

Definition and scope for positive behavioural support

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Abstract

Background: In light of forthcoming policy and guidance in the UK regarding services for people who display behaviour that challenges, we provide a refreshed definition and scope for positive behavioural support (PBS). Through doing this we aim to outline a framework for the delivery of PBS that is of practical and strategic value to a number of stakeholders.

Method and materials: We draw extensively on previous definitions of PBS, relevant research and our professional experience to create a multi-component framework of PBS, together with an overall definition and a breakdown of the key ways in which PBS may be utilised.

Results: The framework consists of ten core components, categorised in terms of values, theory and evidence-base and process. Each component is described in detail with reference to research literature and discussion regarding the interconnections and distinctions between these.

Conclusions: We suggest the framework captures what is known and understood about best practice for supporting people with behaviour that displays as challenging and may usefully inform the development of competences in PBS practice, service delivery, training and research.

Keywords: Positive behavioural support, definition, core concepts

Introduction

International evidence regarding challenging behaviour displayed by children, young people and adults with intellectual or developmental disabilities is strongly in favour of positive behavioural support (PBS) as a model of intervention. This now includes systematic and meta-analytic reviews of single-case and small group designs that demonstrate significant reductions (typically greater than 50 per cent) in challenging behaviour following PBS intervention (Carr et al, 1999; Dunlap and Carr, 2007; Goh and Bambara, 2013; LaVigna and Willis, 2012;). It also includes a smaller number of randomised trials, including a two-treatment study focusing on support for families in community settings (Durand et al, 2012) and a UK randomised controlled trial in which challenging behaviour displayed by adults with intellectual disabilities reduced by 43 per cent after PBS intervention compared with standard treatment (Hassiotis et al, 2009).

Whilst developments and implementations in the UK have generally advanced more slowly than those in the US, in the last ten years a variety of policy documents and professional guidelines have drawn on PBS as a model of best practice for supporting people who display challenging behaviour (British Psychological Society, 2004; Department of Health 2007; Royal College of Psychiatrists, British Psychological Society & Royal College of Speech & Language Therapists, 2007). At times these documents have also incorporated guidance from authors who either advocate alternative approaches to the management of challenging behaviour or embed the principles and procedures of PBS within broader recommendations in an attempt to reach a variety of audiences and serve a variety of aims.

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Current and forthcoming policy and guidance (Department of Health, 2012) may however afford an opportunity to describe use of PBS in a more explicit and detailed manner and with an emphasis that reflects its evolving evidence base. We feel this is of critical importance if PBS is to be implemented fully and effectively to support people who display challenging behaviour in the UK. Establishing a shared understanding will allow a range of stakeholders to be clear about when PBS has been demonstrated and when it has not.

In this paper, we present a definition of PBS that may usefully inform guidance to consumers, professionals, providers and commissioners in the challenging behaviour field. Our aim is that this paper will build on the conceptual model outlined by Hastings et al in this issue, complement the development of a PBS competency framework (discussed later in this issue by Denne et al) and form the foundation for assessing the integrity of research programmes, service developments and training courses that have aligned themselves with a PBS approach. Fundamentally, we assert that in the coming years those working within a PBS framework should be able to draw upon and demonstrate adherence to a core set of overlapping values, theories, evidence-based approaches and processes that are combined with the aim of achieving agreed outcomes.

Whilst multiple definitions of PBS exist (Allen et al, 2005; Carr et al, 2002; Horner et al, 1990; Horner, Sugai, Todd and Lewis-Palmer, 2000; LaVigna and Willis, 2005), a refreshed definition and scope for PBS that reflects research, practice and service structures in the UK appears timely. The following framework is drawn from existing literature and the professional opinion of the authors. We initially provide a working definition of PBS. This is followed by a summary of the scope for PBS implementation and a bullet-pointed breakdown of the key elements that make up the PBS framework. In the remainder of the paper we discuss each of these elements in further detail.

