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Mental health as motivational operation: Service-user and caregiver emotional states in the context of challenging behaviour

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Abstract

This brief conceptual paper seeks to address the role of mental health and the experience of negative life events in the positive behavioural support framework in relation to the behaviour of both service users and caregivers and some of the implications this may suggest for intervention. It is argued that the conceptualisation of mental health related variables as motivating operations is parsimonious at a theoretical and practical level and may create one way of generating further synergies within the field of IDD.

Keywords: Intellectual disability, mental health, trauma, motivational operations

Introduction

Proponents of trauma informed care have often been critical of traditional behavioural interventions offered to individuals with intellectual disabilities who present challenging behaviour. In particular, Harvey (2012), who provided a seminal text in this area, highlighted concerns such as a disregard of physical health issues, reliance on brief periods of observation, over-reliance on medication, the use of restrictive practices that may perpetuate behavioural crisis and over reliance on contingency management. Of note is that the same criticisms of traditional behavioural interventions were raised by early proponents and developers of PBS (Carr et al, 2002; Baker and Shepard, 2005; Dunlap, Sailor, Horner and Sugai, 2009). Similarly, there is commonality between PBS and many of the approaches promoted by Harvey; for example, an emphasis on prevention and manipulation of antecedents, a focus on relationships and rapport and avoiding behavioural crisis through secondary prevention strategies. Yet Harvey (2012) does not appear to effectively distinguish PBS from traditional behavioural approaches, leading to claims that are at times inaccurate and may ultimately perpetuate poor practice in the support of people with intellectual disabilities.

Most noticeably, Harvey, in her trauma informed behavioural interventions book, rejects the use of functional behavioural assessment (FBA) on the grounds that it is about controlling people and instils a narrative of the person being manipulative. These criticisms are difficult to sustain when considering FBA within a PBS framework, where practices are primarily concerned with generating hypotheses that relate to a broad range of contextual factors which will ultimately be used to inform the support of greater individual choice, predictability and personal control (Gore et al, 2013). The overriding message surrounding PBS's use of FBA is that behaviours are not random, but serve key communication functions and are displayed by the individual to support fundamental needs.

As an alternative to FBA, Harvey argues for a thorough social history, a focus on behaviours as recognisable symptoms of trauma and listing of all possible triggers and anniversaries. Whilst this assessment methodology has some commonalities with FBA, it could present major problems to the practitioner in terms of arriving at a useful and valid formulation, as much of the data could be correlational and unverifiable. Although the fluctuating nature of trauma related responses both within

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and between individuals is widely acknowledged (see Paterson in this issue), there is a further danger that the trauma (or any other mental health) diagnosis is seen as a static, immovable characteristic of the individual and that these factors are consistently and universally associated with behaviours that challenge. The consequences of such attributions could clearly be unhelpful for the person and those tasked with devising systems of support. We would argue that FBA, done 'properly', provides a more practical, ethically and theoretically sound approach to supporting an understanding of mental health difficulties in the context of challenging behaviour. We also recognise, however, that PBS as a field needs to do more to support such uses in routine practice.

In 2013, a special edition of the *International Journal of Positive Behavioural Support* was put together in order to counter the misunderstanding and confusion that was accompanying the rapid growth in popularity of Positive Behavioural Support (PBS). The first of these papers (Hastings et al, 2013) attempted to provide a conceptual framework for understanding the occurrence of challenging behaviour in people with intellectual disabilities. As part of this requirement, Hastings et al (2013) highlighted an association between mental health difficulties and challenging behaviour, but also drew attention to minimal understanding in the field with regard to causal mechanisms and the limited research available that could comment on this (Allen, 2008). Whilst obtaining reliable estimates is fraught with difficulty, adults and children with IDD appear at least as likely, if not more so than those in the general population, to experience mental health difficulties (Cooper, Smiley, Morrison, Williamson and Allan, 2007; Einfeld and Tonge, 1996; Emerson and Hatton, 2007). Persuasive arguments have also been made in regard to the increased likelihood of people with intellectual disabilities being exposed to negative life events (Hatton and Emerson, 2004) and the role these may serve in the development of mental health difficulties (Wigham, Hatton and Taylor, 2011; Gore and Dawson, 2009; Esbensen and Benson, 2006; Hastings et al, 2004) and challenging behaviour (Hastings et al, 2013; Wigham, Taylor and Hatton, 2014). It is far less clear, however, how such factors may interact and influence comorbidity of mental wellbeing and behaviour that challenges (Grey, Pollard, McClean, McAuley and Hastings, 2010).

