Positive behavioural support as a service system for people with challenging behaviour

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Abstract
Challenging behaviours amongst people with learning disabilities are a major concern for carers, clinicians, and policy-makers. Services frequently fail to deliver optimum care practices for this user group, yet there is now considerable evidence as to what components are required to constitute an effective service. This article promotes positive behavioural support as an over-arching service model, and describes how it can help address the needs of members of this population and those who support them.

Keywords challenging behaviour; positive behavioural support; service systems

The epidemiology of challenging behaviour
Challenging behaviours such as physical aggression, self-injury, and destructiveness affect 3–6 people with learning disability per 10,000 in the general population. This translates to there being between 20,000 and 40,000 people displaying such behaviours within the UK. Challenging behaviours often first appear in childhood and, in the absence of effective intervention, tend to be enduring; prevalence increases throughout childhood, most notably in adolescence, and peaks in early adulthood. These behaviours are positively correlated with increasing severity of learning disability and with the presence of secondary disabilities, most notably communication and mobility problems.

The impacts of challenging behaviour are many and varied. For the person displaying the behaviour, these include significantly reduced quality of life, exclusion from services and communities, injury, increased risk of physical abuse from carers, and regular exposure to restrictive interventions (such as physical restraint and seclusion). The impacts for those who care for people with challenging behaviour similarly include the risk of a reduced quality of life, increased burdens of care and financial impacts, and impaired physical and mental health. For those who commission and provide services, challenging behaviour frequently highlights and exacerbates fractures in service provision, often resulting in scandals and exposés. It frequently leads to escalating service costs, and may lead to an increased use of out-of-area placements. The latter are often in larger, institutional-scale services that fly in the face of the public sector institutional closure programme and run counter to the principles of community care. Given its various impacts and cost implications, challenging behaviour in this population therefore represents a very significant clinical and fiscal problem.

Causation
Challenging behaviour is the result of multiple influences that include social, biological, and environmental factors. It has been shown to be associated with indicators of social deprivation and specific aspects of family functioning. A range of behavioural phenotypes are also known to increase the risk of challenging behaviour, although the strength of these associations varies significantly from syndrome to syndrome, and most syndromes are in themselves relatively rare. Phenotypic research has, however, suggested that specific neurobiological mechanisms may also underpin some forms of challenging behaviour. Disturbances in a number of neurotransmitter systems have, for example, been implicated in self-injurious behaviour.

Although it is improbable that the majority of challenging behaviours are caused by underlying functional psychiatric disorder, for some individuals the presence of mental ill-health may act as an important setting condition for such behaviour. By contrast, there is a substantial body of research which shows that challenging behaviours may be responses to particular environmental states and that they can be maintained by a variety of positive (e.g. increased levels of stimulation, carer attention, food, drink, etc.) and negative (e.g. reduced stimulation, demands, pain) reinforcers. In the presence of the skills deficits associated with severe learning disability, challenging behaviour may represent an individual’s most effective means of exerting some control over their environment; it is therefore not surprising that challenging behaviours may be more prevalent in environments that are institutional, barren, and unstimulating.

Importantly, even where there may be acknowledged neurobiological drivers for challenging behaviour, environmental variables are known to moderate their impact. Thus, self-injury shown by children with Cornelia de Lange syndrome has been shown to be influenced by environmental setting events. Similarly, it has been demonstrated that self-injury shown by people with Rett syndrome was maintained by automatic sensory stimulation or escape from social contact, and suggested that the features of the syndrome established conditions under which the impact of environmental influences was maximized. The implication of all the above points is that challenging behaviours require an integrated approach to assessment and intervention that can take account of pre-disposing risk factors, gene—behaviour relationships, and the immediate behavioural contingencies operating in care environments.

Key service objectives
Further to the above, any service supporting people with challenging behaviour needs to be able to meet a number of objectives. Specifically, it has to:

- Support people with learning disability to achieve behavioural change
- Manage risks
Positive behavioural support

PBS emerged from the acrimonious debate on the use of aversive behavioural procedures that took place from the late 1980s to the early 1990s. Central to this debate was the high rates of use of punitive behavioural interventions for challenging behaviour at that time, something of a cause for concern given the comparable efficacy of non-aversive strategies. A significant contributing factor to this trend was the lack of an overall values base to guide the application of technologies derived from the field of applied behaviour analysis.7 PBS addresses this deficit by combining the tools of behavioural intervention with the values base of social role valorization (and its emphasis on achieving community presence, participation, increased respect, improving relationships, and developing personal competencies) and the individual focus of person-centred planning (Figure 1). As such, it fits well with the aspirations of all national policy statements for people with learning disabilities within the UK.

