

BEHAVIOUR ASSESSMENT

Critical analysis of the STAPLLE behaviour support programme and comparison with the IABA framework

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Abstract

Challenging behaviour is any culturally abnormal behaviour that places the person, or others, in serious jeopardy. It is prevalent in people with cognitive impairments and can present as self-injury, aggression, destructive behaviours and wandering. The negative effects on carers who support people with challenging behaviour is well documented. This article critically analyses contemporary models of behaviour assessment and intervention, comparing the recently developed Support Training for Autistic People in Living and Learning Environments (STAPLLE) behaviour support programme and the widely implemented Institute for Applied Behaviour Analysis (IABA) framework. The use of multiple assessment processes is a vital component of the IABA framework but can be too complex for general use by families. STAPLLE's use of specifically designed tools has been successful in helping families to reduce the occurrence of challenging behaviours. However, the toolkit's reliance on the Motivational Assessment Scale and the parent carer's requirement to self-assess the ABC chart data is a problem requiring further investigation and research.

Keywords

assessment, autism, behaviour, challenging, family, support

BEHAVIOUR challenges can occur across a wide spectrum of the population, but it is more prevalent in those with intellectual or cognitive impairments, such as autism spectrum disorder (Farmer and Aman 2011, Hattier et al 2011, Hill et al 2014), learning disability (Lowe et al 2007, Lundström et al 2007, Tyrer et al 2014), dementia (Steinberg et al 2003, Cipriani et al 2011, Desai et al 2012) and acquired brain injury (Dooley et al 2008, Kelly et al 2008, Li and Liu 2013). Challenging behaviour has been defined as any culturally abnormal pattern of behaviour that has such an intensity, frequency or duration it places the physical safety of the person, or others, in serious jeopardy; or patterns of behaviour likely to seriously limit, or result in the person being denied, access to ordinary community facilities (Emerson 2001). It can have wide-ranging presentations commonly including, but not restricted to:

- » Self-injury (Emerson et al 2001a, Baghdadli et al 2003).
- » Aggression (Emerson et al 2001a, Tyrer et al 2006, Tyrer et al 2014).
- » Destructive behaviours (Emerson et al 2001a, Lowe et al 2007).
- » Wandering (Matteson and Linton 1996, Halek and Bartholomeyczik 2012).

The negative effects on carers who support people with challenging behaviour is also well documented for family members and professional health and social care staff. Family members experience stress and poor physical health (Gallagher and Whiteley 2013, McStay et al 2014), as well as the loss of identity and social isolation (Fox et al 2002, Brown et al 2011), whereas paid carers primarily report stress and burnout (Hastings 2002, Mills and Rose 2011).

Studies by Butrimaviciute and Grieve (2014) and Scott et al (2005) offer a personal insight into carers' experiences of being exposed to challenging behaviour, finding that subjects frequently document feelings of fear or dread, continuous physical and mental drain, guilt, self-blame and financial hardship. It should also be noted, however, that in both studies a range of positive emotions were also recorded for paid and unpaid carers including feelings of satisfaction, reward and achievement, while many unpaid carers documenting their actions were driven out of a deep love for the person, rather than out of a sense of duty (Griffith and Hastings 2014).

Evidence can also be found that challenging behaviour can have a negative effect on the

quality of support and service provision, including a high turnover of staff (Felce et al 1993, Arnetz and Arnetz 2001, Cudré-Mauroux 2011), which itself may pose a significant health risk to the person or seriously affect their quality of life (Emerson et al 2001b, Lloyd and Kennedy 2014).

Behaviour assessment

Behaviour assessment, functional analysis and appropriate behaviour support interventions are important to mitigate some of the factors outlined above, including reducing self-injurious behaviour, physical aggression and increasing social inclusion (Horner 2000, Grey and McClean 2007, LaVigna and Willis 2012). The purpose of functional analysis is to consider what factors maintain the presentation of a problem behaviour in a specific environment (Matson and Minshawi 2007), this can help to identify correct reinforcers, specific times where aberrant behaviour is likely to occur and highlight functionally equivalent behaviour that could be used to replace the problem behaviour (Sturme 1994).

Hanley (2012) argues that it is the ethical duty of service providers to carry out such assessments so that any interventions developed are precise, person-centred and humane. Beauchamp and Childress (2013) outline a four-point framework for ethical actions, two of which encompass the need to do good – beneficence – and the need to prevent harm – non-maleficence. Without suitable behavioural assessment, any planned interventions may be ineffective, could exacerbate a situation and may cause the person harm; this may not only be unethical but may also be potentially abusive (Tarbox et al 2009, Manente et al 2010).

