1.6: Behavior That Hurts

Introduction

Caregivers can struggle with how to respond when people who live with both intellectual disabilities and mental illness express themselves through behaviours that are hurtful, either to themselves or to others. Unfortunately, challenging or problem behaviours such as self-injury and aggression are highly prevalent in individuals with dual diagnosis (Allen & Davis, 2007; Benson & Brooks, 2008; Lowe et al., 2007; Lloyd & Kennedy, 2014). As well as jeopardizing their own and others' physical safety, challenging behaviours can result in 1) isolation when individuals are denied access to community facilities (Emerson, 1995); 2) greater likelihood of chemical restraint (Webber, McVilly, & Chan, 2011); 3) more frequent admission to psychiatric units than the general population (Lunsky & Balogh, 2010); and 4) more restrictive interventions during hospital stays (Chaplin, 2011).

In some instances, when people engage in self-injurious and aggressive behaviours, their actions are related to pain (see Chapter 5), to a health-related disorder (see Chapter 4), or to escalating symptoms of a psychiatric disorder (see Chapter 3). In other instances, their actions may be triggered by stress (Charlot & Shedlack, 2002) or a lack of the social skills needed to cope with life events (Barnhill & McNelis, 2012; Waters & Healy, 2012).

Medications, particularly antipsychotics, are often prescribed despite mounting concern about their overuse (Edelsohn et al., 2014; Gormez & Varghese, 2014; Lunsky & Elserafi, 2012). When challenging behaviour is not caused by psychiatric disorders, treatment with psychiatric medication can even cause the behaviour to worsen (Allen & Davies, 2007; Valdovinos et al., 2005).

Clearly, it is important to investigate any possible links between challenging behaviours and physical health, mental health, and stress or social triggers. It is also important to collaborate with health professionals about prescribing
medications that may help. However, first and foremost, when people are engaging in hurtful behaviour, these
behaviours must be addressed. Although challenging behaviours may have started in response to identifiable concerns,
they often persist long after the original concern has been resolved (May & Kennedy, 2010).

When individuals engage in behaviour that hurts it is helpful to focus less on the causes of the behaviour and more on
what purpose the behaviour serves. Applied behavioural analysis is a treatment approach that investigates what
purpose a behaviour may be serving and helps develop methods to change the behaviour with new ways of meeting an
individual's needs (Behavior Analyst Certification Board, n.d.). In this chapter we provide an overview of applied
behavioural analysis and then discuss strategies to help decrease self-injurious and aggressive behaviour.

Overview of Applied Behavioural Analysis

A widely accepted definition of applied behaviour analysis is that it is a systematic process of applying interventions
grounded in learning theory to both improve behaviours and to demonstrate that the interventions are responsible for
improving the behaviour (Baer, Wolf, & Risley, 1968). Extending from early work based on principles of behaviour
modification, behaviour analysts use positive reinforcement to increase desirable behaviours, generalize learned
behaviours, or reduce undesirable behaviours. One of the key tools that professionals in the field of applied behavioural
analysis use on a regular basis is functional behavioural assessment.

Functional Behavioural Assessment

Key Points for Caregivers

People may hurt themselves (called self-injury) or other people (called aggression). Self-injury or aggression may occur
because of pain, a health-related disorder, stress, as a symptom of a psychiatric disorder, or because a person lacks
social skills. Medications may even make the problem worse. These possibilities must all be investigated. Challenging
behaviour that starts for one reason may continue even when that reason is no longer there. Behavioural analysis looks
at what needs are served by a behaviour and then finds other ways that people can meet those needs.
Functional behavioural assessments look beyond observable behaviour and examine what function the behaviour may be serving (Mauro, n.d.). Knowing what is valuable, important, and reinforcing to individuals can help caregivers support their clients toward alternative ways of behaving that will still meet client needs. Functional analysis of challenging sexual behaviours is discussed in Chapter 7.