The second paper in the special edition (Gore et al, 2013) sought to establish a refreshed definition and framework for the delivery of PBS. Here the importance of considering and addressing broad contextual factors including both physical and mental health within a PBS framework was explicitly identified. The use of ABA and other evidence-based approaches to provide individualised, function-based assessment and support was also highlighted, but it was not possible at this time to provide worked examples or consider the most appropriate approaches in detail. Interventions designed to support individuals with intellectual disabilities who present challenging behaviour need to be informed by a coherent framework that describes an understanding of the phenomenon. As such, for PBS to be considered a comprehensive intervention framework, it needs to demonstrate a more detailed understanding of the role that mental health needs and trauma experiences may play in the causation of challenging behaviour and suggest how strategies derived from this understanding might address these factors. This paper attempts to support developments in this area by providing a conceptualisation of mental health difficulties, including aspects of a trauma response, as motivational operations (MOs).

Relationships between mental health variables, service user and caregivers' behaviour

At both a theoretical and practical level, use of a four-term contingency, derived from Applied Behavioural Analysis (ABA), is considered an essential means of understanding behaviour that challenges within a PBS framework (Langthorne, McGill and O'Reilly, 2007; Gore et al, 2013). Toogood (2012) outlined how contingency diagrams can be particularly helpful in this regard and highlighted the principal roles that MOs serve in accounting for service-user and caregiver behaviours. MOs refer to variables which when present, have both value and behaviour altering effects (Laraway, Snycerski, Michael and Polling, 2003). The value-altering effect either increases the effectiveness of a stimulus, object or event (establishing operation (EO)) or decreases reinforcer effectiveness (abolishing operation (AO)). The behaviour-altering effect either increases or decreases the current frequency of the behaviour previously reinforced, dependent on its properties as an EO or AO. Toogood provided useful worked examples in relation to two common functions of challenging behaviour: firstly, how deprivation from social interaction establishes attention from others as a positive reinforcer for service users (with delivery of attention contingent on service-user behaviour abolishing this property); and secondly how presentation of a demand establishes escape as a negative reinforcer (again with

this property abolished following escape that is contingent upon service-user behaviour). In both cases, it was further highlighted that service-user challenging behaviour also functioned as a MO for caregiver behaviour via a process of negative reinforcement.

In addition to those relationships outlined, however, it could be hypothesised that emotional state, as an aspect of mental health, may on occasion also function as a MO to influence service-user and caregiver behaviour via a mutual reinforcement process. *Figures 1a and 1b* provide two worked examples whereby the emotional state of a service-user may further establish the reinforcing properties of a socially mediated consequence. It is important to note that these illustrations are presented as possible examples only. They are based on principles of behavioural analysis but consider only two simplified situations and emotional states and are primarily presented here as hypotheses for research and clinical consideration.

In *Figure 1a*, an emotional state of anxiety/hyperarousal, concurrent with a period of attention deprivation serves to further establish social attention as reinforcing for a service user. Put simply, when experiencing anxiety, social contact may be even more valuable for the individual concerned (and isolation or lack of interaction even more distressing) and necessary to help regulate their emotional wellbeing. In such an instance, we might anticipate even higher rates or severity of challenging