Overall definition and scope of positive behavioural support in the UK

Positive behavioural support is a multicomponent framework (Dunlap and Carr, 2007; LaVigna and Willis, 1992; MacDonald, Hume and McGill, 2010) for (a) developing an understanding of the challenging behaviour displayed by an individual, based on an assessment of the social and physical environment and broader context within which it occurs; (b) with the inclusion of stakeholder perspectives and involvement; (c) using this understanding to develop, implement and evaluate the effectiveness of a

personalised and enduring system of support; and (d) that enhances quality of life outcomes for the focal person and other stakeholders.

Scope for PBS

PBS may be implemented in at least three main ways:

- On a case-by-case basis by a single practitioner coordinating all elements of the framework and leading each stage of the process (e.g. Emerson et al, 1987; Toogood et al, 1994; Blunden and Allen, 1987)
- By professional teams where different professionals contribute to different elements of the PBS framework or process (e.g. Allen et al, 2005; Hassiotis et al, 2009)
- Through system-wide approaches whereby the PBS framework is implemented at varying levels of intensity via a tiered-model of prevention that covers an entire organisation or geographical area (Allen et al, 2005; Sugai and Horner, 2009; Allen et al, 2012)

PBS may be implemented in a range of *settings* that include:

1. Residential or small group homes (e.g. Grey and McClean, 2007)
2. Schools (e.g. Goh and Bambara, 2013)
3. Family homes and other community settings (e.g. Durrand et al, 2013)

PBS may be implemented to support people with a variety of needs including:

1. Adults, children and young people with intellectual or developmental disabilities (Carr et al, 1999)
2. Typically developing children and young people with other emotional and behavioural difficulties (Solomon et al, 2012)
3. People with other neurological conditions (acquired brain injury) who display behavioural difficulties (Rothwell, LaVigna and Willis, 1999)

However it is implemented, there are several core dimensions that differentiate PBS from other approaches. We consider PBS to consist of ten, overlapping elements that can be categorised in terms of values, theory and evidence base and process (see *Table 1*). These elements are summarised in the table below and discussed in further detail in the remainder of the paper. It is important to highlight that this table does not represent a 'menu' of options. Rather, as a multi-component framework, PBS necessitates the combined use of all of these elements, resulting in an approach that is considered to be greater than the sum of its parts.

Table 1: Key components of PBS

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| Values | 1. Prevention and reduction of challenging behaviour occurs within the context of increased quality of life, inclusion, participation, and the defence and support of valued social roles |
| | 2. Constructional approaches to intervention design build stakeholder skills and opportunities and eschew aversive and restrictive practices |
| | 3. Stakeholder participation informs, implements and validates assessment and intervention practices |
| Theory and evidence base | 4. An understanding that challenging behaviour develops to serve important functions for people |
| | 5. The primary use of applied behaviour analysis to assess and support behaviour change |
| | 6. The secondary use of other complementary, evidence-based approaches to support behaviour change at multiple levels of a system |
| Process | 7. A data-driven approach to decision making at every stage |
| | 8. Functional assessment to inform function-based intervention |
| | 9. Multicomponent interventions to change behaviour (proactively) and manage behaviour (reactively) |
| | 10. Implementation support, monitoring and evaluation of interventions over the long term |

Values

The development of PBS was driven by a number of human rights and values-based movements in the field of intellectual disability that have shaped how PBS makes use of existing technologies and develops these in practice (Carr et al, 2002; Dunlap, Sailor, Horner and Sugai, 2009; McGill and Emerson, 1992). These movements include social role valorisation (Wolfensberger, 1983), person-centred planning (see O'Brien and O'Brien 2002) and self-determination (Wehmeyer, Kelchner and Richards, 1996). Values that are consistent with these movements should be demonstrated in PBS by practices that reflect key principles as follows:

Prevention and reduction of challenging behaviour occurs within the context of increased quality of life, inclusion, participation, and the defence and support of valued social roles

PBS is concerned primarily with enhancing quality of life (Allen, 2005; Carr, 2007; Carr et al, 2002) as both an intervention and outcome for people who display challenging behaviour and those who support them. Use of behavioural technologies and other evidence-based approaches within PBS should therefore have the explicit aim of generating long-term lifestyle changes. In terms of outcomes, PBS should result in enhanced wellbeing and greater meaningful and valued participation in the community for the focal person and other stakeholders. These are not one-off outcomes or short-term demonstrations of behaviour change but positive changes in support and behaviour that are sustained and supported to evolve for a significant period of time (years rather than weeks or months).