Research with children and individuals living with autism spectrum disorders has contributed to our understanding of functional behavioural analysis, and people with dual diagnosis can benefit from insights generated from this research. One seminal study conducted with children sheds important light on why individuals would continue or maintain their challenging behaviours. Iwata and colleagues (1982, 1994) identified three variables or reasons why challenging behaviours were actually serving a valuable purpose. The first reason was that the behaviour resulted in attention. In the study, children were given toys to play with and told that an adult in the room had work to do. With each demonstration of challenging behaviour, the child was given attention, albeit socially disapproving attention, with comments such as “Don’t do that!” The second reason was that the behaviour afforded them an escape from demands. When children were given educational activities to complete, their challenging behaviours resulted in not having to complete the activity. The third reason was that the behaviour seemed to increase the sensory stimulation the children were experiencing when being alone. Motivation to continue the behaviour was believed to be linked to the feelings of self-stimulation that occurred. Self-stimulation is defined as behaviour that creates internal pleasure or removes displeasure without the involvement of any other person (O’Neill et al., 1997).

Subsequent research also supports these findings and extends our growing understanding of what behavioural analysts look for when implementing functional assessments. For example, Iwata and colleagues (1994) studied 152 individuals with developmental disabilities who demonstrated self-injurious behaviour over an 11-year period. Their findings indicated that negative reinforcement in the form of escape from demands or aversive stimulation accounted for 38.1% of the behaviours, the largest proportion of the sample. Positive reinforcement in the form of access to preferred stimulation such as attention, food, or materials, accounted for 26.3% of the behaviours. Automatic reinforcement of the senses, also known as autonomic sensory reinforcement, accounted for 25.7%. Automatic reinforcement is a type of reinforcement that creates a favourable result without any involvement from others (Cooper, Heron, & Heward, 2007). Multiple controlling variables (such as both escape and attention) accounted for 5.3% of the behaviours, and 4.6% were uninterpretable.

Similar results are found in numerous follow-up studies of functional analyses for self-injuring or aggressive behaviour (Beavers, Iwata, & Lerman, 2013; Hanley, Iwata, & McCord, 2003; Kurtz et al., 2003; O’Reilly, 1995). In short, people may be demonstrating challenging behaviour that serves the purpose of escaping from aversive stimulation, accessing preferred stimulation, or creating automatic sensory reinforcement. For example, individuals may want to escape from math work, house cleaning, life skills activities such as brushing teeth, stimulation that is too loud, work that is too difficult to complete, or even from a non-preferred texture. They may want to access preferred stimulation such as being with people they like, tasting food they enjoy, and participating in activities they believe are fun. Finally, they may want to create autonomic sensory stimulation to bring about a feeling of pressure (such as head banging), or the sound produced by the behaviour (such as hitting ears), or different sights (such as eye gouging), or tactile experiences (such as scratching and self-biting).

It may be useful to think of these behaviours as a form of self-expression and a way of communicating needs, such as “I want attention” or “I need a break.” Viewing challenging behaviours through the lens of behavioural analysis, self-injuring behaviour may indicate a need for sensory stimulation, and aggressive behaviour may indicate a need for social
reinforcement.

Functional Behavioural Analysis

Key Points for Caregivers

Functional behaviour analysis helps us understand why people continue injuring themselves or being aggressive. Three common reasons for any behaviour are that it:

1. Provides an escape from something a person does not like
2. Provides access to something a person does like
3. Provides stimulation that a person can create when they are alone

When people need to escape from an activity that is difficult or unpleasant, providing a break may help. When they need access to something they value, such as favourite people, food, or activities, providing this access before challenging behaviour begins may prevent the challenging behaviour from occurring. When people are alone and they need stimulation, they can be given alternatives through opportunities for them to see, hear, smell, touch, and taste.

Topography of Behaviour

Having a familiarity with the vocabulary or terms used to describe behaviours demonstrated by individuals with dual diagnosis is important. One term used by behavioural analysts and other professional groups when implementing functional behavioural assessments or when devising behaviour intervention plans is topography of behaviour. Topography is a detailed description of the natural features of a geographical area. In other words, topography clearly describes what is there and what we see. A topographical description does not include interpretations of what is observed. For example, maps of a geographical area do not usually include commentary about whether the area is “good” or “bad.”