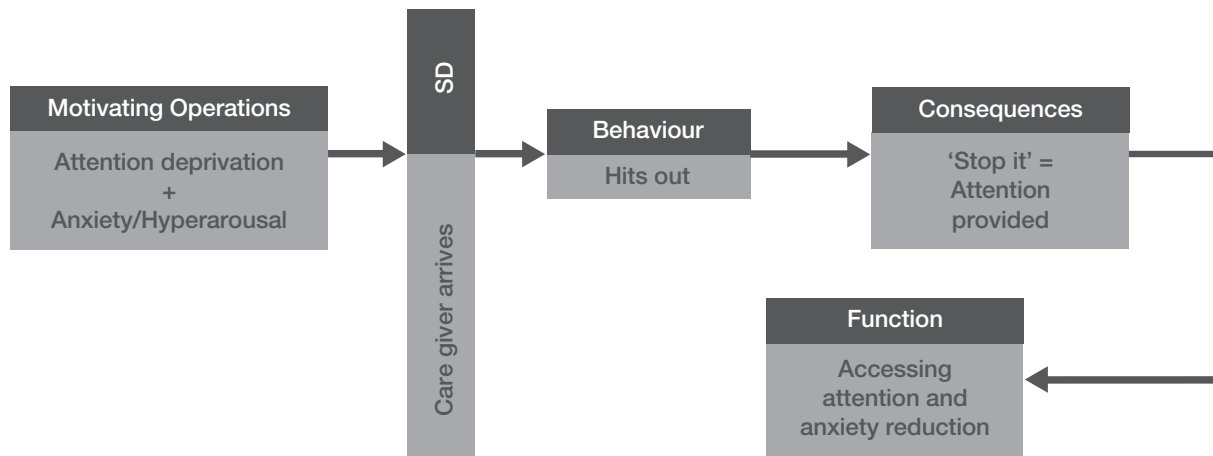**Fig 1a** Anxiety/Hyperarousal and attention deprivation as an MO for challenging behaviour