Aligning interventions aimed at enhancing quality of life and engagement in community settings with a functional understanding of the challenging behaviour an individual displays will likely also serve a preventative role and be associated with reductions in that behaviour (Carr et al, 2002). Reductions in challenging behaviour are however considered to be a secondary gain within a PBS framework. The ultimate focus for intervention selection and implementation should concern quality of life changes that are centred on an individual's needs, preferences and active community participation.

Constructional approaches to intervention design build stakeholder skills and opportunities and eschew aversive and restrictive practices

Interventions and supports should be constructional (Goldiamond, 1974). This means explicitly aiming to increase the focal person's repertoire of adaptive behaviours and his or her range of positive life opportunities. Such interventions are likely to reflect person-centred goals and may include: helping individuals to experience more choice and control; increasing access to favoured and purposeful activities; developing meaningful and positive relationships with others; and enhancing physical and mental wellbeing (for an overview of specific strategies see Dunlap and Carr 2007; Emerson and Einfeld, 2011).

In a PBS framework, the design and implementation of these forms of intervention incorporate skills teaching and positive adaptations to the individual's physical and social environment through the application of behavioural

technologies (discussed below). In contrast PBS avoids the use of punishment or restrictive practices and aims to eliminate those that historically have been put in place through use of alternative technologies (Allen, 2002; Carr et al, 2002; LaVigna and Donnellan, 1986).

Stakeholder participation informs, implements and validates assessment and intervention practices

Consistent with person-centred values, the practice of PBS necessitates stakeholder participation in two ways (Carr et al, 2002): first, as agents of behaviour change; and second as persons for whom quality of life enhancements may form a part of the assessment and intervention process. Opportunities should be sought for those who support the focal individual (e.g. families and professional carers) and, where possible, the individual themselves, to come together to be consulted and supported, and to act as valued behaviour change agents throughout the PBS process.

Stakeholder input is essential to determine priorities and targets for support, to ensure the form of selected interventions and assessments are suited and achievable within the focal person's life context, and to validate the social significance of outcomes pursued (Dunlap et al, 2008). The behaviour and wellbeing of other stakeholders is also intricately connected to how challenging behaviour develops and is maintained for the focal person (see Hastings et al in this issue). Involvement of stakeholders as intervention implementers together with wider efforts to deliver training and direct support to staff and family carers is therefore also required to deliver the kind of durable changes characteristic of PBS (Dunlap et al, 2010; Binnendyk et al, 2009).

Theory and evidence base

An understanding that challenging behaviour develops to serve important functions for people

PBS is underpinned by a conceptual model that views challenging behaviours as functional, rather than a deviancy, diagnosis, mental health condition or deliberate attempt by the individual to cause problems for themselves or others (Hastings et al in this issue; Emerson and Enfield, 2011; Mace, Lalli and Lalli, 1991). PBS proposes that challenging behaviours represent an individual's best attempt to exert influence and control over their life. Challenging behaviour should therefore be primarily understood as learnt behaviour that develops and is maintained within (a) the context of an individual's abilities, needs (including their physical and mental

health) and circumstances and (b) properties of the social and physical environment(s) within which the behaviour occurs (see Hastings et al in this issue). Behaviour affects the environment, and the environment selects behaviour. Thus, behavioural function may be conceptualised as the product of interaction between the two.

Challenging behaviour often begins in childhood (Murphy, Hall, Oliver and Kissi-Debra, 1999; Totsika et al, 2011). By definition, it is difficult for children with a learning or developmental disability to acquire adaptive skills and positive communications in the same way that typically developing children do. Because of this, and other difficulties, such as physical health or sensory difficulties, adverse life experiences, and the behaviour of other people who support the child (Oliver, 1995; Carr, Taylor and Robinson, 1991), children with learning or developmental disabilities have an increased chance of acquiring other behaviours that serve important functions for them but may be classified as challenging by others (Sigafoos, Arthur and O'Reilly, 2003).

