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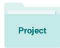

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Implementing positive behavioural support: changing social and organisational contexts

David Allen, Peter McGill, Richard P Hastings, Sandy Toogood, Peter Baker, Nick J Gore and J Carl Hughes

Abstract

Background: Social and organisational contexts have a major influence on both challenging behaviour and interventions designed to ameliorate such behaviour and improve quality of life.

Method and materials: A non-systematic review was conducted in order to identify social and organisational factors that impact upon positive behavioural support (PBS) intervention.

Results: A series of micro and macro influences on intervention effectiveness were identified. Possibilities for improving intervention effectiveness that extend the scope of traditional behavioural interventions were discussed.

Conclusions: Implications and opportunities for building capacity at an individual service user, organisational and cultural level are highlighted.

Keywords: Positive behavioural support, PBS, mediators, organisation, capacity building.

Introduction

Though once seen as an almost inevitable concomitant of intellectual disability, challenging behaviour is now recognised to be the product of a complex interaction between biological, developmental and environmental factors (Hastings et al, this issue; Langthorne et al, 2007). This understanding is central to the concept of challenging behaviour itself, the term being intended to emphasise that:

> *'… such challenges represent challenges to services rather than problems which individuals ... in some way carry around with them.'*
> (Blunden and Allen, 1987, p. 14)

Support for this concept has come from research which has repeatedly demonstrated that certain immediate ('micro') characteristics of the social environment (such as social distance and aversive stimulation) underpin the motivation for much challenging behaviour (McGill, 1999). On a broader ('macro') level, the absence of sufficient capability and capacity in systems to support people with challenging behaviour has been shown to be a key organisational determinant of family/service breakdown and subsequent out of area placement (Goodman et al, 2006; Phillips and Rose, 2010). The desire to build such capability and capacity has therefore been at the heart of UK policy for several decades. This is evident in the Mansell Report (Department of Health, 2007) and in the more recent response to the Winterbourne scandal (Department of Health, 2012). A person's immediate and broader environments therefore play a significant role in determining both whether challenging behaviour is presented in the first place and the service pathway followed thereafter (Allen, 1999; Hastings et al, this issue).

While achieving behavioural change has been repeatedly demonstrated at an individual service user level within the research literature, being able to implement and sustain behavioural support at the volume required to meet the needs of all those who present with challenging behaviours is a critical objective that the field has historically failed to meet. In reviewing the commonalities and differences between applied behaviour analysis (ABA) and positive behavioural support (PBS), Dunlap et al (2008) noted that one distinguishing feature of the latter is its desire to make behaviour change strategies more effective in 'complex settings and at multiple levels and larger scales of implementation' (pp. 688–89) such as 'local, regional, and statewide programs' (p. 690). Carr (2007, p. 4) also suggested that 'the central independent variable in PBS is systems change' and there is some limited evidence to suggest PBS interventions that include a focus on achieving such change are more effective (Carr et al, 1999). This has led to the use of concepts from the organisational psychology

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literature to supplement and support more traditional person-centred behaviour change strategies.

This paper will review a number of ways in which this shift of emphasis is evident and make recommendations for future practice and research. Its structure follows a micro to macro intervention theme, focussing initially on family and staff members and then progressing to consider issues relating to larger systems of service delivery.

Mediator analysis and intervention

The importance of employing a service user's natural carers as agents of behavioural change has long been recognised. Ayllon and Michael (1959) described trained nurses in mental health services as 'behavioural engineers' in order to help support people with psychosis or intellectual disability change their behaviour. Ten years later, Tharp and Wetzel's (1969) seminal text *Behaviour Modification in the Natural Environment* made the case that the increasing creation of specialists in mental health services ignored some of the greatest and most powerful resources,

> *'… the client's natural relationships, with their extraordinary potential for generating behaviour change; and talented sub-professionals, with their energy and enthusiasm.'* (p. 2)

They went on to argue that, since ABA was concerned with the relationship between people and their environments, the obvious location for meaningful intervention was the person's natural environment rather than a contrived setting (such as a specialist treatment unit or clinic). Such artificial settings were seen as inappropriately founded upon a medical model which failed to take into account natural contingencies. Tharp and Wetzel described an alternative, triadic model of working in which behavioural consultants sought to influence and shape the behaviour of mediators who, in turn, influenced and shaped the behaviour of target service users. They defined consultants as 'anyone with the knowledge', mediators as 'anyone with the reinforcers' and target service users as 'anyone with the problems'.[1] The triadic model was built upon consultants giving away skills to individuals in close daily contact with the person displaying challenging behaviour, thus making both clinical sense (in that these individuals would have the greatest influence over the challenging behaviour) and economic sense (in that delivering intervention via immediate carers made greater use of scarce professional time).

