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WFD as a methodological framework

The use of an implementation science theoretical framework to inform the development of a region wide Positive Behavioural Support Workforce Development approach

Authors

Karen McKenzie*, Anne McNall, Steve Noone, Alison Branch, George Murray, Melissa Sherring, Lynne Jones, Judith Thompson, Jill Chaplin

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*Address for correspondence: Department of Psychology, Northumberland Building, City Campus, Northumberland Road, Newcastle upon Tyne, NE1 8ST Email:

k.mckenzie@northumbria.ac.uk

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Abstract

Background: Concern about the poor care of some people with an intellectual disability has highlighted the need for systemic, large scale interventions to develop a skilled workforce.

Method: We outline how an implementation science theoretical model informed the development of a region wide Positive Behavioural Support (PBS) Workforce Development (WFD) approach.

Results: We provide an example of the application of the model in practice and demonstrate how this enabled us to: understand the competencies and development needs of the workforce; engage effectively with stakeholders; and develop, deliver, and evaluate a PBS WFD model.

Conclusion: The application of the model helped us to identify, prioritise, and address the multiple and complex factors that were relevant to the implementation of the PBS WFD approach.

Keywords: Workforce Development; Implementation; Explanatory Models: Positive Behavioural Support

Introduction

Concern about poor quality support and, in some cases, abuse of people with an intellectual disability and/or autism, has been at the heart of recent UK health care policies, such as ‘Transforming Care’ (NHS England, 2014). Such policies have led to the closure of hospital beds to prevent the inappropriate institutional care of this group of people. In order for this to succeed, however, there is a need for a sufficient, stable, and competent workforce with the appropriate skills and values-base (Health Education England, 2017). These staff are needed to support people with an intellectual disability in community-based settings, some of whom are likely to display behaviours that challenge, such as self-harm or aggression (National Institute for Health and Care Excellence [NICE], 2015). Positive Behavioural Support (PBS) is a values-based approach that views such behaviour as serving a purpose for the individual. PBS aims to remove the need for a person to display behaviours that challenge by using approaches that identify and address the function of the behaviour and improve the person’s quality of life. In addition, reactive strategies are used to effectively and safely manage behaviours that challenge if they occur (Gore et al., 2013).

There is a substantial body of research that indicates that PBS is a constructive and effective way of providing support (e.g. Bowring, Totsika, Hastings, & Toogood, 2020; Lewis et al., 2019; MacDonald & McGill, 2013; McGill et al., 2018; PBS Coalition UK, 2015), and its underlying principles have been highlighted in professional and good practice guidelines (NICE, 2015, 2018).

Research also indicates that training staff in PBS can improve various outcomes, such as staff confidence and knowledge, and the content of the PBS plans (see MacDonald, McGill, & Murphy, 2018). Most approaches to deficits in staff skills or knowledge, with some exceptions (e.g. McGill et al., 2018), have comprised of short staff training courses.

Such approaches do not address the wider context in which the staff and those being supported operate. This is despite a long-standing recognition of the need to take a whole-system approach to the development, delivery, and support of PBS (Allen et al., 2013; Denne, Jones, Lowe, Brown, & Hughes, 2015; McGill et al., 2018; Olivier-Pijpers, Cramm, & Nieboer, 2019). In this paper we outline the application of an implementation science theoretical approach to inform such a whole-system approach. We then provide an example of how this was applied in practice to the development and implementation of a regional PBS programme.

Denne and colleagues (2015) outline the challenges involved in developing and sustaining a workforce that is competent in the use of PBS. These include the varied and often limited provision of PBS training, the fact that it is seldom accredited or subject to quality assurance, and the scale of input required to meet the needs of a large workforce, which often has high turn-over rates. They suggest the need for a Workforce Development (WFD) model to address these challenges. This has four associated requirements. The first is to identify the required PBS competencies. The second is to develop an infrastructure that enables the provision of accredited input that is differentiated according to the needs of different stakeholders, and which is based on best practice in learning, teaching, and supervision. The third is to promote wider culture change. This is done by obtaining organisational commitment, providing practice leadership, considering staff welfare, and effectiveness, and ensuring that competence in PBS is embedded in service specification, design, and delivery. The fourth is to evaluate the outcomes and impact of input.