Research has established a clear understanding of the challenging behaviour displayed by people with learning disabilities throughout their lifetime. Challenging behaviour occurs in context, and the most direct way to establish the meaning or function of an individual's behaviour is to identify the circumstances in which it occurs; especially what happens before and after. There is considerable evidence to suggest that challenging behaviour amongst people with learning disabilities is often maintained by social consequences that follow the behaviour and relate to on-going interactions with caregivers (Iwata et al, 1994; Hastings, 2005).

However, the broader context also needs to be considered (McGill, 1999; Carr, 1994; Langthorne, McGill and O'Reilly, 2007). In particular, the likelihood of challenging behaviour is influenced by genetics (e.g. it is more likely in people who have particular genetic syndromes) (Arron et al, 2011). The probability of challenging behaviour may also be altered by the person's physical (Carr and Smith, 1995; de Winter, Jansen and Ewenius, 2011) or mental wellbeing (Allen et al, 2012; Emerson, Moss & Kiernan, 1999) and is more likely when individuals have a restricted capacity to otherwise influence their world (e.g. when the person has limited communication skills) (Durand, 1990; McClintock, Hall and Oliver, 2003). Often more than one of these kinds of factors contributes to the occurrence of a specific individual's behaviour, which means functional assessment and function-based interventions have to be person-centred and multi-component.

The primary use of applied behaviour analysis (ABA) to assess and support behaviour change

Debate surrounds the extent to which PBS is an extension or evolution of the founding tenets (Baer, Wolf and Risley, 1968) and practice of ABA (Cooper, Heron and Heward, 2007; Dunlap et al, 2008; Johnston et al, 2006). The functional model of challenging behaviour and the vast majority of assessment and intervention procedures central to PBS are however directly grounded in use of ABA, which is fundamental to how PBS should be defined and practised.

PBS conceptualises challenging behaviour within the four-term contingency of operant theory (Carr, 1994; McGill 1999; Toogood, 2011). As described above, challenging behaviour is understood as learnt behaviour that relates directly to antecedent events (including those that function as discriminative stimuli, motivating operations and less proximal, setting events) and reinforcing consequences (including those that are socially mediated and those that are automatic). PBS also uses assessment and data-collection methods (see below) that are based largely on behaviour analytic technologies and necessitates routine use of interventions (antecedent manipulations, skills and communication teaching) that stem from and are reliant upon competent use of ABA.

PBS attaches particular importance however to ecological and social validity (Carr et al, 2002) and of using behaviour assessment practices and intervention strategies that are closely aligned with the referral context (Albin, Lucyshyn, Horner and Flannery, 1996). The PBS approach demands high levels of flexibility and emphasises the use of natural assessment environments beyond explicit demonstrations of experimental control. PBS also is concerned with both micro and macro analysis and intervention, and commonly attempts to implement principles and strategies for behaviour change at multiple levels of a system (Dunlap et al, 2008; see also Allen et al in this issue). Whilst each of these elements may at times be reflected in the wider practice of ABA, they are considered as essential and defining features for how behavioural technologies are routinely utilised within a PBS framework.

Crucially, the application of behavioural technologies within PBS differs significantly from historic uses within behaviour modification, which was dominated by the use of specific, sometimes aversive, intervention techniques without a full understanding of the context underpinning the individual's behaviour (Carr et al, 2002; Horner et al, 1990). PBS also differs from parenting approaches that stem from social learning theory but which do not

correspond to a functional account of challenging behaviour (e.g. Webster-Stratton, 2001).

