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Using positive behavioural support as a treatment for trauma symptoms with a man with intellectual disabilities

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Author Note

The client described within this case report provided consent for the use of his information. Identifying information has been changed or removed.

Abstract

Background. There is robust evidence that psychological therapies are an effective treatment for trauma-related symptoms, including post-traumatic stress disorder. However, there are relatively few studies involving people with intellectual disabilities, and no studies drawing on positive behavioural support as the mechanism for the delivery of treatment.

Method and materials. This study was a descriptive case report of a young man with intellectual disabilities who had a history of early trauma. His challenging behaviour was associated with demand avoidance. A positive behavioural support plan, incorporating psychological therapies and medication, was developed, implemented and is described.

Results. Over time, challenging behaviours reduced and were eventually extinguished. This was associated with an increase in engagement in a variety of activities and a reduction in trauma-related symptoms.

Discussion. Using positive behaviour support plans as the organisational framework for the adaptation and delivery of both psychological therapies and medication for complex cases is advantageous. Excellent team working is necessary to ensure that interventions are successful.

Keywords: Intellectual disabilities, trauma, violence, psychosis

Using positive behavioural support as a framework for the treatment of trauma symptoms

Introduction

Symptoms of trauma and their associated treatment with people with intellectual disabilities has received increasing attention within the research literature. There is evidence that people with intellectual disabilities, including children, experience a greater number of traumatic life events, and this is associated with psychopathology (Beail & Warden, 1995; Focht-New, Clements, Barol, Faulkner, & Service, 2008; Hatton & Emerson, 2004; Mansell, Sobsey, & Moskal, 1998; Martorell & Tsakanikos, 2008; Murphy, O'Callaghan, & Clare, 2007; Sequeira, Howlin, & Hollins, 2004). There has also been a suggestion that having intellectual disabilities may increase the risk of developing post-traumatic stress disorder, while some have further suggested that intellectual disabilities, itself as a construct, may be traumatising (Hollins & Sinason, 2000; Mevissen & de Jongh, 2010). Other studies have shown that there is a negative relationship between intelligence and symptoms of post-traumatic stress disorder amongst soldiers (Brewin, Andrews, & Valentine, 2000; Macklin *et al.*, 1998; McNally & Shin, 1995; Vasterling, Brailey, Constans, Borges, & Sutker, 1997). Relatedly, people with intellectual disabilities may present with increasing challenging behaviour in response to trauma which may not be included within traditional diagnostic frameworks (Wigham, Hatton, & Taylor, 2011).

There have been a number of case studies describing and investigating the treatment of trauma-related symptoms with people who have intellectual disabilities. Mevissen and colleagues (2011; 2011; 2012) reported on the successful treatment of trauma-symptoms using eye movement desensitisation and reprocessing, as did Barol and Seubert (2010) and Rodenburg, Benjamin, Meijer and Jongeneel (2009). Both Fernando and Medicott (2009) and Willner (2004) successfully used modified cognitive therapy, while Stenfert-Kroese and Thomas (Stenfert-Kroese & Thomas, 2006) successfully used imagery rehearsal therapy with two individuals.

However, there has been little attention paid to the integration of treatments for trauma-related symptoms within positive behavioural support (PBS) frameworks. PBS is an ideal organising framework for grounding and delivering treatments for trauma-related symptoms, as it is behavioural in orientation, integrates multiple theoretical perspectives, and interventions are drawn from a well conducted functional assessment. Recent meta-analytic work about psychological therapies for the treatment of post-traumatic stress disorder have indicated that those based on learning theory are associated with the largest effect sizes, namely exposure treatment (Cusack *et al.*, 2016). At the same time, questions remain about whether some groups of people with intellectual disabilities can benefit from talking psychological therapies, especially those with communication difficulties.

Taking these issues together, this single case report describes a young man with intellectual disabilities who experienced a series of marked traumas from an early age. As a teenager, he was detained under the Mental Health Act, 1983, as amended, 2007, because community services found it increasing difficult to manage his challenging behaviour. He presented with marked anxiety and a functional analysis of his challenging behaviour revealed that many instances were associated with demand avoidance related to his past traumatic experiences. Implementing an intervention which included teaching functionally equivalent skills, alongside exposure work, led to the extinction of his challenging behaviour and a reduction in anxiety.