The introduction of PBS has been accompanied by a renewed interest in the variables that impact on the mediators of behavioural support plans (families, care staff, and professionals) and on their ability to implement such plans effectively (Allen, 1999; Hastings et al in this issue). It has been clearly shown that PBS skills can be taught to both professional and front-line carers and with notable resulting impacts for service users (LaVigna and Willis, 2012; MacDonald and McGill, 2013). Carr et al's (1999) meta-analysis of PBS interventions found that the success rate associated with natural carers was higher than that obtained by external intervention agents and that interventions conducted in natural settings were as effective as those in more controlled ones. Interventions that required significant change in the behaviour of others were also associated with higher success rates. A further meta-analysis by Harvey et al (2009) also found that changes of this type in the micro-systems supporting service users were associated with better outcomes, particularly for inappropriate social and destructive behaviour. The latter study found no increased intervention effects as a result of involving family or peers, though the authors suggested that once challenging behaviour has responded to more intensive intervention efforts (such as functional communication training) multiple mediators in different contexts can generalise intervention effects through less intensive strategies (such as praising attempts at communication) that are more easily deliverable in natural settings.

It is of concern that the outcome literature for training in one aspect of PBS, namely reactive strategies (distraction techniques, defensive breakaway procedures, restraint etc), is very limited and generally of low quality (Allen, 2001; McDonnell, 2009). This dearth of research is a particular concern given the extent to which such procedures are known to be employed with this population (Emerson, 2002). There is limited evidence, however, that both family (Hawkins et al, 2011) and paid carers (McDonnell, 2009) can be effectively trained in these skills.

Although Tharp and Wetzel (above) recognised and discussed various 'resistances' which may impede the implementation of a triadic approach, it has become readily apparent that achieving effective implementation in natural settings can be problematic (Woods and Cullen, 1983; Emerson and Emerson, 1987; Holburn, 1997; Praill and Baldwin, 1988; Ager and O'May, 2001; Bambara et al, 2009). It is therefore not surprising that effective consultancy (McGimsey et al, 1995) and team-work

[1] This description, while pithy and pertinent to the current analysis, is, of course, outdated in its location of the 'problems'within the service user.

skills (Bambara et al, 2001) need to be taught to relevant professionals in addition to behavioural skills (see Denne, this issue) in order to maximise intervention effectiveness.

Concepts such as assessing and improving the goodness of fit between the capacity and capability of mediators and the demands placed on them by behavioural assessment and intervention procedures have emerged from the now substantial literature on implementing PBS in family settings (e.g. Bambara et al, 2004; Lucyshyn, Dunlap and Albin, 2002). Albin et al (1996) suggested that the contextual fit of behaviour support plans in family settings is determined by variables associated with the focus person (identified via the process of functional assessment and including strengths and skills, triggers for behaviour and functions served), implementer variables (family goals and values, strengths and skills, resources and supports available, stressors that may impede implementation) and setting/systems variables (daily, weekly, seasonal activities; adaptability of immediate and extended family; stage of the family lifecycle). PBS plans are viewed as having a good contextual fit when they match family goals and values, are compatible with family resources, and embedded into existing routines and activities. Lucyshyn et al (2002) suggest that under these conditions, commitment to change, implementation fidelity, plan maintenance and generalisation are improved.

The fact that challenging behaviour generates stress for carers is regarded by some as one of its defining features (Zarkowska and Clements, 1996) and it might therefore be predicted that interventions that addressed carer stress might also enhance the impact of behavioural intervention for challenging behaviour. There is some limited evidence to support this hypothesis. In a randomised controlled trial involving 54 families, Durand et al (2013) used an adapted version of Seligman's (1998) optimism training for parents and compared the effects of PBS alone with PBS plus optimism training. Both training interventions produced significant change, but adding optimism training resulted in even greater reductions in child problem behaviour as compared to the PBS alone group. The authors suggest that the results demonstrate that parents were given new cognitive tools for interpreting their child's behaviour in a more positive light. Singh and colleagues (Singh et al, 2006a; Lancioni et al, 2007) have similarly shown that providing mindfulness training to parents can reduce challenging behaviour in children with developmental disabilities and autism.