The need for an appropriate analysis of the motivation or function of an aberrant behaviour has also been found to play an important role in designing effective interventions leading to successful adaptation of the behaviour (Karsh et al 1995, Newcomer and Lewis 2004). Campbell (2003), for example, conducted a qualitative synthesis of 181 people with autism and found that performing a functional analysis of a problem behaviour before any intervention meant that the intervention was significantly more successful at reducing the behaviour than if the functional analysis was not carried out. This finding was confirmed more recently by Heyvaert et al (2014) in a larger quantitative study of 358 people on the autism spectrum.

Functional assessments

Matson and Nebel-Schwalm (2007) indicate functional assessments produce a shift towards a more supportive model. Rather than simply subduing a behaviour, functional assessment leads to alterations in the environment that is maintaining the behaviour, or to the teaching of positive replacements, which then become the focus of any interventions. Functional analysis aligns with the ethical desire for beneficence and non-maleficence as described by Beauchamp and Childress (2013)

Under the Mental Capacity Act and its associated Deprivation of Liberty framework (Department of Health 2005), any action taken on behalf of a person without capacity must be done in the least restrictive way possible. If practitioners fail to perform an appropriate analysis of problem behaviours and plan suitable interventions or environmental manipulations, any resulting deprivations cannot be seen as the least restrictive option and could be in breach of the Mental Capacity Act. More recently the DH gave further support to this change in focus, emphasising the need to reduce restrictive practices through the use of personalised, proactive approaches (DH 2014).

Analysis of challenging behaviour

The analysis of challenging behaviour with the purpose of defining the function can be (O'Neill et al 2014, Manente et al 2010):

- » Experimental – the manipulation of environmental variables to affect levels of control over behaviour.
- » Descriptive – the direct observation of the behaviour and its maintaining environment.
- » Indirect or informant based – the use of questionnaires or interviews completed by those dealing directly with the behaviour.

If an experimental approach is followed, then manipulating the environment could compromise the ecological validity of the assessment as new behavioural functions may be established during the assessment process itself. Alternatively, the behaviour may also be maintained by events that cannot be manipulated during an experimental assessment. According to Hall (2005) experimental analyses are resource intensive and sometimes difficult to implement. However, according to Emerson (2001), experimental assessment can provide detailed information, allowing for precise measurement and an experimental demonstration of contextual control, which is now thought to represent best practice when assessing aberrant behaviour (Hanley et al 2003). However, false

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positive results can still persist in controlled clinical conditions where experimental functional analysis of this type is undertaken (Shirley et al 1999, Jessel et al 2014).

Descriptive assessment techniques can also be resource intensive, however they do support the observation of the behaviour in its natural conditions, recording the environmental factors seen before, during and after the occurrence of the behaviour. However, because the behaviour is only observed without manipulation of the environment, it can be difficult to prove, without experimentation, the true functions of the behaviour (Tarbox et al 2009).

Indirect informant-based approaches using questionnaires are much less resource intensive than the other two approaches, requiring less time without the same need to directly observe the behaviour (Tarbox et al 2009). Scoring tools can be quickly produced and disseminated to each carer who may be supporting a person with challenging behaviour, however, doubts have been raised about how consistently they will measure the same element over a period of time. (Iwata et al 2000). Despite this Hall (2005) found a strong concordance between the results obtained by both experimental and informant based assessment methods. However, when comparing the results obtained by experimental and descriptive methods, Hall found that there was little consistency between the two. Furthermore, some studies have shown there appears to be little reliability across all three methods. Toogood and Timlin (1996) studied the functions of 121 specific challenging behaviours displayed by people with severe learning disabilities using experimental, descriptive and informant-based techniques. They found that agreement between the three methods was poor and suggested that clinical functional analysis should be performed in a multi-assessment, discrete format tailored to the person.

Positive behaviour support

There are many approaches that adopt the techniques of behaviour assessment, functional analysis and intervention, and many fall under the umbrella of positive behaviour support (PBS) – an ethical and holistic approach to supporting behaviour (Preece 2014) that has developed from the early principles of applied behaviour analysis (ABA) (Anderson and Freeman 2000, Carr et al 2002). However, some debate still persists about whether or not PBS and ABA are the same or distinctly different (Carr and Sidener 2002, Tincani 2007, Dunlap et al 2008). Carr et al

(2002) explored the uniqueness of PBS: 'It integrates the following critical features into a cohesive whole: comprehensive lifestyle change, a lifespan perspective, ecological validity, stakeholder participation, social validity, systems change and multicomponent intervention, emphasis on prevention, flexibility in scientific practices and multiple theoretical perspectives'. Gore et al (2013) indicated that a true PBS system has ten essential components based around a set of values, a base of evidence and theoretical knowledge and a structured process to proactively support and manage behaviour.

