecedent-focused procedures versus near exclusive reliance on manipulation of consequences). Shari Wade and her colleagues (2006) implemented a family-centered proactive problem-solving intervention program to assist children with TBI to participate effectively and prevent problem behaviors. The procedures that families learned included many of the support procedures listed in the **Tutorials on Behavior Management: Prevention Strategies and Positive Behavior Supports.** The families spoke highly of the intervention and the effects on the children were positive.

The traditional contingency management procedures discussed in the current tutorial have a long history of supportive research with many disability groups. Selected contingency management procedures have also been used effectively with some children with problematic behavior after TBI.. However the review by Ylvisaker and colleagues demonstrated a strong shift from primary use of contingency management strategies in the 1980s to primary use of proactive antecedent-focused strategies in recent years. A possible explanation for this shift is the mounting evidence that damage to the undersides of the frontal lobes (common in TBI) creates inefficiency in learning from the consequences of behavior (Damasio, 1994; Rolls, 1998; Schlund, 2002).

Contingency management procedures assume reasonable efficiency in learning from consequences. Therefore antecedent-focused procedures may have a neurological rationale for many children with TBI.

Like TBI, ADHD designates a population of students with executive function/self-regulatory impairments associated with possible pathology in frontal lobe structures. The ADHD intervention research literature is much larger than the TBI literature and can, therefore, be used with discretion as a guide to successful interventions for students with TBI. Zentall (2005) summarized a large number of studies demonstrating the effectiveness of environmental support and task modification procedures to increase the likelihood of successful academic performance and behavioral self-regulation for students with ADHD. Many of these studies are individually summarized in her 2006 book. Although these procedures were not specifically discussed as "behavior management" procedures, any approach that increases the student's successful engagement in activities can be considered behavior management, especially in the case of impulsive, oppositional, or otherwise poorly regulated students.

Russell Barkley has frequently reviewed the research on behavioral interventions for students with ADHD (e.g., Pfiffner, Barkley, & DuPaul, 2006). Most of the interventions that have been studied with that population have been delivered within the framework of traditional contingency management (e.g., point systems, response-cost procedures, and the like). Barkley typically concludes that these procedures can be used to control behavior, but the contingencies (i.e., rewards and punishments) need to be more salient (i.e., powerful), consistent, and immediate than one might otherwise expect for a student of that age. Furthermore, maintenance of the treatment effect over time or transfer to other contexts is unlikely. This is another reason to explore the usefulness of proactive, antecedent-focused procedures.

Regardless of the state of evidence in the research literature for specific behavioral procedures, the selection of such procedures in the case of a specific student should be made on the basis of a functional behavior analysis. Chandler and colleagues (1999) showed that teams of educators in a classroom context can successfully implement both functional behavior analyses and positive behavior supports.

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Tutorial: Motivation

(See also Tutorial on Executive Function/Self-Regulation Routines; Sense of Self; Noncompliance

WHAT IS MOTIVATION?

Motivation is that which activates a student's behavior and gives it direction. Motivation can be either intrinsic or extrinsic. *Intrinsic* (internal) motivation is an internal state or condition that drives choices and behavior. *Extrinsic* (external) motivation refers to direction from outside the person, including the promise of rewards, the threat of punishments, intimidation, and coercion. Both intrinsic and extrinsic motivation are essentially related to goals.

Intrinsic Motivation: Put simply, intrinsically motivated students act in certain ways because they desire and like the outcomes and their actions are satisfying for them. Intrinsic motivation may be determined by any of the following:

1. **Bodily State/Needs:** The student may seek sensory stimulation or seek to decrease hunger, thirst, or other physical discomfort.

2. **Emotional Needs:** The student may seek to calm over-aroused emotions, increase good feelings, decrease negative emotions, maintain optimism and enthusiasm, develop a sense of productivity, or increase self-esteem.

3. **Cognitive Needs:** The student may seek to increase knowledge and understanding, maintain attention to interesting and personally meaningful events and activities, solve problems, or resolve uncertainty or confusion.

4. **Social Needs:** The student may seek to be like a role model, to be part of a group, to help others, or to be accepted by peers and have friends.

5. **Volitional/Self-Determination Needs:** The student may seek to achieve goals that she has set for herself, take control of her affairs, reduce others' control over her (become self-determined), or pursue her dreams.

In summary, intrinsically motivated students act as they do because they are driven by their own needs, goals, and wants versus external inducements, they like the outcomes, and the outcomes make them feel good – give them a sense of satisfaction. The agent of motivation is inside the person; they have an internal locus of control.

Extrinsic Motivation: Put simply, extrinsically motivated students act in certain ways because they believe they will receive rewards offered by others, avoid punishments threatened by others, or please others by doing so. The agent of motivation is outside of the students; they have an external locus of control. Management systems in many rehabilitation centers, schools, and homes are based on the assumption that students are extrinsically motivated – that they will not engage in positive behavior without external inducements. The underlying belief is that most students engage in activities because they are directed to do so, because they are required to do so, or because they are provided with either promises of rewards or threats of punishment in order to sustain their participation. Thus rewards (e.g., points, stickers, food) are offered for activities as basic as being present at assigned classes or therapy sessions.