When topography frames a way of describing challenging behaviour, the same clarity of description and absence of judging value or imposing expectations is expected. For example, reporting that an individual was disrespectful does not describe what is there and what we can see. Descriptions such as “Terra refused to comply with a direction” provide clarity. Similarly, Webster (n.d.) illustrated two different topographical ways of reporting a tantrum. Wording could be “Dylan threw himself on the floor, kicked, and screamed in a high-pitched voice. He did not make physical contact with other individuals, furniture, or other items in the environment.” Different wording could be “Dylan swung his arms and struck other clients and staff, while screaming in a high-pitched voice” (Webster, n.d.). Although each of these reports describes a tantrum, the topographical elements of the descriptions provide critical information when assessing aggression.
Topography of Behaviour

Key Points for Caregivers

Challenging behaviours must be described and reported in detail so that others have a clear picture of what people are actually doing. Topography of behaviour, like topography of a geographic area illustrated in a map, describes only what is there and what we see. Topographies of behaviour do not judge value or include expectations.

Strategies to Help Decrease Self-Injurious and Aggressive Behaviour

Once functional behavioural assessments have been implemented to indicate the purpose a behaviour may be serving, and the topography of the behaviour has been described clearly and without judgment, caregivers can consider new ways to support individuals toward meeting their needs. In this section, we draw from the field of behavioural analysis to outline three approaches that can help decrease self-injurious and aggressive behaviour. The first addresses escaping from aversive stimulation; the second addresses accessing preferred stimulation; and the third addresses creating automatic sensory reinforcement.

Escaping from aversive stimulation. When individuals hurt themselves or others to escape from situations that are aversive, behavioural analysis interventions can be directed toward 1) making the behaviour no longer a way to escape (Escape Extinction, EE); 2) providing instruction to help make the situation less aversive (Skills Training, SK); or 3) finding an alternative way to escape (Differential Reinforcement of Alternative Behavior, DRAB) (Geiger, Carr, & Leblanc, 2010).

Accessing preferred stimulation. When individuals engage in challenging behaviour to access the kind of stimulation they prefer (such as attention from people, food, or activities), strategies can be directed toward other ways they can access these people and the things they enjoy (Functional Communication Training, FCT). For example, as part of an FCT approach, caregivers gave a card reading “I want to talk” to an individual demonstrating aggressive behaviour (Roscoe, Kindle, & Pence, 2010). By using the card instead of aggressive behaviour, the individual was able to access what was important to him, which in this case was conversations with others. In another example of FCT, caregivers taught an individual demonstrating self-injurious behaviour to ask, “Am I doing good work?” Each time the individual did this instead of hurting herself, caregivers provided her with 10 to 15 seconds of attention (Durand & Carr, 1991).

Creating automatic sensory reinforcement. When individuals engage in challenging behaviours, particularly behaviours that are self-injurious to create their own sensory reinforcement, finding the right strategy to help decrease the behaviour can be difficult. Since autonomic sensory reinforcement does not rely on other people, the reinforcement that caregivers are able to offer may not be meaningful. Identifying what might be pleasing about a behaviour that is hurtful to self or others is not straightforward. Questions must be asked about whether the pleasing stimulus is a physiologic effect, and if so, what is the feeling?