The PBS approach has been widely shown to be effective in reducing behaviour that challenges as well as increasing wider positive outcomes for the person (Dench 2005, Grey and McClean 2007, McLean et al 2012). The recently revised code of practice from the British Institute of Learning Disabilities (BILD), in line with the DH guidance on the use of restrictive practice (DH 2014), also emphasises a need for a move towards PBS systems to reduce the use of physical interventions and restrictive practice (BILD 2014). PBS places the person at the centre of the planning process and meets the criteria for an ethical framework as it 'blends values about the rights of people with disabilities with a practical science about how learning and behaviour can change' (Horner 2000).

Behaviour support frameworks

This article compares aspects of the Institute for Applied Behavior Analysis (IABA) framework (LaVigna and Willis 2005) with the Support Training for Autistic People in Living and Learning Environments (STAPLLE) framework (Rimmington and Yearsley 2012). Both frameworks are multi-element systems for the support of people who display challenging behaviours. The IABA framework is widely used across all problem behaviours and has a tiered training approach for three identified mediator groups:

- » Natural mediators, such as parents or carers.
- » Mediators who have a relationship to the person due to their disability, for example, special educational teachers.
- » Mediators who are connected to the person through their challenging behaviour.

Alternatively, the STAPLLE framework was developed specifically for parents and carers of people with autism where, in the author's experience, parental access to training of this type is either unavailable or inadequate. This viewpoint matches the findings of Hatton et al (2010) and McGill et al (2006) who found

poor levels of support for carers of children and adults with neurodisabilities. While not specifically fulfilling all ten of the tenets of PBS defined by Gore et al (2013), because it does not use explicit ABA methodologies, STAPLLE follows the holistic ethos of PBS as described by Carr and Horner (2007) and Dunlap et al (2008).

After working extensively with parents of children on the autism spectrum through his role as a trainer and consultant, the author found a clear gap in accessible services. Parents who were facing extensive levels of challenging behaviour often reported that they could not access appropriate training due to cost, extensive waiting lists or licensing restrictions of the more common behaviour support systems; the author was commonly being asked to provide training in restrictive physical interventions.

Believing strongly in a proactive approach to the reduction of behaviour that challenges as opposed to reactive interventions or restraint, the author collaborated with long-time colleague Anthony Yearsley to develop the STAPLLE system – a proactive approach to support challenging behaviour in those on the autism spectrum.

Due to the high prevalence of challenging behaviour in people with autism (Holden and Gitlesen 2006, Matson and Nebel-Schwalm 2007) the STAPLLE toolkit and training programme was designed specifically to give parent carers the underpinning knowledge to allow them to plan how to tackle the frequent challenging incidents displayed by their children. This sits in line with Carr and Horner's (2007) vision for the future expansion of PBS, which outlines the need for training and be more specifically directed towards parents.

The National Institute for Health and Care Excellence (NICE) also highlights the necessity for appropriate training, as well as a call for behavioural assessments to take into account the resilience, skills and resources of carers or family members (NICE 2015). This was described as 'contextual fit' by Crone et al (2015) and the need for interventions to be contextual has also been identified in research (Lucyshyn et al 2002).

The author agrees with the findings of Lucyshyn et al (2002) as he found that some behavioural analysis tools and intervention strategies are too difficult to implement or too labour intensive to be successfully used in a family/home setting.

This viewpoint reflects the outcomes documented by McGrath (2013) about the

efficacy of behavioural interventions when implemented by paid carers, which concluded that complex or time-intensive interventions were more likely to lead to poor treatment integrity. Similarly, if carers do not feel the intervention will work or they do not fully understand why the strategies are being implemented, the interventions are increasingly likely to fail (McGrath 2013).

The author agrees with McGrath that compliance with planned interventions is often poor where there is a lack of knowledge or commitment to a strategy and a belief by paid carers that a behaviour is occurring for alternative reasons. Similar findings on carer attribution have also been reported by Williams et al (2012) and Wishart et al (2013).

STAPLLE was designed to offer parents and carers information about autism and challenging behaviour and a structured approach to plan behaviour support interventions. Offered as brief introductory 1 or 2-day sessions or a full 12-week programme, STAPLLE is designed to be a more accessible approach for parents than systems such as the IABA framework, which may be unsuitable for families due to its complexity – without a background theoretical knowledge of the principles being used, parental engagement with any planned interventions is low. Rolider et al (1998) support this view, finding that where descriptions of behavioural interventions were presented in a conversational style, rather than an overly technical manner, engagement with the intervention by the general public was much higher.