Comparable effects have also been shown with carers of adults with challenging behaviour. Singh et al (2006b) employed a multiple-baseline design across community group homes to measure the impact of training in behavioural intervention followed by mindfulness training. The number of staff interventions for aggression showed some reduction from baseline levels following behavioural training but decreased substantially following mindfulness training. Goals achieved by service users showed a similar pattern. In a further study on 23 staff in four group homes, Singh et al (2009) showed that the introduction of mindfulness training was followed by a progressive decrease in the use of restraint, with almost zero rates being recorded by the end of the study. The use of physical restraints was correlated with new admissions and on-call staff who had not received training in mindfulness. The use of medication, staff injuries and peer injuries also decreased.

Though this is a relatively new and under-researched area of work, it offers great promise as a potential mechanism for maximising the impact of behavioural strategies. It also represents a practical manifestation of the commitment towards stakeholder involvement that Gore et al. (this issue) describe as being characteristic of PBS.

Increasing capability

The growing interest in mediators and the role they play in supporting more effective intervention inevitably draws attention to behaviours that might prevent challenging behaviour arising in the first place or substantially ameliorate its impact. *Table 1* attempts to provide as comprehensive a summary as possible of the behaviours that, if displayed by mediators in the natural environment, are likely to be associated with reduced rates and severities of challenging behaviour. Environments (families, schools, social care providers etc) which are populated by mediators behaving in these ways might be thought of as more 'capable': more able to prevent challenging behaviour, more resilient in a crisis and more able to provide individuals with the long-term support that will sometimes be required (Mansell et al, 1994). Capable environments will not arise or be sustained without considerable effort. The behaviours outlined in *Table 1* draw attention to one aspect of the wide range of competencies required by successful mediators (see Denne et al in this issue). Such mediators will also need to be effectively led and supported by individuals with administrative competence and the skills to lead all aspects of capable practice. This kind of 'practice leadership' (Deveau and McGill, in press) is increasingly being seen as a crucial element of effective service provision.

Table 1: Mediator behaviours that may prevent or reduce challenging behaviour

Behaviour	Description	Why is this important?	Illustrative supporting evidence
Positive social interactions	Mediators like the person and interact (speak, sign, physically, etc) frequently with them in ways that the person enjoys and understands.	In situations where the person receives unconditional, positive social interactions they are less likely to display challenging behaviour to obtain social interaction; mediators who establish good relationships with individuals can embed any necessary less positive interactions (e.g. physical care that may be uncomfortable or distressing). Most people (with and without learning disabilities) want to receive positive social interactions from those around them.	Non-contingent social interaction reduces challenging behaviour maintained by attention (Carr et al, 2009).
Support for communication	Mediators communicate in ways the person understands and are able to notice, interpret and respond to the person's own communications whether indicated by speech, sign, gesture, behaviour or other. This support for communication is seen across all areas of the person's life and people are supported in rich communication environments. This knowledge of communication is shared across environments and with unfamiliar communication partners (e.g. through the use of communication passports).	Challenging behaviour is less likely when the person understands and is understood by those around them. Most people (with and without learning disabilities) want to communicate with those around them, especially those they are close to.	Both receptive and expressive communication are strongly associated with severity of challenging behaviour in children with developmental disabilities (Sigafoos, 2000).
Support for participation in meaningful activity	Mediators provide tailored assistance for the individual to engage meaningfully in preferred domestic, leisure, education/work activities and social interactions. Assistance meaningfully employs speech, manual signs, symbols or objects of reference as appropriate.	Challenging behaviour is less likely when the person is meaningfully occupied. Skilled support ensures that they can participate at least partially even in relatively complex activities so that they learn to cope with demands and difficulties that might otherwise provoke challenging behaviour. Most people (with and without learning disabilities) like to be busy.	Person-centred active support reduces the severity of challenging behaviour (Beadle-Brown et al, 2012).
Provision of consistent and predictable environments which honour personalised routines and activities	Mediators support the person consistently so that the person's experience is similar no matter who is providing the support. Mediators use a range of communication and other approaches tailored to the individual (e.g. visual timetables, regular routines) to ensure that the person understands as much as possible about what is happening and about to happen.	Challenging behaviour is more likely when the person is supported inconsistently or when in transition between one activity/ environment and another activity/ environment. Most people (with and without learning disabilities) value consistent and predictable support.	Activity schedules decrease challenging behaviour in children and young people with autism spectrum disorders (Lequia et al, 2012).

