The Use of a Functional Behavioural Assessment and Positive Behaviour Support to Address Behaviours of Concern

Behaviour of concern can typically occur when the social, academic, or environmental requirements placed on an individual outweigh the skills they have to respond in an adaptive manner. Positive Behaviour Support (PBS) is a decision-making process based on individualised assessment data drawn from a Functional Behavioural Assessment (FBA). This approach is based on understanding behaviour from a multitude of perspectives and viewing behaviours of concern as a form of communication. The current article outlines the use of an FBA and the implementation of a PBS Plan with the parents of a 5-year-old autistic boy named Rory*, of whom was displaying behaviours of concern, namely hitting and biting. The FBA process identified the predominant functions of these behaviours which were access to preferred tangibles and escape from non-preferred activities. Additionally, the FBA process identified the aspects of Rory's autism diagnosis which may have been impacting the behaviours such as his difficulty with transitioning and emotional regulation, along with the possibility of social masking throughout the school day. A PBS Plan was devised to review how the environment could be altered in order to meet Rory's needs and promote positive behaviour.

Keywords: *positive behaviour support, functional behaviour assessment, autism, behaviours of concern.*

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BACKGROUND

Behaviours of Concern and Autism

Over time, the terminology 'behaviours of concern' has replaced 'challenging behaviours' as the latter language places blame and stigmatisation on individuals who engage in such behaviours and implies that the behaviour is inherent within the person (Government of Ireland, 2022; Jorgensen et al., 2023). Alternatively, the term 'behaviours of concern' identifies that there is a safety risk or a wellbeing concern for both the individual engaging in the behaviour as well as those around them (Government of Ireland, 2022; Javaid et al., 2020). Prevalence rates demonstrate that between 5-15% of individuals with additional needs present with behaviours of concern in educational, health or social care services (NICE, 2015). These can range from minor incidents to high levels of dysregulated behaviour which can impact an individual's social opportunities in addition to their emotional wellbeing and academic development (Government of Ireland, 2022).

Autistic individuals may display behaviours of concern due to factors such as communication and sensory processing needs, heightened levels of anxiety, difficulty coping with change and uncertainty of what is coming next (Government of Ireland 2022; NICE; 2015; Farmer and Aman, 2011). In particular, autistic individuals can find 'transitioning' to be immensely stressful; this is the process of moving from task to task or from one place to another. Transitions can occur daily such as leaving the home environment to go to the school setting or can present when more significant life changes occur such as moving house (NCSE, 2020). Transitions, particularly unplanned changes, may result in significant emotional distress leading to behaviours of concern (Middletown Centre for Autism, 2024). Additionally, research identifies that members of the autistic community may employ strategies to cope within their everyday social world, known as social 'camouflaging' (Cook et al., 2021). This can involve individuals masking their autistic characteristics or implementing compensatory strategies to assimilate or 'fit-in' with their peers (Hull et al., 2021; McQuaid et al., 2022. Aligning with this, it is reported that autistic individuals can be bombarded with social, sensory, and academic demands all day and may suppress the anxiety it causes them. Consequently, this can result in what is referred to as 'After School Restraint Collapse', whereby autistic children and adolescents may be reported to release their emotions using externalising behaviours, such as shouting or hitting out when they return to a safe space; often the home environment (Middletown Centre for Autism, 2021).

It is well documented that autistic people have difficulties with executive

functioning, particularly in relation to cognitive flexibility and planning (Costecu et al., 2023; Han et al., 2013). Previous research has identified links between such executive functioning difficulties and the implementation of emotional regulation strategies, whereby autistic children and adolescents can use less adaptive emotional regulation strategies, making them more vulnerable to augmented levels of stress (Jahromi et al., 2019; Mazefsky et al., 2014).