Methods and Materials

Kaden. Kaden is a young adult man with mild intellectual disabilities (Full Scale IQ = 57). From an early age, concerns were noted about his developmental milestones and the quality of care he had been afforded, leading to the involvement of both health and social care professionals. He had been exposed to domestic violence as a child, and was subsequently removed and placed in care, and one of his foster parents unfortunately died. Early in his life, he was given heroin via injection, along with other drugs, and was subjected to abuse, having fled home and lived on the streets

several times. Throughout childhood, concerns had been noted about challenging behaviour that included physical violence and property damage, including running away when demands were placed upon him. When 15 years of age, he was eventually detained under Section 25 of the Children's Act, and concerns were noted about anxiety, paranoia, and possible auditory hallucinations, which is not unsurprising considering the relationship between trauma and psychosis (Gibson, Alloy, & Ellman, 2016; Kraan, Velthorst, Smit, de Haan, & van der Gaag, 2015). He was discharged, but subsequently readmitted to hospital under the Mental Health Act, 1983, at the age of 16; there had been repeated incidents of punching staff members in the face and absconding. During admissions to several differing hospitals, he continued to punch staff members, and had made use of weapons, inflicting very serious injuries. After incidents, Kaden would sometimes talk about memories of bad things having happened to him, and talk about having "voices" and feeling frightened. He would also express remorse and talk further about not wanting to hurt others, often adopting a critical and punitive tone, which further contributed to the maintenance of a negative self-concept. Throughout his history, there have been repeated incidents where Kaden had presented as overwhelmed by anxiety and panic, and would react with aggression directed at others and property. It had been noted that this appeared to be associated with demands, including encouraging him to take part in activities.

Kayden's challenging behaviour often necessitated the use of reactive strategies, including restraint and seclusion. While secluded, he would often shout and scream, talk about past experiences with extreme distress, adopting a view that he was inherently "bad" and needed to be punished. At the same time, he would make reference to "voices" and would sometimes complain that they told him to assault or attack others. On other occasions, when calm, he would express confusion about whether he heard voices, and it was difficult to consistently interpret them as well formed auditory hallucinations, accepting that he may have been experiencing flash-backs related to his previous history of trauma, and his diagnosis of schizophrenia. Alongside this, he experienced disturbed sleep, his appetite was poor, and he made various somatic complaints. However, as Kayden's

challenging behaviour became increasingly frequent and intense, resulting in multiple serious injurious, a policy of working with him within isolation became unavoidable.

Developing and implementing a positive behavioural support plan for Kayden to improve his quality of life and address his challenging behaviour was paramount. Attempts to work with him using talking psychological therapies proved difficult because of his difficulties with verbal communication and his marked anxiety. Notably, he expressed fear and worry about male members of staff and whether they would hurt him, and increasingly, would isolate himself and avoid social situations, including activities. Inadvertently, restraint and seclusion led to Kayden being removed from situations which were aversive and associated with anxiety, and therefore a contingency based upon negative reinforcement became established. Repeated direct observation of Kayden revealed that he would experience increasing anxiety associated interacting with others, and this seem to be further exacerbated by the presence of men within his environment. It was hypothesised that his aggression was associated with increasing demands and attempts to escape anxiety, which was clearly aversive.

Target Behaviours. Five target behaviours were chosen for inclusion within his PBS plan. These were: (a) physical assault: punching others by making a fist and pulling his arm backwards and then pushing his fist forward into another person's body; kicking others by pulling back his leg and then pushing his foot forward into any other part of another person's body; this behaviour was sometimes preceded by running towards another person, but not consistently, (b) attempted assault: this behaviour is similar to physical assault, but resulted in a failure to make contact with another person's body. This behaviour was also sometimes preceded by running towards another person, but not consistently, (c) other aggression: this included picking up objects with his hands, drawing them back, and throwing them, as well as making a fist and drawing his arm backwards and forwards into walls, doors and other objects, (d) verbal threats: this included statements that he

was going to hit or punch another person, and (e) avoidance: spending more than three consecutive hours in his bedroom during the daytime.

Triggers and warning signs. There were multiple triggers for Kayden's challenging behaviour identified following the completion of a functional assessment drawing on direct observation and a thorough understanding of his history, including his history of trauma. Establishing operations identified were: (a) being insulted or threatened by other service users, (b) increasing rumination and anxiety-provoking thoughts, including images and memories from this past, (c) increasing demands to engage in activities, and (d) rapid changes in plans. Discriminative stimuli identified included: (a) anxiety, and increasingly feeling unsafe, (b) hearing "voices" or having increasingly intrusive thoughts and images, (c) changes in routine and the environment, (d) increasing demands, including transitions from one activity to another, (e) anniversaries that were associated with loss or trauma.