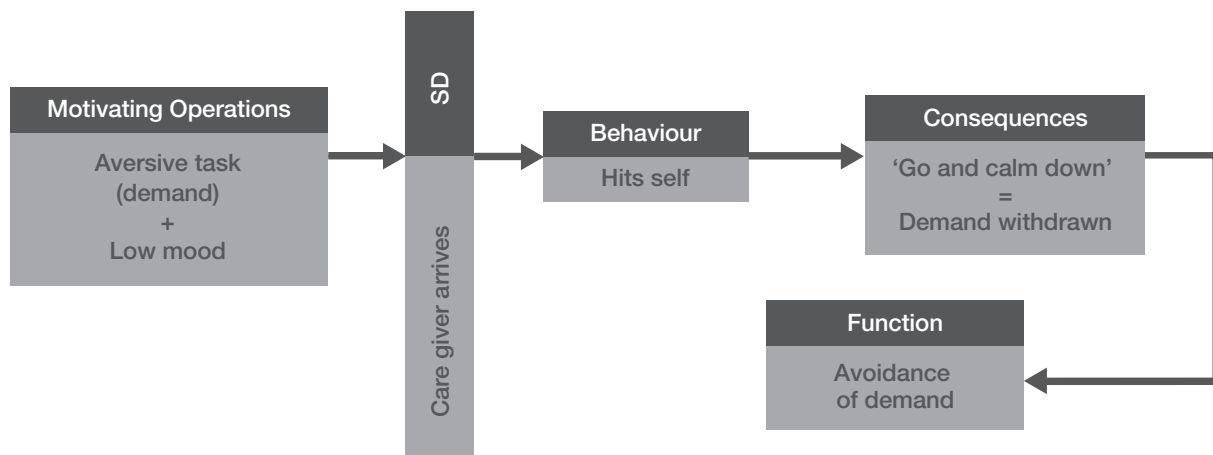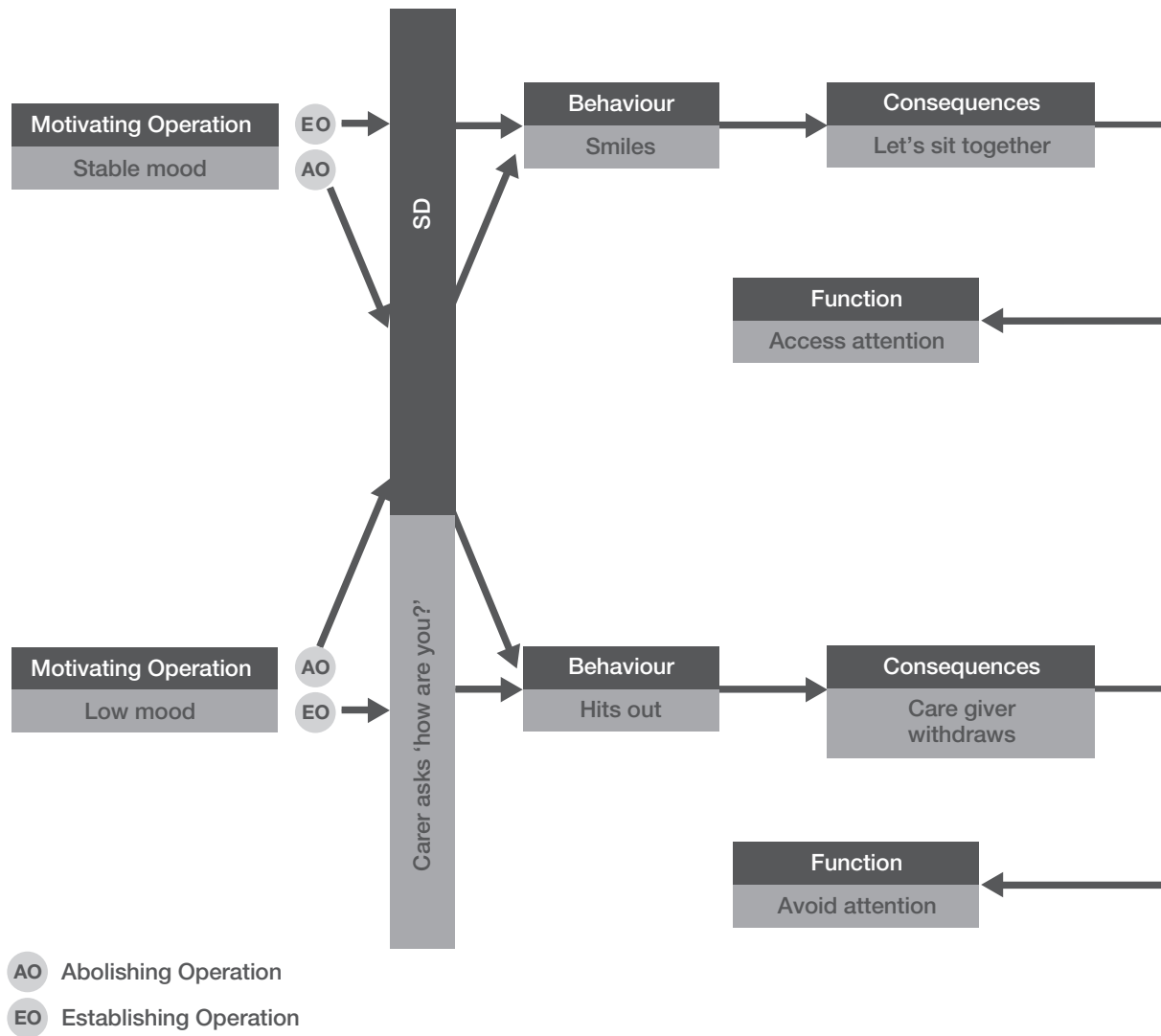**Fig 1b** Low mood and aversive task as an MO for challenging behaviour

Fig 1c   Mood as an MO for adaptive behaviour

AO   Abolishing Operation

EO   Establishing Operation

behaviour (and feasibly, lower rates of other functionally equivalent behaviours) than in the examples provided by Toogood. In *Figure 1b* an emotional state of low mood/in the context of a demand, functions to further establish the negative reinforcing properties of escape. Again, in simple terms, the presentation of demands to a service-user who is in a state of low mood may be experienced as especially aversive and distressing, making escape even more necessary for the individual concerned than at other times. Again, increased rates or severity of challenging behaviour would be predicted.

In addition to challenging behaviour, it might also be useful to consider the interplay between a service-user's emotional state and adaptive forms of behaviour. Here we might anticipate, for instance, that when experiencing an emotional state of anxiety/hyper-arousal or low mood an individual would be less likely to engage in a particular adaptive behaviour, with emotional state effectively functioning as an abolishing operation for reinforcement that has historically been contingent upon such behaviour. For instance, when experiencing a low mood, the reinforcing

properties of attention may be abated somewhat, meaning an individual is less likely to engage in pro-social behaviours that evoke this (see *Figure 1c*). It is further possible that in such an instance, escape from attention becomes established as highly reinforcing, increasing the likelihood of any (challenging) behaviours that typically result in this.