The Danger of Over-Reliance on Extrinsic Motivation:

Over the past 40 years, a large number of studies of many populations of people with and without disability

has demonstrated the following two important points.

1. Over-reliance on extrinsic motivation destroys intrinsic motivation. It has been shown repeatedly that adults and children alike become less interested in activities if they are given artificial inducements (e.g., food, stickers, points, money) to engage in the activities that they were originally willing to engage in with no inducement.

2. Over-reliance on extrinsic motivation leads to learned helplessness and learned dependence. Learned helplessness is a state in which the individual does not believe that she is capable of influencing important outcomes in her life. The more students' behavior is determined by others' directions and external inducements, the more the students will lose their sense of self-determination and self-efficacy.

These are very serious threats. The conclusion is not to ban stickers or point systems from classrooms or to tell teachers that they should wait for students to decide for themselves to do what they are supposed to do. Good judgment is mandatory. Firm instructions and external inducements (e.g., promise of a reward) may be necessary to engage a reluctant student at the outset. However, as quickly as possible, staff should emphasize management systems that are based on principles of intrinsic motivation and self-determination. (See below)

WHY IS MOTIVATION IMPORTANT FOR MANY STUDENTS AFTER TBI?

Motivation is an important theme for many students after brain injury in part because (1) some brain injury related impairments may be misinterpreted to be motivation impairments and in part because (2) motivation is understandably dampened when the student is unable or not allowed to engage in activities that were motivating before the injury. Occasionally specialists in brain functioning describe a system of brain areas that underlies motivation, that is, motivation circuitry in the brain. As expected, these areas are largely in the frontal lobes. However, it is hard to distinguish between motivation circuits, on the one hand, and areas of the brain that subserve initiation, activation, task orientation, working memory, and other functions that, if damaged, result in behaviors that are easily mistaken for lack of motivation.

1. Brain Injury Related Impairment: Initiation Impairment: Students with damage to the dorsal (top) parts of the frontal lobes may have some degree of initiation impairment. That is, there is a part of the brain that enables a person to start and sustain an activity that he wishes to do or is supposed to do. When that part of the brain is damaged, the student may appear "lazy", "unmotivated", or possibly depressed. Because these conditions look so similar, students with brain injury-related initiation impairment are often labeled lazy, unmotivated, or depressed. Intervention for initiation impairment is quite different from intervention for true laziness, lack of motivation, or depression. Furthermore, treating initiation impairments as though they are motivational difficulties can result in an escalation of behavioral challenges. [See Tutorials on Initiation; Depression]

2. Brain Injury Related Impairment: Fatigue: One of the most common consequences of both mild and severe TBI is fatigue. Fatigue can be a result of the ongoing healing efforts inside the body or of the extra effort needed to perform even simple activities. Studies of individuals with TBI show that larger amounts of brain activation is required to accomplish tasks that may be fairly automatic (and require less mental effort) for people without brain injury. This requires energy and depletes energy supplies. Even the cognitive effort needed to maintain attention and focus on everyday tasks may cause greater than expected fatigue. (See Tutorial on Fatigue.)

3. Reduction in of the Domain of Self-Motivating Activities: Students with ongoing disability after brain injury inevitably face reductions in their domains of intrinsically motivating activities. For example, a motivated athlete may not be able to return to favored sports. A motivated student may not be able to engage in or succeed at academic activities that were previously motivating. A socially motivated student may not be able to keep up with old friends and may face social isolation. In each of these cases, not only are formerly motivating activities no longer possible, but also the general level of motivation that these activities had yielded for the student is no longer available.

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WITH APPARENT MOTIVATIONAL DIFFICULTIES?

First, it is important to think clearly about the concept of motivation. To the extent that staff and family believe that it is their responsibility to "motivate the student", the student will remain unmotivated. "Unmotivated" means dependence on others for motivation. This is not to say that there is nothing that staff and family can do to help a student become motivated. Rather it is to say that the ultimate goal is the student's internal motivation, not an extended dependence on other's ongoing provision of external "motivators".

Second, as always an understanding of the problem must precede intervention. Motivation problems must first be distinguished from difficulties with initiation and fatigue. Motivation problems must also be distinguished from general problems with learned helplessness (e.g., "Nothing I do makes a difference"), depression (e.g., "I can't do anything right"), and task orientation (e.g., "I

don't know what I'm supposed to do"). Procedures to address these problems are different from procedures to address specific motivational difficulties. **[See Tutorials on Initiation; Depression; Learned Helplessness; Instructional Routines]**

Important Principle: "Motivating" students externally (e.g., with rewards like food, stickers, points, or money for completing academic tasks) may produce short-term results in student engagement and compliance. However, these rewards will not produce motivated students; they may encourage the opposite. When parents or staff say that they are motivating the student by promising rewards or threatening punishments, they may achieve short term compliance, but not a motivated student. In fact, promises of rewards or threats of punishment may ultimately reduce the student's internal motivation to engage in positive behavior, like studying for exams, doing household chores, and the like. Therefore, although extrinsic motivation may be needed for a period of time, that period should be as short as possible and dependence on extrinsic motivators should be reduced as soon as possible.