Denne et al. (2015) provide valuable guidance on the areas that need to be addressed when considering a systemic PBS approach. In the current paper, we also consider the way in which implementation science can provide a theoretical context which can further inform the development and delivery of a successful WFD approach to PBS.

Theoretical Context

We begin by providing an overview of a theoretical implementation science model and the ways in which key elements of this model are compatible with those of PBS. We then provide a brief overview of a multi-stage process whereby the application of a WFD model, informed by the implementation science model, was applied in practice. We describe the ways in which this provided a framework which enabled us to understand the values and competencies required by the current and future workforce, and obtain an in-depth understanding of their strengths and development needs. It also guided us in engaging effectively with stakeholders, in order to develop, deliver, and evaluate an innovative PBS WFD model. An important consideration throughout was to facilitate the long-term sustainability of the approach.

Implementation Science Explanatory Models

Implementation science researchers are increasingly emphasising the importance of identifying key contextual factors and taking account of these when developing interventions (e.g. Davidoff, 2019; Squires et al., 2019). Davidoff (2019) notes that ‘limited understanding of context...limits understanding of both the fundamental principles of improvement and the actions that put improvements into practice’ (p. 1). He identifies explanatory theories as useful tools in this process, as they help the researcher to make sense of the complexity of the contexts in which interventions are implemented. They also give rise to causal theories about these contexts which can be tested in practice. He argues that explanatory theories provide a multi-component framework which brings clarity and meaning to complex environments.

Davidoff (2019) outlines some key principles which are involved in developing any useful explanatory theory of a complex situation. The first involves bringing together different sources of information to develop a shared meaning. The second is developing

familiarity with the systems and processes in question; making sense of their logic; and identifying the key constituent parts that contribute to the context. The third is recombining these components to create an overarching explanatory model, which is adapted as required, to be used in practice.

These principles offer a framework which helps to identify the distinct elements which are likely to be most relevant to a given context. They also guide the subsequent development of explanatory models which have practical applications in that context.

There are many parallels between the key principles of theoretical explanatory models outlined by Davidoff (2019) and key defining features of PBS (see Table 1). As a multi-component, dynamic, and systemic approach, PBS pulls together evidence from multiple sources to create shared understanding, values, and approaches amongst stakeholders. The successful development and implementation of a PBS plan requires relevant stakeholders to be familiar with the person (and his/her associated needs, preferences etc.) as well as competent in using the PBS knowledge and skills, required by their particular role (PBS Coalition UK, 2015).

As a functional, evidence-based approach, PBS seeks to understand the logical relationships between a person's behaviour, the immediate circumstances (antecedents and consequences), and wider contexts within which it occurs. These different sources of evidence are identified, and their individual and inter-dependent contributions are explored. From this, an explanatory model of the person and the micro and macro contexts within which they operate is created. As Gore et al. (2013) note: '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' (p. 15).

<insert table 1 about here>

Both Gore et al. (2013) and Davidoff (2019) emphasise that a set of guidelines or a PBS plan do not, by themselves, constitute an intervention. Rather, they are designed to guide implementation, which, in turn, requires behaviour change. In the following section, we provide an example of the way in which the common theoretical principles outlined by Davidoff (2019) and that are fundamental to PBS were used to inform the development of a WFD model. This had the aim of generating behaviour change that would ultimately lead to improvement in the quality of life of people with an intellectual disability.