Behaviour	Description	Why is this important?	Illustrative supporting evidence
Support to establish and/ or maintain relationships with family and friends	Mediators understand the lifelong importance to most people of their family, and the significance of relationships with others (partners, friends, acquaintances etc). Mediators actively support all such relationships while being aware of the risks that sometimes arise in close or intimate relationships.	Challenging behaviour is less likely when the person is with family members or others with whom they have positive relationships. For most people (with and without learning disabilities), relationships with family and friends are a central part of their life.	Challenging behaviour is less likely where there is good rapport between individuals and their mediators (Magito-McLaughlin and Carr, 2005).
Provision of opportunities for choice	Mediators ensure that the individual is involved as much as possible in deciding how to spend their time and the nature of the support they receive from the relatively mundane (e.g. choice of breakfast cereal) to the rather more serious (e.g. who supports them).	Challenging behaviour is less likely when the person is doing things that they have chosen to do or with people that they have chosen to be with. Most people (with and without learning disabilities) value the opportunity to decide things for themselves.	Offering choices between activities reduces challenging behaviour of children with autism spectrum disorders (Rispoli et al, 2013).
Encouragement of more independent functioning	Mediators support the individual to learn new skills, to try new experiences and to take more responsibility for their own occupation, care and safety.	The development of new skills and independent functioning enables the individual to have more control over their life. Most people (with and without learning disabilities) like to be independent.	Teaching individuals functional communication skills reduces the occurrence of challenging behaviour (Kurtz et al, 2011).
Personal care and health support	Mediators are attentive to the individual's personal and healthcare needs, identifying pain/discomfort, enabling access to professional healthcare support where necessary and tactfully supporting compliance with healthcare treatments.	Challenging behaviour is less likely when the individual is healthy and not in pain or discomfort. Most people (with and without learning disabilities) attach the highest possible value to 'good health' and want to receive personal support in dignified ways.	Challenging behaviour is more likely when individuals are in pain or suffering from a number of different health conditions (Kennedy and O'Reilly, 2006).
Provision of acceptable physical environment	Mediators support the individual to access and maintain environments which meet the individual's needs/ preferences in respect of space, aesthetics (including sensory preferences), noise, lighting, state of repair and safety.	Challenging behaviour is less likely in the absence of environmental 'pollutants' (e.g. excessive noise). Most people (with and without learning disabilities) want to live and work in safe, attractive environments where they feel at home.	Exposure to poverty increases the risk of conduct problems in children with intellectual disabilities (Emerson, Einfeld and Stancliffe, 2010).
Mindful, skilled mediators	Mediators understand both the general causes of challenging behaviour and the specific influences on the individual's behaviour. They draw on the expert knowledge of the individual's family and friends to improve their understanding. They reflect on, and adjust, their support to prevent and/ or quickly identify circumstances that may provoke challenging behaviour.	Challenging behaviour is less likely when mediators understand its causes and do not take it as personally directed at them. Most people (with and without learning disabilities), when in situations where they require support, want their mediators to attend to and know what they are doing.	Training family mediators in mindfulness leads to reductions in the challenging behaviours of their autistic children (Singh, Lancioni et al, 2006).

Increasing capacity – whole-system PBS intervention

As stated in the introduction, the ability to scale up behavioural intervention to the point that all individuals presenting with challenging behaviour are effectively supported is a major challenge. There are good examples, however, of developments in this direction.