The secondary use of other complementary, evidence-based approaches to support behaviour change at multiple levels of a system

Whilst grounded in ABA, PBS incorporates use of additional approaches to help achieve the full breadth of its aims (Carr et al, 2002; Horner et al, 2008). Additional approaches must however be evidence-based and consistent with the functional account of challenging behaviour. Their use reflects an addition rather than substitution of ABA. This may include psycho-educational work, self-management or therapeutic interventions with carers (MacDonald and McGill 2013; Smith and Gore, 2011; Gore and Umizawa, 2011) and individuals who display challenging behaviour together with systems analysis to help formulate the wider context in which challenging behaviour operates and is maintained (Carr, 2007; Carr et al, 2002; McIntosh, Horner and Sugai, 2009). Hastings et al (in this issue) provide further guidance on when additional approaches (for instance mental health interventions) might be appropriately utilised as a functional intervention.

Process

A data-driven approach to decision making at every stage

The PBS process is values-led and data-driven (Carr et al, 2002). Each stage of assessment, intervention planning and implementation incorporates decision-making that is grounded in research literature relating to challenging behaviour and data that has been gathered about the focal person and his or her environment(s). Such an approach avoids clinical decision-making on the basis of personal opinion or circumstance and provides the most ethical and effective means of operating.

Functional assessment to inform function-based intervention

PBS requires personalisation of both assessment and support arrangements. Although the principles governing behaviour remain constant, no two people are the same and every referral situation is unique. The PBS process begins with a systematic assessment of when, where and how the individual displays challenging behaviour. The aim is to develop an understanding of behavioural function (i.e. how it helps the individual to cope better or exert some control over their immediate environment) to inform development of a multi-layered intervention plan. This process is often referred to as functional assessment or functional analysis (Iwata et al, 1982; Sprague and Horner, 1995; O'Neil et al, 1997; Beavers, Iwata and Lerman, 2013).

Functional assessment relies on methods derived from the field of ABA (e.g. direct behavioural observation), but will often incorporate other forms of data obtained from less direct means (e.g. rating scales and interviews). This exemplifies flexibility within PBS with regard to assessment practices as discussed above. At a minimum a good functional assessment provides a clear account of antecedents and consequences that accompany episodes of challenging behaviour, together with an appraisal of the broader context to ensure that other factors influencing the individual's behaviour are properly identified (Sugai, Lewis-Palmer and Hagan-Burke, 2000).

A critical skill set in behaviour analysis and PBS is the synthesis and interpretation of assessment data, and the subsequent formulation and elaboration of its meaning. Functional assessment addresses a two-part question: What function does this behaviour serve? Why does challenging behaviour and not some other behaviour serve this function? This part of the process demands an understanding of the social and material environment and is crucial for (a) developing intervention strategies that are consistent with the findings of assessment and (b) ensuring that all intervention components are consistent with one another.

Multi-component interventions to change behaviour (proactively) and manage behaviour (reactively)

PBS intervention plans are typically multi-component and devised by all persons with a stakeholder interest. Good quality plans are internally consistent and correspond precisely to a prior analysis and formulation of assessment findings (Sugai et al, 2000; Toogood, 2011; Willis, LaVigna and Donellan, 1993). Browning Wright, Gafferatta, Keller and Saren (2009) developed criteria in 12 areas for assessing the quality of written PBS intervention plans, which found clinical support in one independent evaluation (McVilly, 2013). At the very least PBS plans will include an operational definition of target behaviours and proactive strategies to: (a) increase stakeholder quality of life; (b) eliminate antecedent contexts likely to evoke challenging behaviour; (c) provide functionally equivalent alternatives to challenging behaviour; and (d) supply coping strategies and learning opportunities to reduce the likelihood of challenging behaviour occurring over the long term (Carr et al, 2002; LaVigna and Willis, 2005).

A lesser but important part of the plan should describe a range of reactive strategies to guide responses to challenging behaviour if and when it occurs (Allen, 2002; LaVigna and Willis, 2002). These strategies should be

the least restrictive and most effective available, focus on ways to reduce potential harm to the focal person and others, and minimise the risk of escalation of the behaviour.

Common threads in person-centred intervention plans include: individualised approaches to increasing skills and behaviours that may serve a similar function to challenging behaviour displayed by the individual (Durand, 1990; Tiger, Hanley and Bruzek, 2008); modifying the individual's physical and social environment to reduce antecedents associated with challenging behaviour and increase those associated with more adaptive alternatives (Luiselli and Cameron, 1998); and broader strategies to increase the individual's physical and emotional wellbeing together with opportunities to develop other positive behaviours in general (LaVigna and Willis, 2005; McGill, Teer, Rye and Hughes, 2005).