Motivation, Goals, and Interests: Motivational Analysis: Motivational analysis has two parts:
(1) An exploration of the student's life and interests (via observation, parent interview, student interview) to determine what activities are intrinsically motivating and what goals the student may have. These intrinsically motivating activities may then be used in helping the student gain interest in broader domains of activities. For example, a student may have interests and goals (e.g., sports) that appear to have little to do with academic work, but can be used creatively to generate greater interest in and motivation for academic work.

(2) An exploration of the student's life (via observation, parent interview, student interview) to identify external motivators that can be used as external inducements to increase short-term compliance and motivation. This is to answer the question that teachers often ask, "What will the student work for?"

Often motivational analysis is restricted to #2. But motivation produced by external inducements yields only short-term benefits. Therefore it is important to look for flickers of interest that may help to develop long-term internal motivation (#1)

Goal Orientation: Executive Function/Self-regulation Routines: Motivation is nothing if it is not oriented to goals. Therefore routines of instruction and interaction should highlight goals as the student engages in academic work. The highlighted goals might be immediate or short-term (e.g., ""You'll be proud of yourself when you finish this paragraph" or "Do these 10 problems and you are done for the day"), social reward goals (e.g., " ____ will be proud of you when you finish"), or long-term goals (e.g., "This will be important for the job you want to get"). The Goal-Obstacle-Plan-Do-Review script/routine described in the tutorial on Self-Regulation/Executive Function Routines should be used as a component of the staff and family focus on increasing internal motivation.

Goal Setting and Planning: Teachers should help students learn how to set achievable goals and create plans for achieving those goals. Initially this will be done collaboratively with the student. Small steps to reach the goal can be written down or pictured so that the student does not feel overwhelmed by the task or the distant goal. There should be as much student choice as possible in these plans. Choice is strongly linked to motivation.

Reviewing, Self-Monitoring, and Self-Rewarding: Teachers should also help students create self-monitoring systems (e.g., record their efforts in studying for an exam or completing an assigned project, and then relate those efforts to the grade they received). Regular review of these self-monitoring systems may help the student grasp the relation between effort and outcome. Furthermore, review of performance over time may help the student recognize that she can learn and improve skills. An understanding that effort results in improvement is essential for motivation. Students should also be encouraged to reward themselves (e.g., play a video game; call a friend) after achieving a short-term goal (e.g., completing 20 math problems). **(See Tutorial on Self-Monitoring.)**

Minimal Reliance on External Motivation Systems: External motivational systems – inducements like stickers, food, money, points to be cashed in for rewards later, and the like – can be effectively used to achieve short-term engagement and compliance. However, they should be reduced as soon as possible to avoid growing dependence on external inducements and decreasing internal motivation.

Praise: Praise is a useful social reward and possible motivator if used wisely. First, praise is effective only if the opinion of the person offering the praise is valued. Second, praise should have an appropriate target. For example, "These answers are all correct; good job!" and "This paragraph is well organized and includes well constructed sentences; good job!" are effective

praise because they highlight some specific work that was done well. Effort should also be praised, particularly in the case or poorly motivated students: “Great effort!! You see, when you work on it, it turns out much better!”

General praise, like “Great job!” is less effective, particularly if the student does not know what was done well or, worse, if nothing was done well. Empty or false praise - praise in the presence of nothing to praise – is counter-productive. Students lose respect for the person offering empty praise and genuine praise may become less meaningful.

Recognition of Natural and Logical Consequences: Associated with praise, students need to clearly grasp the relation between their efforts and their satisfying successes (or between lack of effort and failure). These relations should be highlighted by staff: “You see? You studied for this test and you got a B; last week you didn’t study and you got an F. See how that works? And it feels good to get a good grade, doesn’t it?”

Correct Attribution of Success and Failure: Connected with targeted praise and natural consequences is the need for students to understand why they succeed and why they fail. Many students attribute their successes and failures to chance (e.g., “I don’t know why I failed; it just happened”), luck (e.g., “Other kids are lucky; I can’t catch a break”), the whimsey or arbitrary decisions of teachers (e.g., “My teacher just doesn’t like me”), or generally negative self-perception (e.g., “I can’t do anything right”). Ideally students can be brought to the point where they explain their successes and failures correctly: “When I work hard and use my strategies, I do OK; When I don’t, I do badly”; “Reading is harder for me than for other students, but I can get it if I give myself enough time and use my strategies.”