Maslow's (1943) Hierarchy of Needs is a psychological theory proposing that human needs are arranged by levels of necessity and individuals are motivated to fulfil their needs in a hierarchy, whereby they will attempt to satisfy basic physiological or subsistence needs first. Both autistic and allistic individuals may exhibit behaviours of concern due to unmet physiological needs for example being too hot, too cold, in pain or in need of sleep (Government of Ireland, 2022). In a similar vein, the Biopsychosocial Model identifies the multifactorial influences on behaviours of concern namely biological factors such as genetics, social factors such as family influences and psychological factors, for example, mental health influences. It can be helpful to view concerning behaviours through this lens as it promotes a holistic approach through recognition of the range of factors that may impact on behaviour and considers the interaction between such factors (Hernandez and Blazer, 2006). This model depicts a continuum of functioning on which all individuals exist, dependent on a myriad of factors. Based on this, behaviours of concern are viewed through the lens that they are functional i.e, the individual is communicating a message through their behaviour (Gore et al., 2022; Walker 2020).

Functional Behavioural Assessment

Functional Behavioural Assessment (FBA) is a problem-solving process whereby the possible causes and functions of behaviour are explored; providing a roadmap to efficacious intervention (Fahmie and Luczynski 2019; Hanley et al., 2003). FBA is an umbrella term for a variety of methods used to identify the variables that influence the occurrence of behaviours of concern. It is widely researched that the identification of the functions behind behaviour is key to devising a successful intervention plan (Hurl et al., 2016; Anderson et al., 2015; Alvarez et al., 2014) and there is strong empirical support for the success of FBA in identifying those underlying functions (Gable et al., 2014). Importantly, behaviour support practitioners have reported that when behavioural strategies are based on a sound understanding of the functions of an individual's behaviour, it aids them in protecting and upholding the human rights of the individuals they work with (Leif et al., 2023). Six main functions of behaviour have been identified in previous research: namely connection-seeking, gaining access to a tangible,

gaining sensory stimulation, escaping a certain task, and escaping some form of discomfort (Alberto and Troutman 2009). Within the FBA approach, the function of behaviour is represented by a change in an independent variable i.e., an environmental condition and the effect is represented by a change in a dependent variable i.e., behaviour. According to the NICE (2015) guidelines, the assessment of behaviours of concern must follow a systematic phased approach, whereby the assessor's objective is to gain a functional understanding of the behaviour. Therefore, the assessment process is exploring what the individual is attempting to communicate through their behaviour i.e., sensory distress, dislike of an activity etc. (Government of Ireland, 2022).

The initial assessment constitutes an operational description of the behaviour, including its severity, frequency, and duration in order to identify common predictors of the behaviour (Crone et al., 2015). The FBA describes the behaviour in a measurable and observable way, depicting exactly what the specific behaviour looks like. This will be supplemented by an identification of events which predict where the behaviours are most and least likely to occur, in addition to possible functions of the behaviours.

There are a myriad of different methods used for FBA, including direct and indirect approaches. Direct methods constitute information gathered via direct observation such as Antecedent-Behaviour-Consequence (ABC charts) and scatterplots. ABC Charts can be useful in identifying setting events, which are more broad circumstances that could be increasing the likelihood of a behaviour such as sleep pattern or medical illness. ABC Charts can also identify triggers for the behaviour such as being asked to stop a preferred activity or being asked to complete a non-preferred task. Additionally, ABC charts can establish when the target behaviour does and does not occur, as well as what happens as a result of the child engaging in the behaviour of concern (Government of Ireland, 2022). Scatterplots provide information on the timing of the occurrence of target behaviours, rather than the antecedents and consequences of the behaviour. This can be useful in hypothesizing the environmental conditions that are contributing to certain behaviours and can guide further assessment procedures (Miltenberger et al., 2019; Llyod and Kennedy, 2014).