One of the main features of the STAPLLE behaviour support system is its accessibility and therefore it is easily implemented by parents and other non-clinical carers. STAPLLE uses similar techniques in behaviour analysis and assessment tools to IABA, however, without the focused skills of a trained behavioural analyst there are questions about whether STAPLLE's reliance on parent carers as mediators can be as effective when the necessity for training in PBS approaches is well documented (NICE 2015, Hanley 2012).

STAPLLE's initial 12-week programme was implemented in early 2014 and was attended by six parent/carer pairs: three were cohabiting parents and three were single parents supported by close family members or friends. This group of 12 was supporting six people with autism spectrum conditions (aged between 4 and 21) and two undergoing the assessment process (aged between 8 and 11). One parent left the programme in the second

week after being unable to regularly commit to the weekly 4-hour sessions. The remaining attendees of the full 12 weeks reported:

- » A marked decrease in the frequency and episodic severity of behaviour that challenges.
- » Increased community access.
- » Decreased stress and isolation.
- » Increased confidence in dealing with behaviour that challenges.

Although a second STAPLLE programme run in early 2015 found comparable results from a similar cohort, further research is needed to ascertain the efficacy of this system in comparison to other PBS systems, such as the IABA framework.

The STAPLLE toolkit

The STAPLLE toolkit consists of specifically designed tools to guide parents about which behaviour to focus interventions on, as well as basic sensory and autism assessment profiling tools. It also uses tools that are commonly used in IABA approaches, such as the descriptive ABC chart and the indirect observation of the Motivational Assessment Scale (MAS) developed by Durand and Crimmins (1992). Originally designed for use with clients who self-injure, the MAS is considered to be a psychometrically evaluated behaviour assessment tool (Sturmey 1994). Consisting of 16 seven-point Likert scale questions ranging from 'always' to 'never' the MAS aims to identify which of four motivators are driving a particular behaviour or desire:

- » To meet a sensory need.
- » To escape (or avoidance).
- » To seek attention.
- » To gain a tangible item.

The MAS is environment and behaviour specific, and non-invasive, and has been described by Spreat and Connelly (1996) as a simpler method for identifying behavioural motivators than a more time-consuming and complex functional analysis. For the STAPLLE behaviour support system, the author chose the MAS because of its ease of completion and scoring, and its ability to be used with a wide range of mediators, over other functional assessment scoring tools, such as the Questions About Behavioural Function (QABF) assessment (Paclawskyi et al 2000) or the Functional Analysis Screening Tool (FAST) (Iwata et al 2013).

Shogren and Rojahn (2003) found there to be little difference in reliability between the MAS and the QABF, and although the QABF has been shown to be more reliable than the FAST (Zaja et al 2011), no studies could be

found which compared the MAS and the FAST. However, it should be acknowledged that while the MAS is an excellent system requiring little training to help parents and professionals identify behavioural re-enforcers, it does not accurately recognise the true causes of behaviours since these are multifaceted. Also, the accuracy of the MAS, when completed by a lay-person, as opposed to a trained behaviour analyst, is questionable.

This concern is supported by Crawford et al (1992) who found that inter-rater reliability had a tendency to vary between settings and individuals. An inexperienced rater may fail to specifically define the behaviour being assessed and it has been the author's experience that often, during STAPLLE training sessions where the MAS is introduced to parents for the first time, they will define a behavioural descriptor as something similar to 'getting angry' or 'being aggressive,' rather than as an explicit action such as 'slapping' or 'biting,' even with explicit instruction and guidance.

Laypeople also appear to have difficulty isolating a behaviour to a specific location such as 'car' or 'kitchen' – the result of which is a tendency for assessments to indicate an even or average spread across all four motivators identified in the MAS.

Conclusion

This article has identified advantages and disadvantages of using the STAPLLE and IABA frameworks to assess behaviour. The assessment tools used in the STAPLLE toolkit are specifically selected to be implemented by non-professional carers – primarily parents of individuals with autism – so they must balance ease of use with reliability and validity. One of the instruments used by parents attending STAPLLE training is the MAS – further exploration of alternative assessment frameworks may be beneficial, particularly since the literature suggests that the MAS should be used in conjunction with other assessment methods to achieve effective levels of reliability and validity.

The use of multiple assessment processes is a vital component of the IABA framework. Unfortunately, most alternative assessment systems can be too complex or resource intensive for general use by families at their time of greatest need, often requiring the involvement of a professional behaviour analyst. STAPLLE's use of the MAS, ABC charts and specifically designed tools to guide and support family members in understanding the behaviours of those they support has been successful in helping families to reduce

the occurrence of challenging behaviours. STAPLLE toolkit's total reliance on the MAS and requirement for parent carers to self-assess the ABC chart data to measure behavioural

function is a problem. This means that further investigation and research to support the efficacy, reliability, and validity of the STAPLLE framework is needed.

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