Staff and Family Modeling of Enjoyment of Academic Tasks: Poorly motivated students need to be in the presence of people who get joy from learning, reading, and other academic tasks. This pleasure should be made obvious. Some students simply do not understand that academic work – and the skills and knowledge that result from it – can be a source of pleasure and satisfaction. Staff and family should use words like “interesting”, “exciting”, “intriguing”, and the like when introducing tasks to students. Similarly, staff and family should highlight the pleasure they take in reading and other education-related activities.

Success: Poorly motivated students need to experience success with academic tasks and the satisfaction that comes with being successful and with producing a competent product. Success breeds motivation; failure breeds frustration and lack of motivation. Achieving success may require a great deal of support from staff. **(See Tutorial on Instructional Routines.)**

Expert Role: Help Others: Many students with brain injury are discouraged because they are unable to perform and achieve at the level they were accustomed to before the injury. When these students are invited to help other students with greater need, they may begin to revise their self-judgment and recognize some of their strengths. Motivation is enhanced when students perceive themselves as competent. Playing the role of teacher helper can also contribute to this goal.

Expert Role: Projects: When the students’ lack of motivation takes the form, “I don’t need to work on that; I can do it already”, it is sometimes effective to take them seriously and reply, “Good! So will you help me help others who are not so good at it?” The student can then work with the teacher or therapist to develop a manual or tip sheet or video designed to help students with difficulty in that domain. The goals of the Project are (1) to give the poorly motivated student an expert role that enhances motivation and (2) to create opportunities for the student to practice the target skill while working on the Project.

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Tutorial: Behavior And Behavior Problems After TBI

[See Tutorials on Behavior Management: Contingency Management; Behavior Management: Prevention Strategies; Positive Behavior Supports; Discipline; Motivation; Teaching Positive Communication Alternatives; Anger Management; Aggression]

Note: All schools have designated individuals who are trained in behavioral assessments and development of behavior plans. Behavior specialists should be involved in making decisions about how to support students with behavioral challenges after TBI. The main goal of the set of tutorials in the area of behavioral issues after TBI is to highlight the information that is especially important for this population and the intervention and support strategies that are often recommended for these students.

WHAT IS BEHAVIOR?

The term "behavior" refers to whatever a person does, including overt, observable behavior and covert, unobservable behavior (e.g., thinking, feeling). In a specific context, behavior can also include the absence of behavior (e.g., not responding when given a command).

Observable behaviors include whatever you can see another person doing. This includes walking, talking, sitting, singing, hugging, eating, sleeping, doing math problems, and the like.

Unobservable behaviors include the mental and emotional activities and states that cannot be directly observed. These include emotional states, like anger, desire, happiness, and the like, volitional states like wanting to be noticed, intending to please, and the like; cognitive states, like thinking about something or being confused about something; and sensory experiences, like hearing or seeing.

The absence of a behavior can count as a behavior: When a person fails to do something that is expected, like responding when spoken to, then the absence of the behavior can be considered a behavior (non-responding).

"Behavior" is not a synonym for "bad behavior": The word "behavior" is sometimes misused as a synonym for ***challenging or negative behavior*** (e.g., "John has lots of behaviors; Sally doesn't have any behaviors"). There is great danger in using the term this way. Among other things, it encourages staff and family to pay attention only to negative behaviors.

WHY ARE BEHAVIORAL ISSUES IMPORTANT FOR MANY STUDENTS WITH TBI?

Many studies suggest that up to 50% or more of students with TBI have some behavioral challenges after the injury. These challenges are most often associated with externalizing behavior problems (e.g., hitting, yelling, making rude comments); however, behavioral issues are sometimes internalizing problems (e.g., social withdrawal, inactivity). In some cases the problems after the injury are an extension or worsening of problems present before the injury. In many cases, behavioral changes are directly related to the injury itself (e.g., aggression related to frontal lobe injury causing inhibition impairment). In some cases, the behavior problems are a reaction to the many restrictions in life after the injury or are a consequence of psychological distress associated with disability and failure after the injury.

Is the challenging behavior a consequence of the injury? This question is asked frequently. A thoughtful answer may require considerable assessment work. But often the answer is that the difficult behaviors are a consequence of complex interaction between injury and non-injury factors. The question then becomes, does it make a difference that the problem behaviors are associated with the injury? In many cases, the answer to this question is that yes, it does make a difference. In the tutorials on Behavior Management: Prevention Strategies and Positive Behavior Supports, the point is made that students with frontal lobe injury may be very impulsive or may not learn efficiently from consequences of their behavior. In these cases, it is critical to use proactive, antecedent management approaches as opposed to contingency management. **[See Tutorials on Behavior Management: Prevention Strategies and Positive Behavior Supports.]**

WHAT ARE THE MAIN THEMES IN INTERVENTION AND SUPPORT FOR STUDENTS WITH BEHAVIOR PROBLEMS?