Indirect methods involve gathering information from an informant such as a parent through the use of interviews, questionnaires, and rating scales, for example, the Questions about Behavioural Function questionnaire (QUABF) (Paclawskyj, 2000) and the Functional Analysis Screening Tool (FAST) (Iwata and DeLeon 2005). Practitioners report an almost exclusive reliance on indirect assessments

when conducting an FBA as they provide a consistent format, are easy administer and time efficient (Oliver et al., 2015). However, it is important to note that evaluations of the psychometric properties of indirect assessment methods show only modest reliability and validity (Iwata et al., 2013).

Positive Behaviour Support

Positive Behaviour Support (PBS) is a values-led approach to supporting individuals through the use of evidence-based teaching and behaviour support strategies. Kincaid et al., (2016) propose an updated definition of PBS which is committed to the use of sensitive, positive approaches and eschews the use of aversive, harmful interventions. PBS is described as an ongoing process of data-based assessment and decision-making strategies that are respectful of a person's dignity and wellbeing with the aim to enhance the person's overall quality of life, consistent with the human rights model of disability (Leif et al., 2023). The abovementioned is the definition of PBS referred to in the current research. A core practice of PBS is to promote proactive strategies in order to minimise the likelihood of a behaviour of concern occurring. One such example is that of differential reinforcement of alternative behaviours (DRAs), whereby reinforcement is provided for the occurrence of a target behaviour, alternative to the behaviour of concern being reduced (Bradley, 2016). It is important that the alternative option acts as a functional replacement for the individual. For example, if a child is hitting their sibling to seek connection, explicitly teaching them a socially appropriate behaviour such as telling jokes or saying 'Hi, can we play?' is effective as it serves the same functional purpose and is a more appropriate way of seeking connection (Hill et al., 2020). Reactive strategies are also a component of PBS- these are planned responses to the presentation of identified concerning behaviours. Notably, reactive strategies can be considered punitive practices and do not aim to achieve long-term behaviour change. Moreover, reactive strategies are likely to be more effective when drawing on person-centred approaches; recognising situations and settings that may act as triggers for the individual (NICE, 2015). In relation to this, the Department of Education are currently developing guidelines for schools on the management of behaviours of concern. These guidelines are expected to place a strong emphasis on prevention and positive behavioural approaches, refute the concept of seclusion and refer to the premise that physical intervention should never be used for disciplinary purposes (Madigan, 2023).

PBS and Neurodiversity

It is necessary to note that the use of PBS has received negative feedback from those who perceive this approach to deny neurodivergent individuals' part of

their identity and conform to neurotypical preferences. Criticism around PBS generally refers to historical work in the field of Applied Behaviour Analysis; however contemporary work within the field is characterised by being person-centred and built on values of respect (Gore et al., 2022). Both the neurodiversity movement and the social model of disability propose that when autistic people face challenges in their world, these are primarily as a result of the interaction between the autistic person and their environment. For example, sensory aversions to loud noises can make it more difficult for autistic individuals to navigate a world designed for allistic people (Terroso, 2021; Belek, 2019; Chapman, 2019). The use of PBS is consistent with the abovementioned idea that behaviour is influenced by environmental factors. Accordingly, professionals implementing PBS aim to focus on eliminating environmental triggers, developing positive environmental alterations and teaching the individual functional skills in a neuroaffirmative way (Jorgenson et al., 2023; Leif et al., 2023).

METHODS

The current research explores a single-subject case design whereby professional behaviour support was implemented with the parents of a five-year-old boy, Rory*. The family were existing users within the Children's Disability Service due to Rory's autism diagnosis and complex needs. They requested support in response to a recent escalation in behaviours of concern. Parents gave written consent for the clinician to work with them and were informed of their right to withdraw at any stage of the process without consequence. A key principle underpinning the work was that of Family Centred Practice, whereby the family of the young person is regarded as the pivotal factor in supporting their child's development. This model empowered the family to set their own objectives and goals with the clinician (HSE, 2021; Dunst, 2002). Collaboratively, the clinician and parents aimed to identify the communicative intent behind the behaviours of concern and explore how the home environment could be altered in order to promote positive behaviour. Additionally, it was hoped that the PBS plan would include strategies to support Rory with his emotional regulation skills and help to cultivate meaningful and supportive interactions within the family dynamic.