An Example of the Implementation Science Model in Practice: The Development and Implementation of a PBS Workforce Development Model

By contrast to more traditional staff training, which tends to focus on the individual learner, a WFD approach takes account of the systemic, organisational, and individual factors that influence values-based, cultural, and behavioural change (see Denne et al., 2015). WFD commonly influences change through the mechanism of collaborative stakeholder partnerships (Jacobs & Hawley, 2009). As such, a WFD model is compatible with, and informative for, implementation approaches. Indeed, Squires and colleagues (2019) note that such contextual factors need to be integrated if implementation attempts to change practice are to be successful. They highlight that many researchers do not explicitly address the ways in which contextual factors influence the success or otherwise of an implementation approach.

In an attempt to address this issue, we provide an example below of the implementation of a PBS approach within the NHS England North-East and Cumbria region, which was underpinned by a WFD model. At the time the region comprised three NHS Trusts, 19 local authorities, and a wide range of third sector organisations. The estimated size

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of the paid workforce was 1477 NHS staff and 25,000 social care staff. In addition, many family carers provided unpaid support, although their exact number was unknown.

A number of factors assisted with this implementation process. First, as was outlined previously, an inherent aim of PBS is to understand and promote positive behaviour change through systematic assessment and understanding of the factors that help and hinder change in the wider context of the person. This approach, therefore, mirrors the processes and aims of WFD and explanatory theories of implementation science, as outlined by Davidoff (2019).

Second, the development of the PBS Competence Framework (PBS Coalition UK, 2015) provided a structure by which the required competencies for staff with different support roles could be identified, supported, and assessed. This is a crucial step, as highlighted by Denne et al. (2015).

Third, government policy (e.g. NHS England, 2014) was emphasising the need for high quality, evidence-based, and person centred, community support. Finally, the implementation process was facilitated by different stakeholder groups in the area. NHS PBS specialists were looking for a better way to support the WFD of the wider staff group in the region; social care providers identified that there was no consistency in, or agreed approach towards, supporting staff to develop competence in PBS; and people with an intellectual disability and their families were driving the need for better support.

As an example of the application of the theoretical approaches being used in practice, the paper will only provide a brief overview of each aspect of the process. Additional details about the different stages, the associated methodologies and results are available from McNall, McKenzie, and Branch (2016) and on the Positive Behavioural Support North East and Cumbria Community of Practice website (<https://www.pbsnec.co.uk/>). Sources that provide further information are also cited in the relevant sections.

The ways in which the shared elements of the implementation science model and PBS informed the different stages of the development and application of the WFD framework are highlighted in Table 1.

Building an Explanatory Model to Inform the PBS Implementation Process

We were guided in the development of an explanatory model of the PBS implementation process by the work of Denne et al. (2015) and the WFD model developed in 2012 by McNall (see McNall et al., 2016) as outlined in figure 1 and described below. The overall aims of the initial stages of the implementation process were to draw together evidence from a range of different sources. This was to increase familiarity with the context into which PBS would be delivered and create a shared understanding and meaning of the evidence. These initial stages also allowed the key elements that would influence the implementation of PBS to be identified, both as individual elements and as part of the wider system. Specifically, we wanted to understand the existing drivers for using PBS at that time, and how PBS was enabled and delivered across the target region. We also sought the views of multiple stakeholders about what they felt was needed to support the current and future workforce to use a PBS approach.

In the next stage we analysed and synthesised these multiple perspectives in order to inform a WFD plan. The aim of this plan was to increase and sustain workforce competence in PBS in the region, in a manner that could be grown at scale. The components of each stage of the overall process are briefly outlined below.

<Insert figure 1 about here>

Developing Familiarity and Shared Meaning

Scoping the existing situation.

The aim of this initial stage of the process was to obtain an in-depth understanding of the values and competencies required by the current and future workforce, to enable them to provide person-centred support based on PBS principles. To do so, we conducted a scoping exercise and analysis of the existing workforce against the PBS Competence Framework (PBS Coalition, 2015) and the influencing factors.