[See Tutorials on Behavior Management: Contingency Management; Behavior Management: Prevention Strategies; Positive Behavior Supports; Discipline; Motivation; Teaching Positive Communication Alternatives; Anger Management; Aggression]

Understanding the behavior and its function

Helping a student with problem behavior requires that teachers and parents begin by understanding the behavior and the function it serves for the student. To achieve this understanding, the starting point is a good **description** of the behaviors. This is not as easy as it may sound. Many people inadvertently **interpret** behavior when they think they are describing it. For example the following are all interpretations, not descriptions: "He is frequently non-compliant" "He engages in manipulative behaviors" "He is frequently aggressive". When staff leap too quickly to potentially mistaken interpretations of a student's behavior, the predictable result is ineffective behavior management, because the behavior and its function may have been misinterpreted.

For example, a student may cry and put his head on his desk when told to do math problems. This may be identified as "non-compliance" with a resulting plan that requires staff to persist and force the student to do the work. However, the behavior may be a way of communicating, "I think it's too hard; I need help" in which case the plan might be to do several problems collaboratively at the beginning of the math lesson in order to help the student gain confidence.

Description Versus Interpretation of Behavior: What follows are illustrations of behaviors described objectively followed by several possible interpretations of that behavior.

Description: He is opening the door and walking out of the room.
Possible Interpretations: He is escaping the task; he wants to go to the bathroom; he feels sick.

Description: He is squealing and flapping his hands
Possible Interpretations: He is stimulating himself; he is withdrawing from reality; he is trying to get my attention

Description: He is laughing.
Possible Interpretations: He is showing disrespect for his teachers; he is trying to get my attention; he is remembering a good joke.

Description: He cut his arms.
Possible Interpretations: He attempted suicide; he is crying for help; he is trying to be like his friends

Functional Analysis of Behavior

Functional analysis of behavior – or functional behavior assessment (FBA) – assumes that behavior is related systematically to antecedents and consequences. Or -- another way of saying the same thing -- assumes that behavior is purposeful. That is, when people do things, it is to achieve some outcome, however unconscious that outcome or goal may be. Functional assessments of behavior have two stages: observation/correlation and experimentation (hypothesis-testing).

Observation/correlation: The goal of systematic observation of the student in a variety of contexts is to determine what events (stimuli) seem to be correlated with and possibly trigger the behavior in question and what events (consequences) seem to be correlated with and possibly maintain that behavior. Ideally observations are made in as many settings as possible, in the context of as many activities as possible, and with as many people as possible. Sometimes the triggers are hard to observe because they may be remote (e.g., a fight on the bus in the morning was the trigger for refusing to participate in class early in the school day).

This observation is usually referred to as ABC analysis: A=antecedent; B=behavior; C=consequence. The primary purpose of ABC analysis is to generate hypotheses about the function of the behavior. ABC analysis by itself cannot show conclusively that the behavior serves a specific purpose.

Experimentation/hypothesis testing: Observations generate hypotheses – possible interpretations of the behavior. Systematic experimentation with hypotheses regarding the meaning/purpose of the challenging behavior is then required. For example, a hypothesis might be that hitting serves the purpose of getting out of an activity. Therefore, if we routinely prompt and then reward verbal requests for a break (e.g., "Can I have a break now?"), does the hitting disappear? If so, the meaning/purpose of the challenging behavior was probably: "I want a break!" Prompting and rewarding the alternative behavior (requesting a break) was an experiment – a test of the hypothesis that the behavior served the purpose of achieving a break from work.

Common Functions/purposes of Challenging Behavior

Students engage in a variety of behaviors that may be considered unacceptable in school or at home. There are two broad classes of such behaviors:

Socially Motivated Behavior or Behavior with a Communication Purpose: Common communication functions of challenging behavior include the following

1. *Acquire or gain access to:* others' attention, others' respect, others' sympathy, favored objects, favored activities, favored people, favored places (e.g., a student cries in class in order to gain sympathy from his classmates and aide)
2. *Escape or avoid:* others' attention, undesirable activities/work, undesirable people, undesirable places (e.g., a student talks out in class in order to be removed from math class)
3. *Express affection:* (e.g., a student hugs others even thought they may not want it)
4. *Demonstrate skill or power:* (e.g., a student refuses to do what the teacher commands in order to demonstrate power over her)

Non-Socially Motivated Behavior: No Communication Purpose Common non-communication functions of challenging or unusual behavior include the following

1. *Create needed stimulation (self-stimulation):* e.g., a student rocks and hums in order to create needed stimulation
2. *Reduce incoming stimulation:* e.g., a student covers his ears in order to block out confusing stimulation

Modifying the Behavior

Behavior management/behavior modification refers to any strategy or procedure that is deliberately used to increase or decrease the likelihood of a specific behavior. Behavior management strategies may be used **before** the target behavior occurs in order to facilitate specific positive behaviors or prevent specific negative behaviors (called "**antecedent management**") or **after** the behavior in order to increase the likelihood of more of the same if it is positive or reduce its likelihood if it is negative (called "**contingency management**"). **[See Tutorials on Behavior Management: Prevention Strategies; Behavior Management: Contingency Management]**

Examples of antecedent management procedures that are used **before** the student engages in a specific behavior with the goal of **increasing** the frequency of that behavior:

1. A therapist offers interesting activities with the goal of maintaining the student's engagement in therapy tasks.
2. The teacher shows the student an organizer for completing a complex task with the goal of increasing the chances that the student will stay with the task and succeed.