IDENTIFICATION OF NEED

The clinician used the FAST tool with Rory's parents to operationalise his target behaviour by defining it objectively (Storey and Haymes, 2023). This tool

is an indirect functional assessment method using a rating scale which provides preliminary information around the environmental and physical factors that influence behaviour. The reliability of the FAST is considered to be moderate at best, with a general lack of predictive validity. However, given the nature of the data generated by the FAST, the low reliability and validity is unsurprising (Iwata et al., 2013). The Behaviour Problems Inventory (BPI-S) was also conducted with Rory's parents. This is an informant-based behaviour rating scale to assess behaviours of concern present for individuals with developmental differences (Mascitelli et al., 2015). The BPI-S has adequate to good internal consistency, inter-rater agreement, and test-retest reliability (Bowring et al., 2017; Mascitelli et al., 2015; Rojahn et al., 2012). This tool aided the clinician in identifying the intensity with which certain behaviours occurred, for example mild, moderate, severe; and the frequency at which they occurred, for example daily, weekly or monthly. For the current research, the clinician collaborated with parents to focus on the behaviours occurring daily with severe intensity. Based on the FAST and the BPI-S, the broad behaviours of concern were identified as physical aggression to others. Pre-cursor behaviours are any behaviour or response that occurs immediately prior to the target behaviour (Herscovitch et al., 2009). The pre-cursor to Rory's behaviours of concern were identified as growling, screaming, shaking of fists, slamming doors and cursing. The target behaviour was then defined in terms that were intended to be both observable and measurable to anyone working with Rory. The behaviour was defined in a way that if two or more adults were viewing the behaviour, they should be able to agree on whether or not they are viewing the defined behaviour (Hill et al., 2020; Moreno et al., 2017). The operationalised definition of behaviour was as follows: Any instance of hitting family members using a closed fist and biting family members using his teeth on their arm or hand, leaving temporary marks, or breaking the skin. Nonexamples of the behaviour were also discussed with parents, for example if Rory kicks his sibling or throws a toy this should not be recorded as it is not the target behaviour.

DATA COLLECTION

Antecedent-Behaviour-Consequence (ABC) Chart

As part of the data collection, Rory's parents were required to complete ABC charts. This involved parents directly observing the behaviour of concern i.e., the operationalised behaviour, and recording 1) What happened directly before the behaviour, known as the antecedent 2) Describe the behaviour itself in terms of where it happened, what it looked like, the duration etc. and 3) Describe what happened directly after the behaviour, known as the consequence (Miltenberger et

al., 2019). The ABC Chart demonstrated that antecedents for Rory engaging in the target behaviour were as follows: being asked to travel in the car, being instructed to turn off his tablet and being instructed to go into the shower. The ABC Chart demonstrated that consequences of Rory engaging in the behaviour consisted of being given the tablet for additional time, delaying the start time of showering, or avoiding tasks.

Scatterplot

One of the functions of the FBA it to gather information on situations in which the target behaviour is most and least likely to occur (Miltenberger et al., 2019). A scatterplot was identified as an appropriate option for parents to complete for a one-week duration in the home setting as part of the data collection. Scatterplots involve collecting frequency data within continuous intervals. For the current study, Rory's parents completed the scatterplot on an hourly basis, for example, if the target behaviour occurred between 9-10am, they ticked the corresponding box on the scatterplot. The baseline data showed that the target behaviour occurred twice every day between 2-3pm and 5-6pm. It was identified that both of these timeframes aligned with when Rory was required to go to the car to collect his sister from extra-curricular activities. Parents noted that behaviours lasted between 10 to 40 minutes per incident. It was shown that the behaviour occurred more frequently on Saturday and Sunday, with two occurrences between 11am-1pm. Relatedly, it was identified that on weekends, there was an increase in time spent in the car collecting his sister and this was offered as an explanation for the increase in target behaviours. The clinician and parents also found the scatterplot useful to explore times of the day that the behaviours of concern were not occurring, often referred to in therapeutic approaches as 'finding exceptions' to the issue being explored (Smock Jordan and Turns, 2016). Exceptions to the behaviours of concern were noted when he was spending one to one time with a parent or when he was spending time alone playing with toys or on his tablets.