The process involved an analysis of existing policy documents, relevant literature, and the PBS Competence Framework, as well as obtaining the views of people with an intellectual disability and their families. This work demonstrated an existing evidence-base, and policy support for PBS principles and the PBS Competence Framework (see McNall et al., 2016, for details). There was also a recognition of PBS as a beneficial, values-based approach that comprised important elements of good quality care, as identified by people with an intellectual disability and their families (See McKenzie, Whelan et al., 2018 and McKenzie, Meyer et al., 2018 for details).

Understanding how the workforce is currently prepared.

The aim of this stage was to obtain an in-depth understanding of the strengths and development needs of the current and future workforce. This involved data collection and analysis in relation to existing commissioning specifications for PBS and how these requirements were monitored. We also gathered information about existing regional and national provision of PBS education and how this was assessed/accredited.

The results from this component indicated that there was minimal or no requirement for PBS in the commissioning specifications or monitoring processes at that time. There was no standardised approach to WFD in the region and the commonly adopted approach was a training model. There was inconsistency in the assessment and accreditation of this training,

with limited means of assessing competence, or the ability for staff to transfer their learning into practice.

Training was rarely informed by evidence-based learning and teaching methods for adult education. The high turn-over rate of the workforce meant that training often had to be repeated and NHS PBS specialists spent much of their time in this activity. This, combined with the lack of provision for training to be transferable between organisations, created costs at many different points in the system. The need for a standardised, practice-based approach to learning, that helped staff to develop competencies which were aligned to their specific role, was emphasised. It was also important that this resulted in an accredited qualification which was transferable between organisations (see McNall et al., 2016, for details).

The difficulty in recruiting and retaining support staff, with the associated negative impact on quality and continuity of care (e.g. Stevens et al., 2019), represented a significant challenge. This was both to the success, at a strategic level, of the 'Transforming Care' policy (NHS England, 2014) and to the implementation of a PBS approach at a regional level. We undertook a review of peer reviewed publications, grey literature, and online practice examples of recruitment and retention strategies, to develop a greater understanding of this challenge. This review was to inform the development of recommendations to increase recruitment and reduce staff turn-over. Factors that were repeatedly highlighted in this literature included the nature and quality of the training, support, and supervision provided to staff, the organisational culture and values-base, and the impact on staff of supporting people with behaviours that challenge (see McKenzie, Metcalfe, Whelan, & McNall, 2020, for further details of the review). This work highlighted the importance of building capacity to provide values-based, high quality, and ongoing supervision and support to staff.

Logic, Analysing, and Synthesising the Evidence to Identity Key Elements

Effective stakeholder engagement.

The above findings indicated the need for a standardised approach to learning, teaching, and assessment of PBS, and for the development of an infrastructure that allowed this to be delivered and supported on a large scale. Given our overall aim of facilitating changes in systems and processes in the practice environment, we adopted a collaborative action research approach (Parkin, 2009) for this stage of the process. This involved bringing together stakeholders through a range of activities, to obtain and integrate multiple perspectives and address issues that had been identified at previous stages of the project. A key part of this was the appointment of two PBS Senior Clinical Trainers who delivered a programme of PBS awareness sessions across the participating region. The aim of these sessions was to help social care staff and families understand PBS and differentiate it from physical intervention training (see Branch & Wilson, 2017, for further details). Examples of these activities and associated innovative solutions are outlined in the next section.

Adaptation: Developing and Implementing a Multi-Component WFD Plan

Innovative models for WFD.