The PBS plan will often include strategies to support positive change in the wider system and improve stakeholder quality of life by attending to those contextual factors that are thought to influence challenging behaviour for the individual. This may include, staff training, psycho-education and emotional support for families and provision of additional services and resources.

Implementation support, monitoring and evaluation of interventions over the long term

PBS plans include clear guidance on how strategies will be implemented, by whom and by when (Horner, Sugai, Todd and Lewis-Palmer, 2000). Additional guidance together with training and modelling is typically required to support implementation of individual and multiple strategies. Monitoring systems are established early in the pathway so that progress with implementation can be reviewed periodically and the effectiveness of strategies evaluated (LaVigna, Christian and Willis, 2005; LaVigna, Willis, Shaull, Abedi and Sweitzer, 1994).

Monitoring systems typically include the continued use of data collected on the occurrence and non-occurrence of challenging behaviour together with quality-of-life indicators, and mastery of particular PBS strategies specified in the plan. Monitoring and re-implementation is often required over the long term as persons are expected to encounter deficiencies in the material and social environment more than once in their lifetime. Monitoring that translates into continuous evaluation enables prevention through early identification and intervention – effectively preventing or attenuating potential crises related to challenging behaviour.

While the outlook in PBS is inherently optimistic, it is worth noting that a plan is just a document consisting mainly of words on paper and, perhaps, ideas in people's minds. A plan is not an end in itself; rather, it is a device to guide implementation of what is usually a complex intervention. Implementation always requires behaviour change, by the focus person and by people who define the social environment of that individual – that is, families, friends, carers, staff, and professionals. Behaviour change tactics, such as reinforcement, are likely to be needed in equal measure to support behaviour change among those persons as for individuals designated as the focus person.

Discussion

In this paper we have provided a refreshed definition of PBS that draws upon previous literature and our experience of supporting people who display behaviour deemed as challenging. Our aim here has not been to provide a radically new definition of PBS but to more clearly categorise key components of a framework that may usefully inform service delivery, clinical practice, training, commissioning and research. In doing this we have emphasised the need for a multi-component approach that consistently reflects knowledge, skills and actions drawn from each and every element of the framework. From this standpoint we argue that services, practitioners or trainers that are unable to implement one or more of these elements (be it the use of ABA, stakeholder participation or the development of multi-component interventions) are by definition not operating within a PBS framework. Clearly this has implications for how competencies in PBS may be supported in the future (see Denne et al in this issue).

Two further points are important to note in relation to the definition of PBS we have outlined and how this is drawn upon in the future. Firstly, PBS is both an evolving and

inherently creative approach to providing support and services. There is perhaps some risk that the framework presented here could be used in an overly prescriptive manner that hampers rather than facilitates the development of innovative ways to provide support to those with behaviour that challenges. This is certainly not our intention. Rather, we have attempted to highlight what PBS in a UK context should currently include, based on the existing evidence-base and professional opinion. It is conceivable that the framework will be expanded in the future to incorporate further evidence-based practices for supporting those with behaviour that challenges and organising systems of support as these emerge in the research literature. We would suggest however that developments will need to be consistent with how PBS is defined in this paper, and not serve to replace or minimise the core components of this framework.

Secondly, there is considerable overlap between the components described in the framework. It is important to note that we are not suggesting that these components have been developed in complete isolation from one another or never coincide in the professional practice of clinicians who may not define their work in terms of PBS. This is particularly salient when considering some of the elements we have categorised in terms of process (i.e. functional assessment) and some that we have categorised in terms of theory and evidence-base (i.e. ABA). We have tried to describe some of the theoretical and technological inter-connections and distinctions between elements that provide some rationale for how the framework is presented. Ultimately however these categories have been devised for pragmatic purposes, with the overriding aim being to create a framework that is clear to a range of stakeholders and functions in a way that improves the quality of life for people who display behaviour that challenges and those that support them.

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