FINDINGS

The findings of the direct and indirect assessment methods demonstrated that the target behaviours served multiple functions, namely escape from non-preferred activities and access to preferred items.

Escape from demands and activities

As determined by assessment and data collection tools, one of the main functions of the concerning behaviour was noted as escape from non-preferred

activities. Escape-maintained behaviours are known as serving a social-negative reinforcement function and are a common maintaining variable for behaviours of concern (Geiger et al., 2010). Rory engages in target behaviours to avoid doing something that does not peak his interest. For example, over time he has learned that when he engages in hitting and biting before shower time, this is likely to delay the starting time of his shower. This behaviour is multi-functional whereby it serves an escape purpose of delaying the non-preferred activity of showering, while also allowing him to gain access to a tangible, which is additional time on his tablet. Additionally, it was evident from the assessment methods that target behaviours often occur when accompanying his parents in the car to collect his sister from school or extra-curricular activities. ABC Charts demonstrated that Rory was usually engaging in preferred activities directly before he was expected to walk straight to the car.

Access to a tangible

The results of the assessment methods showed that one of the motivations behind Rory's behaviours is often to access a preferred tangible or activity. This means that the function of behaviour is to gain access to preferred item or participate in an enjoyable activity.

Sensory Stimulation

Analysis of the FAST Tool and qualitative findings from the parent interview identified that Rory may engage in the target behaviours because it is physically stimulating or is providing a calming or pleasing sensation for him. He may be seeking tactile and deep pressure proprioceptive input from the feeling of biting down or hitting others (Middletown Centre for Autism A, n.d).

Behaviours viewed through the context of Rory's Autism diagnosis

Throughout the FBA process, it became apparent that Rory's target behaviour should be navigated within the context of his autism diagnosis. Such factors include the following:

Difficulty with transitioning:

It was identified that Rory finds transitions from preferred activities to non-preferred activities difficult. This aligns with research demonstrating that transitioning between activities can pose difficulties for autistic individuals whereby they may resist the transition through displays of behaviour that is difficult to manage (Sterling-Turner and Jordan, 2007). This is demonstrative of his need for certainty and clarity around transitioning from one activity to the next.

Potential of Social Masking and 'After School Restraint Collapse'

It is notable that Rory's target behaviours are not observed in the school setting. It is possible that Rory is engaging in social masking throughout the day and consequently experiencing anxiety and behaviours of concern on returning home from school. This has been likened to a Coca Cola bottle exploding after it has been shaken (Middletown Centre for Autism B, n.d). It is possible that Rory is bombarded with social and academic demands throughout the school day and is suppressing his emotional responses until he returns home.

Cognitive Flexibility

It is demonstrated that Rory may be having difficulty finishing one task and initiating another. This could be as a result of executive functioning difficulties which autistic individuals often struggle with. Executive functioning encompasses higher-order cognitive processes including cognitive flexibility. This is also known as 'shifting' and refers to the ability to start new tasks (Blijd-Hoogewys et al., 2014). It is possible that Rory is exhibiting struggles with cognitive flexibility which is further contributing towards his behaviours of concern. This will be factored into the intervention plan through providing Rory with predictability around what is coming next within his day and giving him set times to finish and move on from tasks.

Emotional Regulation

A diagnosis of autism is often associated with difficulties with emotional regulation, constituting amplified emotional responses and poor emotional control (Sung et al., 2022). Attaining emotional regulation is the ability to exhibit an appropriate emotional response when exposed to high arousal stimuli. Research has demonstrated that autistic individuals demonstrate a less adaptive pattern of emotional regulation strategy use (Mazefsky et al., 2013). Assessment methods showed that Rory exhibits emotional dysregulation through externalizing behaviours such as hitting, biting and verbal responses.