In order to address the issue that few providers of training in PBS were using evidence-based learning and teaching methods for adult education, we created the opportunity for NHS PBS specialists to undergo a bespoke version of a Post Graduate Certificate in Teaching and Learning in Professional Practice. This was provided by a local university and funded via an existing Health Education England block contract. This cohort of NHS specialists developed a region wide PBS learning and teaching hub to provide ongoing support with learning. They also co-produced draft, evidence-based PBS curricula to develop PBS competence and infrastructure for practice-based learning and assessment. The

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target groups were direct care workers and practice leaders in organisations. The draft curriculum aligned the learning outcomes with the required knowledge, skills, and values outlined in the PBS Competence Framework, the entry level of the participants, and the Regulated Qualifications Framework. The aim was to meet the need for standardised, high quality, evidence-based educational materials (see McNall et al., 2016, for details).

In order to address the need for a regional infrastructure to support practice-based learning, three clinical leaders in PBS posts (WFD managers) were developed. The aims were to share the findings of the project and the proposed curricula and to develop a wider regional community of practice (Lave & Wenger, 1991), with involvement of all stakeholder groups. The development of the regional community of practice (see <https://www.pbsnec.co.uk/>) enabled exploration of other system wide issues that needed to be addressed and the co-production of an action plan for WFD.

Implementation: Commissioning and delivery of the WFD model.

Based on the results of the previous stages of the project, an educational programme, which represented a collaboration between the NHS and the local university, was commissioned by the NHS. This involved the development, validation, and delivery of different programmes of learning. These were: A Post Graduate Certificate or Advanced Diploma in 'Leading PBS' for Practice Leaders; a Certificate in 'Facilitating PBS in teams' for PBS Facilitators; and an 'Award of competence in PBS' for support workers. Ensuring learning and competence at different levels of the workforce was essential to facilitate the implementation of PBS as an approach within services, as stated in the PBS Competence Framework.

The delivery was based on a cascade model (see figure 2) whereby the three WFD Managers provided input into the PBS programmes, as well as providing supervision,

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support, and assessment, along with practice leaders, of the PBS competencies required at an organisational level. The practice leaders provided supervision and support to, and assessment of competencies of, the PBS facilitators, who, in turn, provided this to support workers (see McKenzie, Martin et al., 2020, for further details of the PBS programmes). This model allowed the programme to be delivered at scale across the region. At the time of writing the programme had been delivered to 30 Practice Leaders, 106 PBS Facilitators and 181 support workers, and was in the process of being delivered to a cohort of NHS staff. The programme is overseen by a steering group, which has representation from multiple stakeholders.

<insert figure 2 about here>

Evaluation.

An independent evaluation was commissioned as part of the programme. This evaluated a number of components, including the perceived quality of the teaching, changes in participants' knowledge, confidence, competence, and practice, and changes in the behaviour and quality of life of those being supported. The initial qualitative phase of the evaluation indicated that it was seen to have led to increases in staff confidence and knowledge, resulted in improvements in staff practice, and in the quality of life of those being supported. At a wider systems level, it was reported as having had benefits for organisational strategies, policies, and processes, as well as improving staff retention (see McKenzie, Metcalfe et al., 2020 for further details). Evaluation of the longer-term impact of the programme is currently underway.

Including the WFD requirements in future commissioning specifications.

In order to ensure the long-term sustainability and quality of PBS WFD, and in line with recommendations by Denne et al. (2015), the need to establish the requirement for staff

competence in PBS and the use of PBS by services in commissioning specifications was identified. This has been addressed in part via the input of WFD managers, who enabled commissioners in one part of the region to re-evaluate how PBS was embedded into specifications for services for those with behaviours that challenge. This has resulted in the development of new service specifications which detail PBS requirements. These also include questions and criteria to evaluate the understanding and use of PBS by potential service providers. Another regional commissioning hub has been assisted to develop new models of support for children and young people.

Discussion

It has been highlighted that many researchers tend to prioritise the implementation stage of intervention. Less emphasis tends to be placed on the earlier stages, for example, exploration and preparation, and later stages, such as how to maintain change on an ongoing basis (Moullin, Dickson, Stadnick, Rabin, & Aarons, 2019). In this paper, we outlined how we tried to address these issues. We provided an example of the ways in which using a WFD framework, which was informed by key principles of implementation science and PBS, helped us to develop an explanatory model of the context in which the planned PBS intervention would be delivered.