However, strategies that ignore the challenging behaviour and provide reinforcement when the behaviour does not occur for a specified period of time (Differential Reinforcement of Other, DRO) show promise. In one case where DRO effectively decreased a behaviour, caregivers set up a schedule for praising a boy when he decreased his skin-picking behaviour. The schedule included leaving the boy alone but entering the room regularly. Each time the boy did not engage in skin-picking, caregivers offered a token and praise such as “Good job not scratching” (Toussaint & Tiger,
Another strategy that can lead to substantial decreases in automatically reinforced challenging behaviour is environmental enrichment. This strategy begins with an assessment that identifies what items the individual prefers, and then ensuring that these items are made available. Research has shown this strategy can substantially decrease self-injury that is automatically reinforced (Lindauer, DeLeon, & Fisher, 1999; Smith et al., 1993; Vollmer, Marcus, & LeBlanc, 1994). Environmental enrichment is the least labour intensive of all the strategies described in this chapter. No one is required to monitor individuals in order to implement the strategy; instead, the preferred items are made available in ways that provide an enriched environment. This approach may be useful when little time is available for individual attention. To successfully implement this strategy over longer periods of time, individuals need continued assessment for items/activities they still enjoy, those they have tired of, and new ones that could be added.

A final strategy simply makes the desired sensory stimuli freely available. For example, when an individual engaged in self-injurious hand mouthing, behavioural analysts hypothesized that his hand mouthing produced mouth stimulation, hand stimulation, or both. In response, they made Twizzlers (licorice-flavoured candy sticks), mouth guards, and hand stimulators freely available for mouth and hand stimulation (Piazza et al., 2000).

As the preceding discussion has illustrated, when caregivers are able to accurately identify what an individual finds stimulating about a challenging behaviour, they are more able to support them towards behaving in ways that do not focus on hurting themselves or others.

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### Strategies to Help Decrease Self-Injurious and Aggressive Behaviour

#### Key Points for Caregivers

Strategies to help decrease self-injurious and aggressive behaviours provide individuals with alternative ways to meet their needs.

1. When people need to escape difficult situations, strategies can prevent escape, can offer instruction to make the situation less difficult, or can offer an alternative way to escape.

2. When people want access to stimulation they like, such as food, activities, or attention from people, strategies can make these people and things available. Strategies can include:
   
   a. Card reading or saying “Help please” or “Break please” as an alternative to aggressive or self-injurious behaviour
   
   b. Presenting fewer or less difficult tasks for the individual to complete
   
   c. Breaking down larger or complex tasks into smaller steps
   
   d. Providing help and prompts to the individual at regular and ongoing points of time, only reducing help when the individual shows that he or she has mastered the skill independently
3. When people want stimulation for their senses when they are alone, strategies can offer comparable ways to experience the sensations and feelings. An example of a strategy is substituting appropriate food treats to provide alternate sensations experienced during hand mouthing.

   a. Regular scheduled praise from a caregiver, such as “Good job not …” when challenging behaviour does not occur within a specified period of time

   b. Providing preferred items for the individual to interact with instead of engaging in challenging behaviour.

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**Conclusion**

People may engage in self-injurious and aggressive behaviours because of pain, a health-related disorder, symptoms of a psychiatric disorder, medications, stress, or because they lack social skills. The behaviour may even continue or be maintained long after the problem that caused the behaviour been resolved. In this chapter, we have emphasized the importance of addressing these challenging behaviours and provided strategies from the field of applied behavioural analysis that can help decrease the behaviours.

Behavioural analysis is an approach that determines the purpose a behaviour serves or what value it might have to people, and then finds other ways to meet their needs. Functional behaviour analysis is a tool that can identify specific reasons why people would find it valuable to maintain self-injurious and aggressive behaviour. Common reasons are that the behaviour provides escape from aversive stimulations (unpleasant or difficult experiences), access to preferred stimulation (pleasant experiences often with people, food, and activities), and creates automatic sensory reinforcement (sensory stimulation when the person is alone). Topographical descriptions are clear detailed descriptions of the behaviour we can see. When topography of behaviour is explained in functional behaviour analysis, no judgments about value are included.

Knowing that people might be engaging in challenging behaviours to escape, caregivers can try strategies to prevent escape, to offer instruction and help, or to find alternative ways to escape. Similarly, knowing that people might want access to people, food, and activities they like, caregivers can try to make these people and things more available. Finally, knowing that people might value stimulation for their senses when they are alone, caregivers can look for ways to offer pleasing experiences with sight, sound, smell, and touch.

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**Chapter Audio for Print**

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References


Behavior Analysis, 36, 147-185.