POSITIVE BEHAVIOUR SUPPORT PLAN

Based on assessment findings, a PBS Plan was created with Rory's parents (See Table 1**).** This addressed the functions of Rory's behaviours, in addition to autism-specific supports and strategies to support his overall wellbeing.

Table 1: Rory's PBS Plan

Positive Behaviour Support Plan			
Hypothesized Function via FBA	**Environmental Strategies (Proactive)**	**Skills Teaching**	**Direct Intervention (Reactive)**
Social Escape	**-Visual Schedule:** The creation of a visual schedule will provide certainty and predictability around the sequence of activities for the day ahead. **-Visual Timer:** Prior to non-preferred activities, use of a visual timer will act as a visual representation to show how much time is left doing a preferred activity. **-First, Then Board:** If Rory is struggling to follow demands in an attempt to escape non-preferred activities, give clear directions in a 'First-Then' format, using visuals. The 'First' picture should be a picture of the non-preferred activity such as showering or travelling in the car. The 'Then' picture should be a preferred activity such as playing outside or using a tablet. This will help to motivate him as he will know what is expected of him and will provide more structure to the tasks. **-Increase opportunities for choice:** When he is engaging in a non-preferred activity, he should be given choices in order to reduce target behaviours, gain some control over the activity and increase compliance (Geiger et al., 2010). For example, Rory might be allowed to choose the songs played in the car on the way to collect his sister.	**-Social Story:** This is a visually presented, personalized story describing social situations and behaviour expectations which has been shown to be effective for use with autistic individuals (Gray, 2021). **-Functional Communication Training:** Rory will be taught how to use a 'Break' card. If he feels he is getting emotionally dysregulated he can communicate this to his caregiver. This will provide continued access to escape, while also targeting communicative skills (Geiger et al., 2010).	**-Emotion Coaching Strategies (Siegel and Byron, 2012):** **1) Connect and Re-Direct** When struggling to regulate his emotions, caregivers should acknowledge emotions through physical touch, empathetic facial expressions, a nurturing tone of voice and non-judgmental listening. Caregivers can then redirect Rory with logical explanation and planning. Once he is in a calm and alert state, discussions around misbehaviors can occur, not during the incident. **2) Name it to Tame It** Caregivers should encourage Rory to re-tell stories of incidences where his target behaviours occurred, in order to empower him to move on and give words to his frightening experiences. If Rory is helped to name his emotion and pain, this may help it. Saying something like 'I saw Dad told you to go to the car, and you began screaming and hitting him. That must have been really upsetting for you. What happened after you hit Dad? How did you feel?'

Positive Behaviour Support Plan			
Hypothesized Function via FBA	**Environmental Strategies (Proactive)**	**Skills Teaching**	**Direct Intervention (Reactive)**
			3) Paying Attention to What's Going on Inside Teachers and caregivers can educate Rory on what is happening in his body when he experiences target behaviours. Bring his attention to identifying physical sensations such as clenched fists as indicators of anger. It may be helpful to provide Rory with an outline of a cartoon body as a tool to help him identify and draw out what happens inside him when he engages in a target behaviour, i.e., heart rate increases, sweaty palms, furrowed eyebrows.