In response to its historical origins, PBS rejects the use of aversive behavioural interventions in favour of strategies that focus on changing antecedent conditions that trigger difficult behaviour, developing skills as an alternative to such behaviour, and using differential reinforcement to shape more adaptive behaviours. An outline of a PBS model and some example of intervention strategies are shown in Table 1.

Although its central therapeutic stem is clearly behavioural, PBS is also an inclusive approach that blends best practice in behavioural, educational, and ecological practice; it also acknowledges and incorporates the importance of gene—behaviour relationships and the role of internal physical or psychological states as drivers for behaviour.8,9 Importantly, while PBS majors on preventive strategies for changing behaviour, it also incorporates strategies for managing such behaviours when they occur.10 This is crucial because, by definition, challenging behaviours typically pose a degree of risk either to the person themselves or to those who care for them, and these risks need to be managed effectively and ethically. Finally, PBS also attends to the needs of those charged with implementing intervention strategies and the organizational supports required to deliver the approach in practice (see Figure 1). The remainder of this article therefore explores how PBS can be used as a therapeutic and organizational model for addressing the key service objectives specified earlier.

The role of positive behavioural support in meeting service objectives

Achieving behaviour change

The overall utility of behavioural interventions for challenging behaviour has been repeatedly demonstrated by a series of meta-analytical studies. One such analysis11 focused exclusively on PBS interventions and examined 109 published articles that featured a total sample of 230 participants and 366 different interventions. The review found that 90% or more reductions in behaviour from baseline levels were achieved in 52% of interventions, and 80% or more in 68% of interventions. Positive findings were also reported in relation to generalization of change across settings and intervention agents, and successful maintenance for up to 2 years; only a minority of studies reported data on the latter, however. Changes in levels of adaptive behaviour were also reported in a small number of studies. Subsequent research has confirmed the value of PBS as a behaviour change intervention.12,13

Managing risk

Evidence on the use of emergency reactive strategies for managing challenging behaviour is scant in comparison to that of behaviour change interventions. This is of major ethical concern given the high use of physical interventions, emergency medication, and seclusion with this population. There is now significant UK guidance available on the use of such procedures.14,15 There is also limited evidence to show that improving training and approaches to physical intervention can reduce carer and service user injuries16 and help to insulate against placement breakdown.17 Strategic organizational approaches to restraint reduction have also been shown to be effective.18

Improving quality of life

Improving quality of life is both an outcome and an intervention in PBS. Achieving broad-based ecological change (e.g. in residential or educational programmes) is an important strategy given that inappropriate environments often have a major role to

Figure 1 The components and outcomes of positive behavioural support.
### Examples of positive behavioural support strategies

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<th>Strategy type</th>
<th>Role</th>
<th>Examples</th>
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| **Primary prevention** | To reduce the likelihood of challenging behaviour occurring by altering or removing known personal or environmental triggers | Developing a supported employment placement for a person whose destructive behaviour appears to be triggered by long periods of inactivity at their day centre  
Introducing a sleep hygiene programme for a person whose self-injury is worse when their sleep is poor  
Treating an underlying depressive state in a person who uses aggression to escape from demands when in a low mood  
Teaching a person who has limited communication to sign when they wish to take a break from activities as an alternative to them having to hit their head to achieve the same outcome; routinely offering them more help during tasks; and shortening the periods between their normal breaks  
Increasing a person's rate of access to preferred reinforcers on a non-contingent basis  
Using a reward system with a person who normally engages in high-frequency destructive behaviour for set periods of time that they are free of such behaviour  
Teaching coping skills to someone who frequently gets distressed when they are asked to wait for their food; providing them with non-fattening mini-snacks at regular intervals between main meals  
Placing demands that a person finds difficult between a series of those that they don't |
| **Secondary prevention** | To prevent serious episodes of challenging behaviour occurring by spotting precursor signs and indicators that the behaviour may be about to occur and then intervening early before it does | Immediately removing known triggers for challenging behaviour  
Diverting the person to an activity that they find highly compelling or reinforcing  
Prompting the person to use coping skills developed via anger management training  
Using as-required medication proactively to reduce arousal |
| **Reactive** | To respond quickly, effectively, and ethically to episodes of serious challenging behaviour that are not preventable | Increasing personal space so as to avoid kicks and blows  
Utilizing evasive procedures to escape grabs  
Applying minimal restraint in a safe, seated position |
play in the genesis of challenging behaviour. A number of studies have evidenced the greater quality-of-life gains associated with accommodating people who challenge within smaller-scale community services compared with more traditional institutional models, and of moving individuals from the latter to the former. Although improvement in lifestyle was reported as a key variable in only a minority of the studies reported in the PBS meta-analysis, the same analysis demonstrated that making changes to the ecology of the intervention setting, for example by systematic personal changes, enhancing activity levels, and improving the fabric of the physical environment, resulted in improved success rates for intervention overall.