This model, in turn, helped us to generate solutions to identified issues and make use of existing resources that would facilitate the implementation. A number of the facilitators that we identified in our project have been previously identified in relation to PBS WFD (e.g. Denne et al., 2015) and found to be common to other contexts (Squires et al., 2019). First, the willingness of different stakeholders to collaborate to achieve the common goal of developing a competent workforce. Second, access to resources, such as funding for the WFD manager posts and for the development and delivery of the PBS programme. Third, the existing work

structure, which facilitated a cascade model, whereby more skilled staff supported and supervised those who were less skilled. Fourth, skilled project leadership in the form of the PBS steering group. An additional significant facilitator was that PBS is a systemic approach. This enabled the stakeholders to apply system wide and contextual thinking more quickly, to understand and overcome barriers to implementation.

The process did, however, take considerable time and effort. There was a period of approximately three years between the initial identification of a need for a regional PBS approach and the first delivery of the programme. The next challenge is to explore if the model can be scaled up further and extended across the UK. It is recognised that the complexity of the context in which any intervention is implemented, which in this case our explanatory model sought to identify and address in one region, can limit the generalisability of the intervention to other contexts. Implementation models, however, enable the possibility of generalisation, by providing a framework that can be used and adapted to meet the needs of different contexts (Moullin et al., 2019).

Conclusion

This paper outlines a multi-component process, whereby the elements which were common to a theoretical implementation science model and PBS were identified. The application of the theoretical model informed the development of a WFD framework. This, in turn, helped us to identify, prioritise, and address the multiple and complex factors that were relevant to the implementation of the PBS WFD approach. Taking account of the key factors that were highlighted within the explanatory model enabled the successful implementation of a regional PBS WFD approach.

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Table 1: Common elements of Implementation Science explanatory models and Positive Behaviour Support and how these informed the development of the Workforce Development Model

Implementation Science Explanatory Models (adapted from Davidoff, 2019)		Positive Behavioural Support (adapted from Gore et al., 2013, and the Positive Behavioural Support Coalition UK, 2015)	Workforce Development Model Associated stages
Shared Meaning	Combining information and evidence to develop a shared understanding of the situation	A PBS framework brings together evidence from a range of sources and stakeholders with the aim of creating a shared understanding, value-base and practice, with the ultimate aim of meeting agreed goals.	We combined evidence from different sources. This included conducting a literature review, surveys, and interviews with stakeholders (including people with an intellectual disability, families, support organisations and commissioners). The aim was to develop familiarity with, and generate a shared understanding of, the current context into which PBS would be introduced. Specifically:
Familiarity	Ensuring the different elements of the context become familiar and known	PBS requires familiarity at two main levels: <ol style="list-style-type: none"> 1. That the people being supported and their needs, preferences etc. are known to all those involved in their care and represented in their PBS plan. 2. That all those involved in the support of the person display knowledge and competence in PBS appropriate to their role. 	<ol style="list-style-type: none"> 1. Understand the existing drivers for using PBS at that time 2. Develop an understanding of the existing situation regarding how PBS was enabled and delivered across the target area 3. Elicit the views of stakeholders on what was required to develop the current and future workforce to use a PBS approach;
Logic	Develop an understanding of how the different elements relate to each other logically	PBS approaches are underpinned by assessment, data, and behaviour analytic technologies. These are used to develop a functional understanding of the relationships between the person's	We analysed and synthesised the multiple perspectives and sources of evidence obtained in stage 1. This informed the development of an implementation