Examples of management procedures that are used **before** the student engages in a specific behavior with the goal of **decreasing** the frequency of negative behaviors:

1. The teacher does the first 2-3 math problems with the student with the goal of preventing a negative reaction to the math assignment.
2. The teacher never asks the student to do something unless she believes that the student is capable of doing it.
3. The teacher never interacts with an oppositional student in a way that invites an oppositional response or creates a power struggle.

4. The teacher invites the student to do an important responsible job for her at the beginning of the day with the goal of preventing negative behavior often associated with the bad mood the student typically arrives at school in.

Examples of contingency management procedures that are used **after** the student engages in a specific behavior with the goal of **increasing** the frequency of that behavior:

1. A mother claps her hands and squeals with glee when Johnnie eats a bite of broccoli – in order to increase the likelihood that he will eat more broccoli.
2. A teacher praises the student for working hard after he turns in an assignment – in order to increase the likelihood of more hard work and timely submissions.

Examples of management procedures that are used **after** the student engages in a specific behavior with the goal of **decreasing** the frequency of that behavior:

1. A student talks out of turn in class; the teacher turns away and calls on another student.
2. A student pushes another student; the teacher removes a star from next to his name and reminds him that he will have no fun time today.

In several Tutorials, specific behavior management strategies are offered and discussed: **Behavior Management: Prevention Strategies; Behavior Management: Contingency Management; Positive Behavior Supports; Prevention; Discipline; Anger and Anger Management; Manipulativeness; Noncompliance; Motivation**

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Tutorial: Noncompliance

(See Tutorials on Behavior Management: Prevention Strategies; Positive Behavior Supports; Motivation)

WHAT IS NONCOMPLIANCE?

Individuals are described as noncompliant if they fail to or refuse to follow the instructions of an authority figure or conform to rules. These individuals may routinely fail to complete assigned homework, expected household chores, and other expected activities. The individual may be charming, pleasant, and apologetic when the problem is called to his attention. Alternatively, he may be sullen and openly defiant when confronted with his behavior.

It is critical to note the difference between "failure to comply" and "refusal to comply". Failure to comply has many possible explanations (e.g., the person did not understand the instructions; forgot or did not know the rule; was simply slow to start) and does not imply any specific intention or motivation on the part of the person. In contrast, refusal to comply suggests an oppositional intention on the part of the individual – willful noncompliance – and is normally considered a behavior problem. In cases of extreme willful noncompliance, a diagnosis of oppositional-defiant disorder is often made.

In practice, most people use the term "noncompliance" to mean that the person refuses to follow an instruction or request, or obey a rule. That is, it is assumed that the act of refusal is conscious and willful. Unfortunately, many times staff or family members make the move from DOES not do to WILL not do with inadequate evidence that the person's act is willful. That is, there is a tendency to interpret failure to comply as willful. The end product is that others then attempt to increase control over the person in order to increase compliance.

Deciding that the individual is behaving in a willfully noncompliant manner assumes that he: (1) is aware that the person issuing the instruction is a proper authority figure, (2) understands the instruction, (3) remembers the instruction, (4) is able to control impulses, (5) has adequate initiation ability, and (6) is not especially slow in formulating responses. Each of these assumptions is associated with brain injury (see below) and should be ruled out before making a judgment that the behavior is willfully noncompliant.

Furthermore, genuine noncompliance (i.e., willfully refusing to follow instructions) may represent a variety of different functions or communication intents for the student. For example, the student may be saying, in effect, "I need some sense of control and this is how I get it." Or, "I can't do what you are asking me to do." Or, "I feel like showing off for my peers." Or, "I am depressed and can't do anything today." Or "I am sick." And there are other possibilities. Clearly an understanding of the function of the act of noncompliance (i.e., its communication intent) is necessary before intervention decisions can be made. In general, functional analysis of behavior must precede intervention decisions. **[See Tutorials on Behavior Management: Prevention Strategies; Behavior Management: Contingency Management.]**

WHY IS NONCOMPLIANCE IMPORTANT FOR MANY STUDENTS AFTER TBI?

Student behaviors that are labeled "noncompliant" are commonly identified as the greatest problem for school staff and a significant problem for families as well. School and classroom management practices (and in many ways home life as well) are built on two assumptions: (1) that students understand the rules and routines of the classroom and home, and are willing and able to follow those rules and routines with minimal intervention and support; and (2) that the students recognize that parents and teachers are authority figures whose instructions and rules are to be followed. Lack of compliance disrupts home and school routines and results in staff and parent discontent.