A variety of precursor behaviours were also identified, which included: (a) staring with a glazed and vacant expression, and when speaking to him, not modulating his communication with his eyes, (b) an increase in requests for various objects and tangibles, including drinks, even though he may already have access to such, (c) a sense of rushing and urgency where he begins to rush tasks or activities, or moving quickly from one task to another task, trying to complete them as quickly as possible, (d) asking others whether everything, including himself, are "ok" repeatedly within increasing intensity over a very short period, (e) interrupting others who are engaging in activities, and (f) increasingly rapid and pressured speech.

Proactive strategies. The crux of the strategies used centred around the use of differential reinforcement of any other behaviour (DRO). The programme was developed jointly with Kayden, incorporating his suggestions. Initially, because he was spending increasing time avoiding activities and isolating himself, our programme focused on spending time in communal areas engaging in activities with others, exposing him to anxiety provoking situations in a graded manner, and

reinforcement was delivered contingent on engaging in any other behaviours, other than the target behaviours. Kayden suggested that he would very much like a recording sheet for his achievements that incorporated images of rocket ships, and this became his rocket ship star sheet. Stars were awarded and Kayden affixed these to his sheet contingent on spending time outside of his bedroom engaging in any activity other than the target behaviours for certain time intervals, with the initial interval initially being short and set at five minutes. The interval could be achieved using any combination of time spend out of his room, and a reset interval scheduled was not used. This meant that he could come out of isolation multiple times for very short periods, and reinforcement was delivered once the total time reached five minutes. Once he achieved five stars, he was able to choose a reinforcer which Kayden called a “big prize”. These were objects which Kayden had previously chosen and had been purchased for him. They included objects such as DVDs, posters, books, key rings, and various other objects relating to things he liked and enjoyed. Access to other reinforcers was not stopped, and Kayden continued to purchase objects himself with his own money. Overtime, the time interval associated with activities was slowly increased from five minutes to sixty minutes, as were the number of stars needed to gain access to a “big prize”, which was eventually increased to sixteen. The continuing goal is to augment this programme to meet his needs, and if appropriate, fade the programme out completely.

Working collaboratively with Kayden, and as he increasingly spent time with others, we devised a series of activities to help him develop a sense of mastery. A picture of the activity was placed on a set of cards, and staff and Kayden collaboratively chose the activities that he would work upon each day. Overtime, these activities varied, and involved increasing demands, including spending time in groups working with others. Alongside this, and with discussion with Kayden, we introduced a “lazy day” card which was added to his cards displaying his activities. Kayden was able to implement the “lazy day” card at any point throughout the day to terminate activities. Any time spent engaging in an activity was carried forward to the next activity, and continued to count towards earning a star. Kayden was able to stop having a “lazy day” at any point and re-engage in activities.

As Kayden sought reassurance frequently, and this was a clear early warning sign, three 10 minute 1:1 sessions with staff were implemented throughout the day. The purpose of these sessions was to spend time with Kayden, and provide with a fixed time interval for reassurance seeking. A member of staff was identified who wore a bracelet, and Kayden was taught that the member of staff wearing the bracelet was the person that Kayden spoke to during these sessions. Other staff members were encouraged to re-direct him as needed to this staff member, and reflect his questions back to him using a warm tone of voice, encouraging him to answer his questions himself when he sought reassurance. The member of staff wearing the bracelet was also in charge of helping him to choose his activities, and monitoring his progress throughout each day, ensuring adherence to the programme.

Historically, Kayden had been treated with a variety of mood stabilisers, antipsychotics, and anxiolytics as regular prescribed medication, as well as various as required medication. Considering that he fulfilled diagnostic criteria for schizophrenia, he was stabilised and responded positively to Clozapine, and this was included as a proactive strategy. As he responded well to the combination of treatments, as required medication was withdrawn and discontinued.

Communication strategies, which included ensuring that staff spoke to him using a warm and friendly tone, along with speaking slowly and clearer were vital, as was the use of regular and appropriate social praise.

Secondary prevention and reactive strategies. Secondary prevention involved reducing demands and re-directing Kayden to use a “lazy day”, as well as making sure that communication was warm, engaging and reassuring. When needed, he was re-directed to his programme and prompted about the excellent progress he is making while acknowledging his feelings. The number of staff communicating with him was reduced, and empathic validation was used help him manage his affect. Physical interventions were only used as an absolute last resort.

All staff working within the service were trained in PBS, and regular meetings were held to monitor progress, including some direct observation of the staff team. Alongside this, reflective practice sessions were scheduled and open to all staff members. The PBS plan and progress were reviewed regularly by the multi-disciplinary team.

Results

As alluded to above, Kayden made substantial positive progress. Prior to the implementation of the programme, there were, $M = 10.40$, $SD = 11.50$, incidents of serious aggression per month.

