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'Predictable, Consistent, and Safe': School-Wide Positive Behaviour Support in Welsh Primary Schools

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‘Predictable, Consistent, and Safe’: School-Wide Positive Behaviour Support in Welsh Primary Schools

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Yr wyf drwy hyn yn datgan mai canlyniad fy ymchwil fy hun yw'r thesis hwn, ac eithrio lle nodir yn wahanol. Caiff ffynonellau eraill eu cydnabod gan droednodiadau yn rhoi cyfeiriadau eglur. Nid yw sylwedd y gwaith hwn wedi cael ei dderbyn o'r blaen ar gyfer unrhyw radd, ac nid yw'n cael ei gyflwyno ar yr un pryd mewn ymgeisiaeth am unrhyw radd oni bai ei fod, fel y cytunwyd gan y Brifysgol, am gymwysterau deuol cymeradwy.

I hereby declare that this thesis is the results of my own investigations, except where otherwise stated. All other sources are acknowledged by bibliographic references. This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree unless, as agreed by the University, for approved dual awards.

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Contents

List of Figures

List of Tables

Overview and COVID-19 Reflection

Positive school cultures, and explicit teaching of social and emotional skills can have a direct impact on pupil's academic performance (Panayiotou, Humphrey, & Wigelworth, 2019) and a decrease in school-wide disruptive behaviours (Caldarella, Shatzer, Gray, Young, & Young, 2011). This is important as an independent review of schools in the UK identified that many schools have behaviour problems (Bennette, 2017). Behaviour problems lead to a significant loss of instructional time in the classroom (Ofsted, 2014) and higher reported levels of stress in both pupils and staff (Parsonson, 2012).

Pupils who do not follow school rules, and exhibit inappropriate behaviours are subject to a high rate of reprimands and experience fewer positive interactions than their peers (Shores, Jack, Gunter, Ellis, DeBriere, & Wehby, 1993). Pupils whose behaviours are aggressive and dangerous are often isolated from their peers and communities and sent to alternative provisions where restrictive practices such as restraints and seclusion are common (Ofsted, 2007; Estyn, 2012). The use of evidence based proactive tactics can decrease disruptive behaviours in the classroom and limit the need for restrictive practices (Pisacreta, Tincani, Connell, & Axelrod, 2011; Dinenage & Zahawi, 2019).

The purpose of this thesis is to investigate whether proactive interventions based on the science of Applied Behaviour Analysis (ABA) can be implemented in the UK to increase academic engagement, decrease disruptive behaviour, and eliminate the need for restrictive practices in alternative settings. This investigation took the form of the application of School-Wide Positive Behaviour Support (SWPBS) (Sugai & Horner, 2015) to multiple primary schools in North Wales, supporting teachers in those primary schools to use positive tactics at the individual classroom level, and the explicit teaching and reinforcement of emotional, social, and academic skills in an early years Pupil Referral Unit (PRU).

SWPBS in Welsh Primary Schools

Chapter 1 is a review of the current literature on behaviour management in schools in the UK, an introduction to ABA, and the rationale and evidence base for SWPBS. **Chapter 2** focuses on the implementation of SWPBS in Welsh primary schools. It contains a mixed methods paper on the feasibility of implementing SWPBS with fidelity, the effects on pupil behaviours, and staff's perceived facilitators and barriers to implementation of this approach.

Chapter 3 narrows the lens from school-wide implementation to a classroom level single subject design across teachers. An approach to supporting teachers to increase their behaviour specific praise in the classroom is evaluated, and the effects on pupil behaviour is analysed. **Chapter 4** describes a group design created to extend the findings in the previous chapter. This project was interrupted by school closures due to COVID-19 and so a protocol with the study's baseline data is reported and a discussion of the project is offered.

Chapter 5 includes a quasi-experimental design into the investigation of the use of ABA methodology to reduce restrictive practices in an early years PRU. Finally, **Chapter 6** discusses the results found across all studies, and concludes the thesis.