Deciding that the student with TBI is behaving in a willfully noncompliant manner assumes the following:

1. The student is aware that others issuing the instruction are proper authority figures. Social cognition and social perception deficits are common after brain injury and may affect this awareness. **[See Tutorial on Social Perception.]**
2. The student remembers the instruction or rule at the time he is supposed to comply. Memory problems are common after brain injury. **[See Tutorial on Memory.]**
3. The student understands the instruction or rule, and understands that the instruction is to be followed now. Impaired attention, orientation to task, and language processing after brain injury may cause one to question this assumption. **[See Tutorials on Attention; Language Comprehension.]**

4. The student is in control of his impulses; the response is not a result of brain-injury related impulsiveness, very common after brain injury. **[See Tutorial on Impulsiveness/Disinhibition.]**
5. The student does not have initiation difficulties and can volitionally stop or start the behavior in question. **[See Tutorial on Initiation.]**
6. The student's failure to respond is not a result of brain-injury related delayed responding or generally slowed processing, common after brain injury. **[See Tutorial on Slow Information Processing.]**

Noncompliance is highlighted as a common problem for students with brain injury in part because of the ease with which a wide variety of the student's co-existing difficulties are misidentified as willful noncompliance. Impulsiveness, initiation impairment, memory problems, slowed responses, impaired social perception, impaired attention, weak language processing, all common after brain injury, can lead to an incorrect judgment of noncompliant behavior. Noncompliance might also be a symptom of emotional distress or depression. Willful noncompliance may also be associated with brain injury as the student reacts negatively to new rules and restrictions imposed by the injury.

For these reasons, what may appear to be willful noncompliance may not in fact be willful. Careful assessment is mandatory.

Whether the adult judgment of willful noncompliance is accurate or inaccurate, it often results in staff and parents imposing greater and more obvious controls over the student's behavior. This often leads to a negative student reaction, which in turn results in greater parent or staff control. This is the classic control battle that may lead to severe problematic behavior from the student (e.g., aggression, elopement, verbal disruption).

In schools and at home, the common response to willful noncompliance is punishment. In schools, punishments may range from losing recess, or other enjoyable activities, to suspension. At home, punishment may include losing privileges, losing time spent in enjoyable activities, or "grounding". The assumption is that the student will recognize the connection between his behavior and the punitive consequences, and therefore modify his behavior in response. However, many students with brain injury (especially frontal lobe injury) fail to make the connection between their behavior and its consequence. Or if they make the connection intellectually, it does not result in improved behavior. Therefore, behavior management systems that rely on punishments are rarely successful and most often make the problem worse. **[See Tutorials on Behavior Management: Contingency Management; Behavior Management: Prevention Strategies; Positive Behavior Supports]**

WHAT ARE THE MAIN THEMES IN INSTRUCTION AND SUPPORT FOR STUDENTS WHO ARE NONCOMPLIANT?

Careful Analysis of the Behavior: Step 1 in all management plans is to ensure accurate understanding of the behavior. In the case of apparently willful noncompliance, staff (or family) must first rule out the possibility that the apparently willful act of noncompliance is in fact the result of the student's co-existing problems with impulsiveness, memory or attention problems, initiation impairment, lack of understanding, slowed responding, or depression. If it is discovered that one of more of these problems is primary, then intervention and support plans should be directed at those identified problems. **[See Tutorials on Impulsiveness, Memory, Attention, Initiation, Language Comprehension, Slow Processing, Depression.]**

Assuming that the student's behavior is truly willful noncompliance, family and staff must then attempt to understand the function of the behavior. For example, if the student is saying, in effect, "I need some sense of control and this is how I get it," family and staff should offer legitimate opportunities for student choice and control at times when this is appropriate. Or if the student is saying, in effect,"I can't do what you are asking me to do," family and staff must make supports available so that the student can have confidence that the task is do-able. Or if the student is saying, in effect, "I feel like showing off for my peers," family and staff might either create greater isolation during intense work times or offer other legitimate opportunities for the student to be a "big shot" in the eyes of peers.

The point is that intervention should be designed to prevent the willful noncompliant behavior [See Tutorials on Behavior Management: Prevention Strategies; Positive Behavior Supports] and must be adjusted to the function of the behavior. To the extent that the student is truly oppositional, threats, punishment, power struggles, coaxing, nagging, and the like generally make the problem worse.

General Management Strategies for Noncompliant Behavior

1. Collaborative negotiation of task expectations: Staff and family members should take time to negotiate with the student reasonable expectations for work completion and supports to ensure that the work is do-able and that the student perceives it as do-able. Furthermore, within work routines there should be reasonable opportunities for student choice. Oppositional students are often looking for a sense of control in their lives; planned choices and control over work tasks may be essential for these students.

Advantages: Negotiation creates relationships that are collaborative and positive, reducing the likelihood that instructions from authority figures are interpreted as a challenge – threatening the downward spiral of control battles. Furthermore, there is no real need for refusal if the plan for activities is made by the individual – she is following her plan not simply complying with the demands of others.

Disadvantages: Negotiation can be time consuming and difficult to implement in the family setting or in a larger classroom setting. Many adults teachers are concerned that this kind of negotiation gives too much "power" to the student (although it is really the adult exercising intelligent power) and that siblings' or other students' behaviors may worsen when they see that the adult "is not in control".