Following the introduction of the programme, the frequency of aggression decreased to, $M = 2.00$, $SD = 2.00$, per month during the first six months, and increased slightly during the next six months to, $M = 2.50$, $SD = 1.37$, and then decreased to $M = 1.00$, $SD = 1.26$, across the next six months, and then ceased completely during the subsequent period; it recurred on one occasion, which was associated with an anniversary of a traumatic event. Following this occurrence, there have been no further incidents. Kayden now regularly accesses activities, and his PBS plan is working well. We have reduced his Clozapine significantly. As required medication was discontinued and there has been no need for the use of other reactive strategies. He is able to engage in activities that last longer than several hours, and is using the community regularly. He has recently found voluntary employment with a local advocacy group.

Discussion

Intervening across different systemic levels was one of the most beneficial aspects of using PBS as the guiding organisational framework for the delivery of interventions for Kayden. The treatment programme focused on reorganising and re-establishing appropriate contingencies to facilitate the use of exposure therapy as a treatment for trauma-related symptoms and associated challenging behaviour. It was clear that Kayden experienced marked anxiety associated with social situations where demands were being placed upon him, and challenging behaviour allowed him to escape these situations, while at the same time, challenging behaviour served as a maintaining factor for his

continued distress, serving to further strengthen his belief that he needed to be punished. Using a DRO programme, which was modified over time, encouraged slow and graded exposure to anxiety-provoking situations, ensuring the positive reinforcement was contingent on any behaviour other than challenging behaviour. This allowed Kayden to experience anxiety while engaging in activities, learning that he could make achievements and that anxiety dissipates over time, thus leading to a reduction in the conditioned negative emotional response to stimuli that had previously become established. This is akin to exposure therapy for the treatment of post-traumatic stress disorder (Foa, Keane, Friedman, & Cohen, 2008), which has been shown to be effective with a large effect size (Cusack *et al.*, 2016). The use of a “lazy day” card, and associated communication strategies, served to establish a functionally equivalent skill which allowed Kayden to escape demands without needing to use challenging behaviour. Further, daily goal setting within the context of PBS plan approximated a treatment based upon behavioural activation. This appeared to have further positive effects upon his mental state, leading to a reduction in anxiety and low mood, as did a prescription for Clozapine. It was very beneficial for Kayden as his as required medication was withdrawn and is no longer needed. Alongside this, Kayden increasingly took part in some structured psychological therapies groups addressing risk, and currently, takes part in a weekly problem-solving group which has become a further proactive strategy.

While disentangling the impact of Clozapine from aspects of his PBS plan may appear problematic, it is important to consider that he had been taking Clozapine for some years, before the introduction of a PBS plan. His challenging behaviour had continued, and earlier attempts to reduce his medication led to a deterioration in his mental state and challenging behaviour. Following the introduction of his PBS plan, which was associated with an improvement in both his mental state and challenging behaviour, the dose of Clozapine was reduced, and as required medication was withdrawn. However, this was not associated with an increase in the frequency or severity of challenging behaviour, or a deterioration in his mental state.

Some reflection is needed on the challenges faced by both Kayden and his support team. His challenging behaviour was difficult to work with because people had been hurt. It is important to acknowledge that staff members were scared, and there was apprehension about his PBS plan because of an associated fear that it may not work. It became integral to the treatment programme to ensure that all staff had a shared understanding of his formulation and the nature of the PBS plan, and this became a large focus on the work. This involved working with the team, helping to ensure adherence to the programme. Initially, there were difficulties, and further occurrences of challenging behaviour, as new contingencies became established. However, as improvements unfolded, this was associated with a reduction in anxiety amongst the team, which was further associated with an increase in confidence in both the plan and their ability to work with Kayden. Consequently, as both Kayden and the team grew in confidence, anxiety amongst the team and Kayden's diminished.

This case report outlines the creation of a PBS plan incorporating psychological interventions for the treatment of trauma-related symptoms, including both exposure therapy and medication. This was a complex case and one of the most striking results was that assaults on others were extinguished, and Kayden's social engagement within activities improved, along with his quality of life. PBS plans can appropriately serve as an organisational framework for the development and delivery of many differing interventions, including medication, for people with intellectual disabilities. Their marked strength is that they are formulation driven, and interventions are directly informed by this formulation, meaning they are likely to be successful. Adapting and delivering psychological interventions, including "talking" psychological interventions, for a range of mental health problems within PBS plans can be completed easily, considering that all such interventions are formulation driven, and preceded by an appropriate assessment, including functional assessment.

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