COVID-19 Reflections

This thesis was initially planned in January 2018. Seven schools from across two counties in North Wales signed up to a project and part funded the authors PhD in order to increase school readiness skills and create a positive school culture in their schools. One school contained a foundation phase resource base for pupils with emotional, social, and behavioural difficulties from across the county and left the main project to focus the project's resources on this provision as opposed to the whole school. This meant six schools were involved in Chapter 2's whole schools project.

Four additional schools from across North Wales were then identified in order to collect control data to complete the design. Pre and post data were successfully collected, and

the intervention implemented as intended with the 6 intervention schools. Pre-data were also successfully collected for the four control schools. However, schools in 2020 closed for Easter holidays but did not reopen until September 2020 when visitors to the schools were restricted, and business as usual was not resumed due to the COVID-19 global pandemic.

As a result, post data for control schools could not be collected one year after the pre data, as was the intended method. Subsequently there was no control element to the project as was initially intended by the research team. This was a big blow to the project and research team. It meant that claims about the effectiveness of the intervention were now extremely limited, and less data than originally planned could be analysed to determine how the level of a school's fidelity of implementation affected any change in behaviour data.

In order to add to the existing data and strengthen any conclusions that may be drawn from the chapter another element to the original design was added. The project became a mixed methods design in May 2020, consisting of a quantitative element as just described and now a qualitative element consisting of a thematic analysis of teacher interviews concerning factors affecting implementation in their school during the project.

Further disruption to research in the form of school closures due to COVID-19 can be found in Chapter 4. Chapter 4 was originally designed as an extension to the research conducted in Chapter 3. This was supposed to be the final research chapter in this thesis. The study had been designed, ethics approved, participants recruited, and baseline data had begun to be collected across 23 participants and 19 different schools from across the whole North Wales region. School closures in 2020 meant that the project had to be put on hold. Whilst schools opened again in September 2020 the researcher could not resume the study due to the need to visit multiple schools that were all operating on a "bubble" system, with nonessential persons not allowed on site.

The work being done with the seventh school's foundation phase resource base had always been intended to be published as a short research paper, or case study, but was never intended to be a chapter within this thesis. However due to the loss of the project described in Chapter 4, Chapter 5 was written with the intention to communicate all aspects of work that had been undertaken by the researcher as part of their PhD.

This thesis has been shaped by school closures and necessary changes within schools due to the COVID-19 pandemic. The research that follows is not as was initially intended, but still provides a contribution to the evidence base for ABA methodology being applied to schools and alternative educational settings in the UK.

Chapter 1: Introduction

SWPBS in Welsh Primary Schools

Education within the UK has many objectives including: academic achievement, creating informed ethical citizens, and teaching pupils to be resilient, empathetic, problem solvers (Welsh Government, 2020). Whatever the intended outcome success in education can only be achieved if pupils can behave appropriately within the school environment (Bennett, 2020). Ofsted (2014) concluded in their report based on inspections of 3000 schools, and surveys from many more, that low-level disruption in classrooms was a major problem that was having a serious impact on many pupils' life chances and led to many teachers leaving the profession. Results from their surveys identified that staff and pupils felt that school leaders did not understand the extent of the problem and were not tackling low-level disruption within their schools. It was estimated that pupils lost an hour a day of lesson time due to disruptive behaviours in the classroom.

After Ofsted's report the Department for Education (2016) released official guidance to schools and teachers on behaviour and discipline. The purpose of the report was to outline the school's obligations in publishing a behaviour policy and what needs to be included in it. Over half of the report was dedicated to suggesting punishment procedures for "poor behaviour" including redoing work that is not up to standard, missing break times, after school detentions, confiscation of pupils' property, and the use of reasonable force and seclusion. No advice was given on ways to directly increase "good behaviour" despite citing a school's responsibility to promote it.