2. Concrete Daily Goal-Obstacle-Plan-Do-Review Routines: [See Tutorial on Self-Regulation/Executive Function Routines.] In working with students with brain injury and others, it is wise to engage the student in routine planning sessions that are organized around the Goal (What are you trying to accomplish?), Obstacle (Why might this be hard?) Plan (How can you get this done?), Do, and Review (How'd you do? What worked for you? What didn't work for you?). These planning sessions, which can be very short, ensure that the student is completely clear about expectations and the means to achieve them. These sessions also create a collaborative relationship that reduces the need for defiant noncompliance. In the classroom or family setting, these routines can be whole-class or family routines, not necessarily individualized to the noncompliant student.

Advantages: Respectful engagement in planning is often helpful in working with noncompliant students. Furthermore, written or picture routines (plans) provide clarity of expectations for the student. This is especially helpful for students with memory and organizational difficulties. Increased predictability of expectations increases the likelihood that a student will comply with those expectations – in general, the ability to predict the course of one's day decreases the probability of behavior problems. This kind of support keeps the accountability and responsibility for behavior clearly in the hands of the student, reducing the need for defiance in response to external authority.

Disadvantages: This routine can be difficult to implement at first. However, once it becomes part of the daily routine, it is as easy as any other teacher or parent routine.

3. Errorless Teaching/Learning Strategies: In many cases, student noncompliance is a result of the student lacking confidence that she can accomplish the task. In such cases, staff should attempt as much as possible to use errorless teaching/learning procedures. Furthermore, there are many additional reasons to use these procedures for students with brain injury. **[See Tutorial on Errorless Learning] Video Illustration of Errorless Learning.**

> **Advantages:** Errorless teaching/learning procedures reduce noncompliance based on fear of failure and also reduce the need for negative corrective feedback, thereby reducing the student's refusal opportunities. Errorless teaching/learning procedures also increase the opportunities for positive feedback, so there is an increase in positive behavioral momentum to help overcome difficult behaviors. **[See Tutorial on Positive Behavioral Momentum]**
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> **Disadvantages:** Errorless teaching/learning procedures can be impractical in younger children or in a grade level classroom setting, although some classroom curricula (e.g., Direct Instruction programs) are based on a philosophy of errorless learning. Some adults complain that these procedures "coddle" students who need to learn that they must comply with the instructions of authority figures even if they don't want to. This concern is legitimate. However, the question is how to get students to that point if they are currently succeeding with their oppositional noncompliance. The procedures outlined in this section can be thought of as an initial stage in a process that will ultimately result in a more compliant student.

4. Quiet, Confident Authority: In interacting with noncompliant students, whether willful or not, parents and teachers should exercise their authority in a quiet and confident manner. They should make reasonable expectations clear, offer needed support, remain consistent in their discipline practices, and remain calm. When parents or teachers appear agitated, anxious, or

lacking in confidence, the silent communication to the noncompliant student may be that he controls the adult's behavior and emotional states with his behavior. He is in charge – and he may like that!

5. Assertiveness Training: In some cases, the student's noncompliance is her indirect (i.e., passive) way of saying, "I can't do this; it's too hard." In this case, staff and parents should help the student to explicitly identify the difficulty level of the task and ask for help. **[See Self-Regulation/Executive Function Routines.]**

Advantages: If the student is offered a positive communication alternative to the negative noncompliant behavior, there may no longer be a need for noncompliance; it may disappear.

Disadvantages: The student may become overly assertive or demanding. In this case, the negotiation outlined in #1 above is relevant.

6. Reactive Strategies: Redirection and Disengagement: On those occasions when noncompliance has not been effectively prevented, family and staff need to react in a way that does not exacerbate the problem behavior. The first reactive strategy is redirection. If the student's attention can be drawn away from the negative interaction, it may be possible to then return to the task at hand without resistance. In the face of genuine resistance that cannot be overcome with redirection, staff should temporarily disengage, possibly leaving the student (e.g., "I see you're not ready; let me know when you are ready"), and then return when the student appears more ready. The rationale for disengagement is that power battles intensify when both parties are actively asserting their power.

Advantages: These reactive strategies reduce confrontation between the student and the authority figure, thereby reducing escalation of non-compliance into other more problematic behavior.

Disadvantages: It is possible that these strategies may result in initial increases in problem behaviors causing greater difficulty for the classroom (and at home) over the short run.

7. Reactive Strategies: Rewards: Social and other natural rewards for compliance should be a salient component of home and school cultures. At school, praise should be used liberally (e.g., "That's terrific; you're doing exactly what I asked and you're doing a great job!"). At home, parents can routinely reward completed homework with natural comments such as, "Great job; because you're done with your homework, there's plenty of time for video games!"

See Tutorials on Behavior Management: Prevention Strategies; Behavior Management: Contingency Management; Discipline; Positive Behavior Supports; Motivation.

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