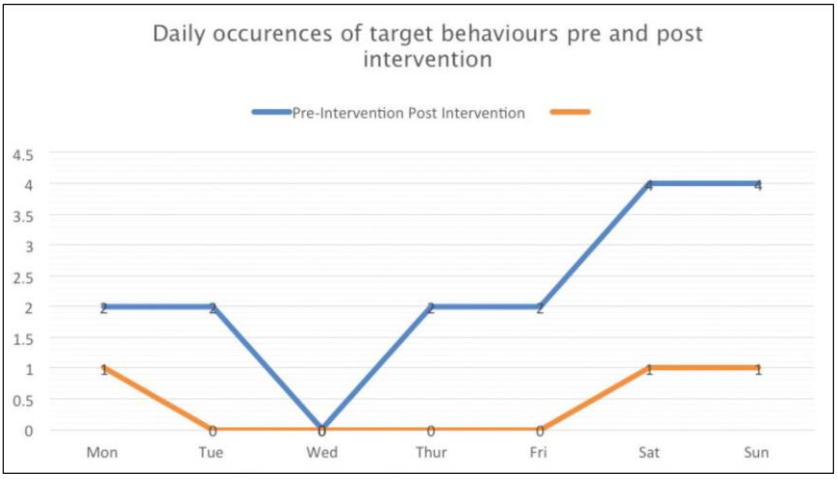
Positive Behaviour Support Plan			
Hypothesized Function via FBA	**Environmental Strategies (Proactive)**	**Skills Teaching**	**Direct Intervention (Reactive)**
Access to a Tangible	**-Schedule a transitional activity:** If time allows, an activity of moderate preference may be scheduled between highly preferred and highly non-preferred activities. For example, following his iPad time, Rory may be allowed to play with his Lego, before going for a shower.	**- Functional Communication Training:** Teach Rory specifically how to appropriately ask or signal for a tangible, such as the iPad. This way, he will be taught the skills to get what he wants without engaging in the target behaviours. **-Use of the Incredible 5-Point Scale:** This is a direct, instrumental way of teaching Rory about his emotions. Feelings are made visual and concrete. This strategy simplifies emotions by assigning them a number and a colour (Dunn Buron and Curtis, 2012). The objective of using this resource is that overtime, Rory will be taught to recognize his own emotions and strategies to monitor and regulate himself when needed. **-Interval Schedule of Reinforcement:** This means that reinforcement becomes available after a specific period of time. As Rory shows an absorbing interest in stickers, these will be used as a token. Rory will receive a sticker each evening if he has displayed appropriate behaviours and target behaviours have not occurred. Behaviour expectations will be clearly discussed with Rory. The chart will be situated at eye-level on the fridge and Rory will place the sticker on the chart himself to give him control and boost his self-esteem. If he continuously receives the sticker reinforcer every two days, he will receive a reward, such as additional time playing with his friends. Rewards will be discussed in advance. The efficacy of the system will be monitored and gradually faded every four days and every week. Extinction of schedule will occur as time goes on.	

Positive Behaviour Support Plan			
Hypothesized Function via FBA	**Environmental Strategies (Proactive)**	**Skills Teaching**	**Direct Intervention (Reactive)**
Sensory Stimulation	**-Provide replacement behaviour:** To address the potential sensory function, Rory will be provided with a chewee that he can put around his neck. Rory will be redirected to his chewee, during an incident of biting.		

RESULTS

At the time of the current write-up, several of the strategies on the PBS Plan were carried out. Following the application of partial elements of the PBS Plan for a duration of three weeks, an additional scatterplot of target behaviour occurrences was completed by parents. The data collected demonstrated a reduction in weekly target behaviours from sixteen occurrences to three incidents (See Figure 1). This coincided with parent-reported satisfaction levels in that Rory was responding extremely well to specific elements of the PBS Plan.

Figure 1- Line graph to demonstrate the comparison in occurrences of target behaviours pre and post intervention.