WFD as a methodological framework

		behaviour and their immediate and wider circumstances.	intervention to develop and sustain workforce competence in PBS at scale.
Separating out the key elements of the context	Identify the main elements that are central to the particular context	PBS is a multi-component framework that explores the individual and inter-dependent contributions of different elements within complex systems.	
Unifying the key elements of the context	Combine these elements in light of the additional information to develop an explanatory model		
Adaptation	Adjust the explanatory model as required to allow it to be applied in practice	PBS plans which are generated from the preceding processes specify how approaches will be used in practice, under which circumstances and by whom. In-built monitoring and evaluation ensure that the plans can be adapted and updated as required.	Based on the results of the previous stages, a multi-component intervention was developed and implemented in practice. The components were: <ol style="list-style-type: none"> 1. The appointment of two PBS Senior Clinical Trainers who delivered a programme of PBS awareness sessions 2. The opportunity for NHS PBS specialists to undergo a bespoke version of a Post Graduate Certificate in Teaching and Learning in Professional Practice. 3. Development of a PBS community of practice/Learning Hub 4. Appointment of three clinical leaders in PBS posts 5. Commissioning, development and delivery of a collaborative, accredited educational programme. 6. Independent evaluation of the PBS WFD model

Figure 1: Workforce Development Model used as a framework to inform the development of an explanatory model of the Positive Behavioural Support implementation process

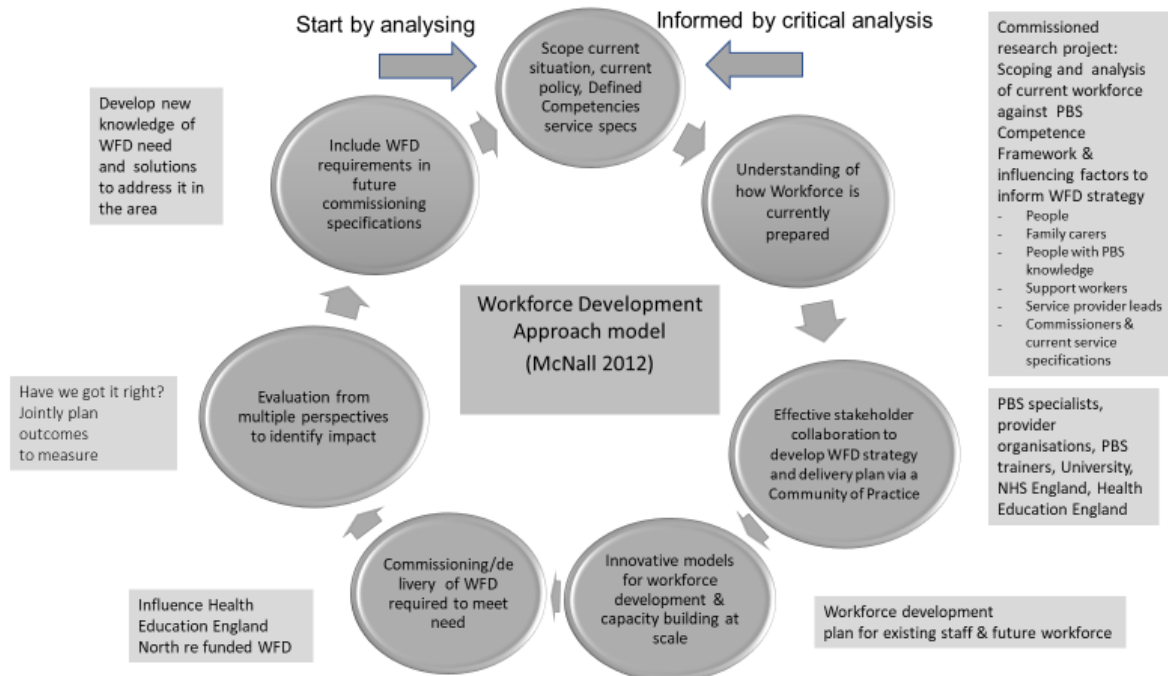


Figure 2: Cascade model of Positive Behavioural Support Workforce Development delivery