Improving the competence of carers in key clinical skills

For the most part, interventions for people whose challenge are implemented by their normal carers as opposed to skilled experts. This is, in part, an economic model, as greater cost-benefits are associated with this approach in that interventions can be delivered to more individuals than would be the case in an 'expert only' intervention service, but it is also theoretically sound in that paid or family carers will exert greater behavioural influence than an external expert by virtue of the control they are able to exert over immediate environmental contingencies. This position is validated by the finding that paid or family carers have higher success intervention rates than external agents. There is also a growing body of evidence that that carers can successfully be taught the skills of PBS and, more critically, implement these effectively with service users.

Improving the emotional well-being of carers

Carers supporting people who challenge may experience a range of strong and essentially negative emotional reactions. Failing to address this emotional impact is one factor that potentially militates against the implementation of effective interventions; it may also contribute to the increased use of aversive or restrictive procedures, help fuel service user abuse, and precipitate the increased physical and mental health problems experienced by carers. Another important feature of PBS, therefore, is that it pays considerable attention to the functioning of those who mediate carers. Another important feature of PBS, therefore, is that it pays considerable attention to the functioning of those who mediate carers. Another important feature of PBS, therefore, is that it pays considerable attention to the functioning of those who mediate carers.

Improving organizational competence

Despite the positive research cited, behavioural interventions can be notoriously difficult to implement and sustain. This is partly due to a frequent failure to attend to the variables discussed in the previous section, but it also reflects an almost systemic failure to attend to the importance of management in human services. There are now some good generic management toolkits for managers in such services, and advocates of PBS have also begun to develop management tools that are specifically designed to support the use of this approach in practice. The Periodic Service Review, a quality assurance system that can be employed effectively to support the reliable implementation of behavioural interventions, is perhaps the most well known of these, and a small number of studies have now begun to appear that are providing some empirical evidence of the use of this approach in practice.

Conclusion

Challenging behaviour in people with learning disabilities poses clear problems to any service system. Despite many services claiming to provide expertise in supporting this user group, few can actually evidence this when required to do so. The central tenet of this article is that it is possible to identify a formulaic service structure that would address many of the challenges posed by behaviours such as aggression and self-injury, and that PBS provides a sound over-arching model for doing so. At the present time, however, there are very few services in the UK that deliver the specified components, all of which are probably necessary, and none sufficient to produce high-quality outcomes. Resolving this situation requires that the importance of the formula outlined is acknowledged in policy statements and commissioning specifications, that clinicians develop the necessary skills to support its implementation in practice, and that service providers are able to demonstrate their adherence to it. The fact that the political and financial levers required to effect such a change exist is not in doubt; whether they will be used is unfortunately much more open to question.

REFERENCES


Practice points
- Exploring the epidemiology of challenging behaviour in people with learning disabilities is a useful starting point in identifying the requirements of high-quality services.
- PBS provides a model for meeting these requirements.
- PBS focuses on helping to change and manage difficult behaviours, and also on the well-being of carers and the organizational supports required to sustain effective intervention.
- All of the components of PBS are likely to be necessary rather than sufficient conditions for effective services.

Further Reading

A notable publication that seeks to promote the kind of 'joined up' approach to challenging behaviour advocated in this article.


(A useful series of accounts about how PBS can also be applied in family setting.)


(A special issue on PBS.)

ASSESSMENT & MANAGEMENT