In North America, the whole-system use of PBS to address disciplinary problems in schools for non-learning disabled children has received considerable practice and research attention (Crone and Horner, 2003). For example, Luiselli et al (2005) described the implementation of a whole-school model that included the following key components: improving instructional methods, formulating behavioural expectations, increasing classroom activity engagement, reinforcing positive performance, and monitoring efficacy through data-based evaluation. The intervention was associated with decreased discipline problems (office referrals and school suspensions) over the course of several academic years as compared to baseline. Student academic performance, as measured by standardised tests of reading and maths, also improved with the introduction of the intervention. Bradshaw et al (2010) used data from a five-year longitudinal randomised controlled effectiveness trial of school-wide PBS conducted in 37 elementary schools to evaluate the impact of training on implementation fidelity as well as student suspensions, office discipline referrals, and academic achievement. The results showed that schools trained in systems-wide approaches implemented the model with high fidelity and experienced significant reductions in student suspensions and office discipline referrals. McIntosh and Bennett (2011) showed that the introduction of school-wide PBS in high-implementing schools decreased levels of problem behaviour, the numbers of students at risk for significant behaviour challenges, and increased academic achievement and positive student perceptions of school. Though these studies are not dealing with intellectually disabled populations and, arguably, deal with less severe difficulties and more limited aspirations, it is the principle of a whole-organisation approach which is important here and its potential generalisability to other populations and service settings.

Allen (2011) reviewed the literature on the organisational variables most frequently associated with achieving successful reductions in the use of restrictive practices such as restraint, as required medication and seclusion. These were found to be: the provision of effective leadership, the involvement of service users, the development of capable environments and effective programmatic structures, the provision of clear crisis management strategies, attention to mediator variables and training, learning from critical incidents and data-driven quality assurance. It was proposed that applying PBS in a systemic, organisational framework would deliver many of the key variables that have consistently shown to be associated with achieving large scale reductions in the use of restrictive procedures (such as restraint, emergency medication and seclusion). Freeman et al (2005) and Allen (2009) also outline what might be required to embed positive behavioural support in human service organisations.

Although research evidence to support this proposition is currently sparse, a series of papers has described how the adoption of a whole-organisation approach to PBS across services (specialist behavioural community teams, acute admission units and long-stay specialist residences) for adults with intellectual disability and severe challenging behaviour in South Wales was associated with improvements in quality of life, reductions in challenging behaviour and reductions in the use of restrictive procedures (Perry et al, 2011; Allen et al, 2011, 2012; Gray et al, 2013).

Discussion

Challenging behaviour arises in context. Its occurrence reflects both the immediate social context (e.g. interactions with family and paid carers) and the broader organisational context (e.g. the resilience and capability of educational, health and social care provision). It follows that effective intervention needs to focus on the context in which intervention takes place. This paper draws attention to a number of factors that need to be taken into consideration to maximise intervention effectiveness.

First, our analysis (see also Hastings et al, this volume) implies that the traditional pre-requisite skills for intervention at the individual service user level need to be complemented by: (a) the capacity to develop effective strategies for addressing mediator stressors, and (b) organisational behaviour management skills to facilitate systemic sign up and implementation. This has significant implications for key practitioners such as clinical psychologists whose current training may need to expand to ensure they have the necessary range of skills. The task here is to continue to deliver individually focused PBS based on a well-conducted functional assessment while complementing this with a greater degree of sophistication around the implementation process. This should lead to better and more consistent implementation, more effective intervention and a greater likelihood of the maintenance of individual change over time.

Second, at an organisational level, we suggest that the service characteristics that appear to be associated with low use of restrictive practices need to be regarded as the required norm rather than the exception. There is a clear road map to follow here, which, if systemically adopted, would make a significant difference in the quality of services delivered to people who challenge and help shape up the capable environments that people clearly need. The task here is, drawing from the literature on school-wide PBS, to develop an approach for working within service providers more generally that will prevent challenging behaviour where possible, facilitate early detection and intervention, and ensure resilient responses that minimise restrictiveness and maintain quality of life of individuals even where there remains a risk of significant challenging behaviour occurring.

Third, on a wider cultural level, service providers will need encouragement to support the changes required and be held to account for doing so. National policies and guidance informed by an understanding of PBS can provide the necessary encouragement and clarity about expectations. Local commissioners can reinforce such policy through a clear specification of the kinds of services they want to be provided. Regulators (and commissioners in their purchasing role) need to monitor critical service inputs, outputs and outcomes. The task here is to design the broader culture so that a PBS approach is systematically supported at all levels.

In theory, these are exactly the conditions which exist in the UK at the present time in the wake of the Winterbourne View scandal. A number of groups have been charged with producing guidance on PBS, the use of restraint, service specifications, and updating best practice guidance for key professions as part of the government's response to the scandal. Time will tell whether these groups will deliver, but the window of opportunity it has created has the potential to make a massive impact on the lives of some of our most vulnerable citizens and help insulate against the occurrence of further scandals.

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