Figure 2a provides a worked example of how the emotional state of a caregiver may similarly be further accounted for by a consideration of this state as a MO. In this example, a caregiver who is in a heightened state of anxiety or hyper-arousal might be predicted to experience challenging behaviour displayed by a service-user as particularly aversive and therefore be more likely to engage in any action that would permit escape from the individual or terminate their behaviour. At such times, caregivers might be at particular risk of

engaging in support strategies that in the short term bring about a reduction in challenging behaviour, but which ultimately serve to reinforce and maintain this behaviour in the longer term. Note also that ongoing repeated exposure to the aversive properties of challenging behaviour, or exposure to intense episodes of behaviour would be anticipated to have a further negative influence on caregiver emotional wellbeing (particularly when other forms of support and reinforcement are minimal). Additionally, we might expect that a caregiver's emotional state could at times serve to abolish the reinforcing consequences of more helpful and supportive interactions with services users. In a state of low mood, a caregiver may perhaps be less likely to engage in behaviours that provide contingent or non-contingent social attention for instance (see *Figure 2b*) or respond to episodes of challenging behaviour in helpful ways (see *Figure 2c*).

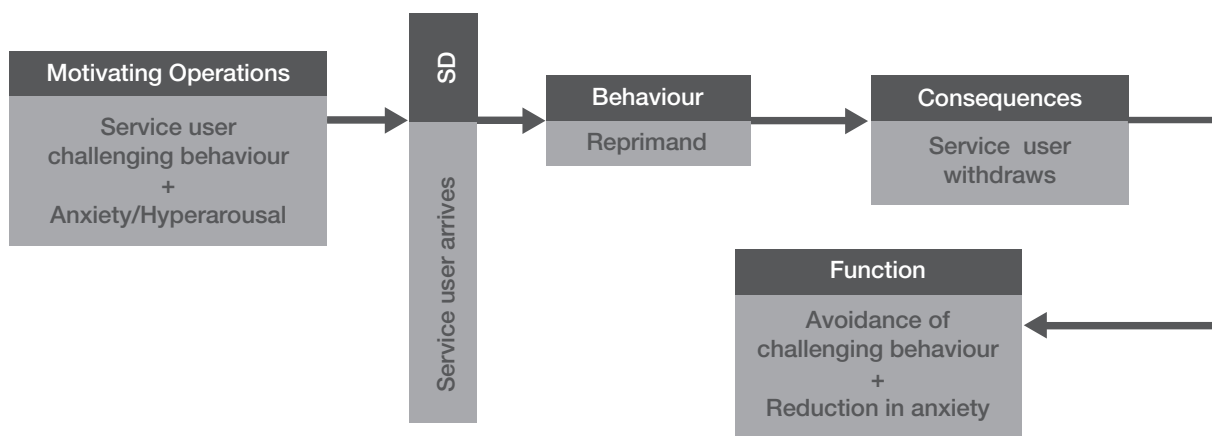**Fig 2a**   Emotional state and challenging behaviour as an MO for unhelpful carer behaviour