The prominent sources of success were explored with parents during an informal interview. It was reported that the schedule of reinforcement was a significant motivator whereby Rory took great pride in attaining his stickers every two days. They believe this to be the leading factor in the reduction of target behaviours. While this is positive in the short-term, the clinician advised that a reinforcement system should be viewed as a temporary structure used to improve behaviours. As positive behaviours increase, the objective is for the reinforcement schedule to be thinned (Alberto and Troutman, 2009). Given that transitioning to the car was a source of distress for Rory, parents reported that autism-specific strategies around this were effective. Through the use of a visual schedule, Rory was given predictability and certainty around his tasks. Parents used a 'First-Then' board to explain to him that he was allowed to have time on his tablet, followed by a trip in the car. This was supplemented with the use of a visual timer to show him a concrete visual of how much time he had remaining. Parents reported that the reduction in behaviours of concern was influenced by these environmental changes. Additionally, parents reported that Rory was eager to engage with the Incredible-5 Point Scale, which is stuck on the fridge at eye level. Parents reported that this strategy made the abstract concept of emotions more concrete for Rory as each stage of escalation was labeled with a number. Rory also used the 'What can I do?' section of the tool to self-regulate during periods of frustration, for example checking his scale and reading the individualized strategies such as 'Practice my deep breathes.' Parents noted that the use of emotion coaching strategies were particularly helpful in enabling them to be more emotionally responsive to Rory during times of frustration, while also aiding them to co-regulate during stressful times.

LIMITATIONS

While implementation of PBS strategies were generally successful, it is important to note the barriers within the current case study.

Generalisation of Skills

At times, difficulties transferring skills to separate contexts acted as a barrier in his engagement with the reinforcement schedule. Autistic individuals often have difficulty transferring skills and knowledge learned in other settings and activities, known as generalization (Roberts et al., 2022). This challenge was demonstrated through Rory responding well in the home environment, yet occasionally still hitting and biting when he was playing outside with his neighbours. His difficulties in generalizing what he had learned in the home setting resulted in him regressing

back to the original target behaviours at times. This barrier was overcome through consistent dialogue about contextualizing new skills to a variety of settings.

Parental Reluctance around fading of Reinforcement Schedule

Parents were content with the positive gains made from the interval schedule of reinforcement and therefore were more reluctant to begin the fading process. Fading involves a gradual increase in the number of appropriate responses required for reinforcement (Alberto and Troutman, 2009). Parents expressed concern that the thinning of Rory's schedule would increase the target behaviours again. It was explained that this would be a gradual fading process, completed in a systematic manner to avoid ratio strain. This occurs if a schedule of reinforcement is thinned too quickly, the individual may stop responding. For example, if Rory initially received one sticker per one positive behaviour and this was then reduced to one sticker per five positive behaviours, it is likely he would show strained behaviour through non- engagement and consequently, behaviours of concern may increase again (Cook and Lattal, 2019). A discussion was held around intrinsic versus extrinsic motivators and that; while the progress made was successful, it is important to equip Rory with the lifelong skills to intrinsically motivate himself.

IMPLICATIONS FOR PRACTICE

It is reported that having a socially valid approach to behavioural assessment ensures the individual and their families benefit from the supports in meaningful ways (Alverez et al., 2014). While the current study provided social validity in that the supports created were individualised to parents' perspectives and goals around the behaviours of concern; Rory was not directly involved in this process. In line with the United Nations Conventions of the Rights of the Child, there is a universal recognition that children should be seen as competent to express their opinions and views about their own engagement with psychology services and assessment of their needs. It is asserted that children should be given opportunities to contribute their perspectives and have a role to play in decisions made about them (Larkins et al., 2020; Natasi et al., 2020). While this was not possible within the confines of the current research, it would be valuable for future research to hear the child's voice through their direct involvement throughout the assessment process.

The current study highlights the importance of clinicians, parents and anyone working closely with the child to look beyond the behaviour that meets the eye, and instead view it as an attempt to convey a message. Rather than merely viewing

a behaviour as an issue which needs to be addressed and stopped, an FBA is helpful to identify the purpose it serves for the individual. Armed with information collected from the FBA process, Positive Behaviour Support Plans can be devised and tailored to the specific needs of the individual and to promote a constructive and empathetic response to behaviours of concern, leading to effective outcomes and meaningful lasting relationships.

**All names used in this article are pseudonyms.*

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