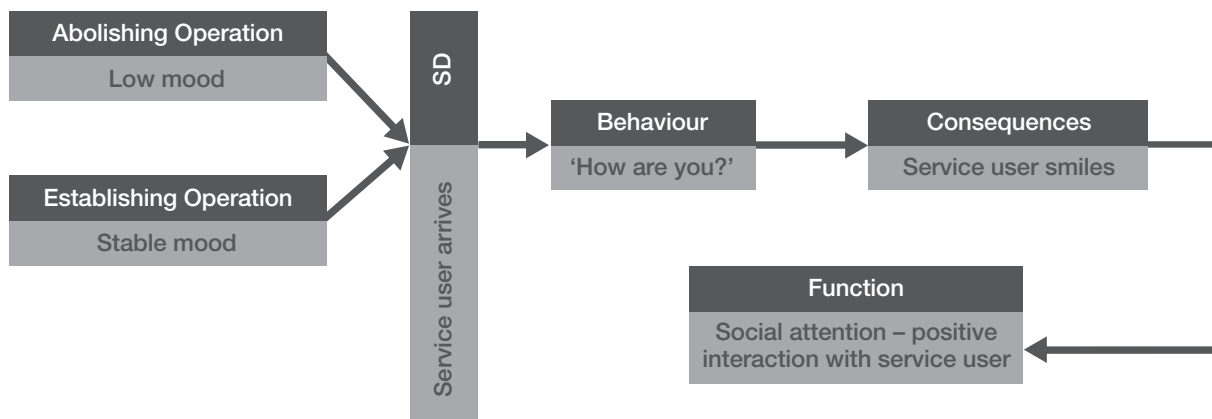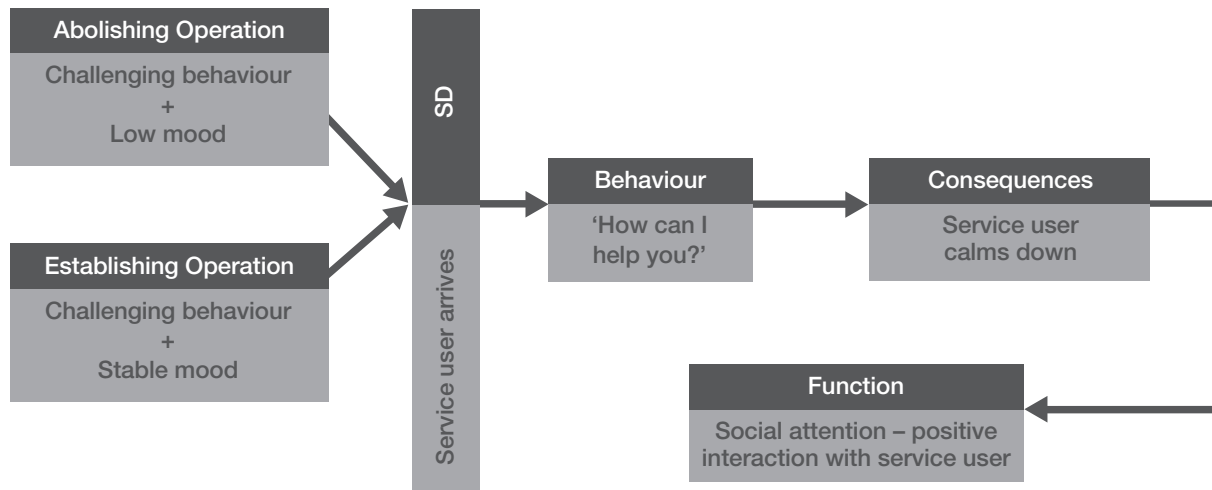**Fig 2b**   Carer mood as an MO for helpful carer behaviour

Fig 2c   Carer mood and challenging behaviour as an MO for helpful carer behaviour

In this later example, there is the very real potential for things to go full circle, with a reduction in social attention setting the scene for service-user, attention-maintained challenging behaviour and increasing the likelihood of emotional or mental health difficulties for the service user who is deprived of the protective and reinforcing properties that arise from positive social relationships. Finally, it might quite unquestionably be assumed that staff behaviours which are more explicitly restrictive, aversive and abusive (whether or not influenced in part by their own emotional state) would have a direct influence on the behaviour, emotional and mental health of service-users.

Implications for supporting people with intellectual disabilities with mental health difficulties and challenging behaviour

In general, the approach to supporting physical health care needs within a PBS framework has been to facilitate immediate address, either by direct carers or by the involvement of a more specialist physician. Indeed, there is a helpful literature available in relation to the effects of physical health difficulties and challenging behaviour, conceptualising the potential for poor health to serve as a motivating operation for challenging behaviours (Baker, 2009). The extent to which there is a comparable literature in relation to mental health difficulties is limited, perhaps due to the aforementioned lack of clarity in regard to the relationship between mental health conditions and challenging behaviour.

In practice, it is also most likely that mental health needs are addressed in much the same way as physical health, via referral to a specialist clinician or service. This may result in access to a form of psychological or therapeutic support, but more commonly would seem to result in facilitating access to medical assistance, as may be evidenced by the high use of antipsychotic medication by people with intellectual disabilities who present challenging behaviour (Tsiouris, Kim, Brown, Pettinger and Cohen, 2103). Either way, if we are not clear about how mental health factors relate to challenging behaviour, there is very real danger that a consideration of mental health in the context of challenging behaviour is viewed as a minor add-on to PBS and ultimately the responsibility of someone else, rather than a truly integrated part of the framework. Misunderstandings are therefore likely to arise.

Within this brief article we have provided examples to help further explore the interplay between a small number of mental health variables on service-user and caregiver interactions concerning maintenance of challenging behaviour. However, a comprehensive framework needs to go further than this and to also consider processes that lead to the development and maintenance of such states beyond those that may arise through exposure to behaviour that challenges and the limited, inappropriate or abusive management of such behaviour. Multiple risk factors associated with mental health difficulties in general are over-represented for people with intellectual disabilities,

including exposure to social-economic deprivation (Emerson, 2007), adverse life events (Hulbert-Williams and Hastings, 2008), poor physical health (Prasher and Janicki, 2008), unemployment (Emerson, 2007) and impoverished social networks (Lunsky and Benson, 1999). Many of these factors also serve to increase the risk of challenging behaviour within the learning disability population (and more broadly) and are proactively supported via PBS. Yet PBS, although explicitly including mental health variables in analysis and intervention has thus far had little to say about how biological, psychological and social contexts may serve to influence mental health and emotional wellbeing specifically.

To further consider development and maintenance of mental health variables in PBS it will be necessary to at times adopt a slight change in the focus of analysis, whereby emotional states and potentially other aspects of mental health, including the re-experiencing of negative life events, are conceived as the central unit under consideration (see Toogood, this issue).

Whilst multiple psychological models are available and may inform this understanding, we propose that it will be expedient for the field to consider Applied Behavioural Analysis in this regard for three main reasons.

● Firstly, PBS is informed primarily by the use of ABA and doing this would allow a constructive and theoretically consistent development to the other multiple ways this has influenced the framework. This is not to disregard use of other mental health approaches and interventions that are consistent with the components of PBS. There is an ongoing need for the evolution of PBS to draw on learning from a range of evidence-based approaches and scientific methodologies. Rather it is to ensure that the potential value of ABA is maximised within the framework.

● Secondly, use of (positive) behavioural approaches in the field of challenging behaviour has supported a functional, non-blaming and effective way of delivering support that is valued and acceptable to stakeholders (Kincaid et al, 2016; Elliot, Witt, Galvin and Peterson, 1985; Reid and Nelson, 2002). Extending this value system and approach to mental health and emotional wellbeing may be very helpful and supportive to those who are in extreme need and often stigmatised. In particular, conceptualising diagnostic categories not as fixed characteristics of the individual but rather as contextually controlled, dynamic factors that are constantly interacting with aspects of the environment.

● Finally, there is a historic and evolving behavioural literature relating to mental health and wellbeing that to date has largely been under-utilised in PBS research but would seem to have great potential. Promising examples include the use of behavioural activation (Jahoda et al, 2015) and acceptance and commitment therapy (Hoffman, Contreras, Clay and Twohig, 2016; Jackson-Brown and Hooper, 2009) and a variety of other approaches that include a behavioural component (cognitive behavioural therapy – Unwin, Tsimopoulou, Kroese and Azmi, 2016; dialectical behavioural therapy – McNair, Woodrow and Hare, 2016; mindfulness based cognitive therapy – Idusohan-Moizer, Sawicka, Dendle and Albany, 2015; imagery rehearsal therapy – Kroese and Thomas, 2006; exposure therapy – Lemmon and Mizes, 2002; eye movement desensitisation reprocessing (EMDR, Mevissen, Lievegoed and De Jongh, 2011).

A vision of comprehensively supporting the behavioural and wellbeing needs of people with intellectual disability is unlikely to be reached by adherents to a single or narrowly defined intervention approach. Criticisms or debates based on a misunderstanding of positions or ways of working and a lack of conceptual and practical clarity are also unhelpful in this regard. Yet PBS as an evolving framework, embracing multiple methodologies and evidence-based practices has the potential to synthesise and build upon developments in ABA and the experiences, knowledge and strengths of those working across the field more broadly. We therefore encourage and look forward to an increasing number of constructive future collaborations to further an understanding of evidence-based practice for those who present with mental health difficulties and behaviours that challenge.

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