Advice to schools from the government on dealing with disruptive behaviours is mostly reactive and punitive. Whilst punishment procedures can be effective in decreasing unwanted behaviours, they cannot in themselves increase appropriate behaviours. Punishment procedures also generate a number of side effects such as negative relationships between the punisher and the punished, pupils engaging in other inappropriate behaviours in order to fulfil

the same need, and counter aggression or an escalation in inappropriate behaviours (Vargas, 2013).

B.F. Skinner (1974) asserted that people whose behaviour had been punished were not now more inclined to behave in different ways, but instead were likely to seek more effective ways to avoid punishment in the future whilst engaging in the same behaviours. For example, a pupil who only hits other pupils when an adult is not around has had their hitting behaviour effectively punished in the presence of an adult but will still hit in the absence of an adult. The school has taught the pupil not to hit when adults are around, not an alternative to hitting in order to still contact reinforcement or brought them under a wider social contingency that might punish hitting behaviour regardless of who is present or who the pupil is hitting. Other problems with punishment procedures in schools are that they are not always effective.

Payne (2015) investigated behaviour management procedures in a secondary school setting and found that pupils stated that verbal warnings and being reprimanded in front of the class did not lead to a reduction in disruptive behaviour, but instead meant that pupils would no longer actively participate in the lesson. Furthermore, they reported that in the pupils' opinion the only effect being made to miss a break had on them was for the pupil to dislike the teacher more in the future, not behave better. O'Leary & Becker (1968-69) investigated the use of reprimands in a classroom and found that praise and ignore tactics decreased disruptive behaviours, whilst when the teacher delivered loud reprimands disruptive behaviour in the classroom increased.

The government states it is a school's responsibility to teach and promote good behaviour and create an environment where pupils can learn effectively (Department of Education, 2016). Effective evidence-based strategies that can achieve these goals and limit the need for punishment are found in the Applied Behaviour Analytic literature.

Applied Behaviour Analysis and Schools

Applied Behaviour Analysis (ABA) is an applied branch of the science of behaviour and provides a comprehensive theory of learning (Cooper, Heron, & Heward, 2020). ABA is used to address behaviours of social significance and it adheres to seven dimensions: generalisability, effectiveness, technological, applied, conceptually systematic, analytic, and behavioural. For an intervention or practice to be considered ABA it must meet all seven dimensions (Baer, Wolf, and Risley, 1968). ABA has been widely applied to various aspects of education in schools both academically and behaviourally (Daly & Martens, 1994; Harris & Sherman, 1973; Rubow, Vollmer, & Joslyn, 2018; Sullivan, Crosland, Iovannone, Blair, & Singer, 2020). The same approach is taken for both academic and behavioural interventions. A clearly operationally defined set of objectives, skills or behaviours, repeated opportunities for practice, reinforcement for correct responses and specific feedback for incorrect responses, prompts to engage in target behaviours, and continuous monitoring and adjustment to methodology where necessary (Martens, Daly, Begeny, & VanDerHeyden, 2014). These methods can be delivered by school leaders and classroom teachers as part of their daily practices.

Torelli, Blair, Diekman, & Wehby (2017) taught mainstream teachers in elementary schools to use a stimulus control intervention to signal to pupils when teacher attention was available, and when it was not. This meant that teachers could work with small groups of pupils, without disruption from the rest of the class, and without delivering reprimands. Cook et al. (2018) found that when teachers positively and individually greeted pupils as they entered the classroom, pupil academic engagement increased, and disruptive behaviour decreased.

SWPBS in Welsh Primary Schools

Another easily adapted teacher behaviour that can decrease class-wide pupil disruptive behaviour and increase academic engagement is an increased use of praise and behaviour specific praise (BSP). Multiple studies have shown this to be an easy, effective intervention, with social validity (Allday, Hinkson-Lee, Hudson, Neilsen-Gatti, Kleinke, & Russel, 2012; Broden, Bruce, Mitchell, Carter & Hall, 1970; Chalk & Bizo, 2004; Haydon & Musti-Rao, 2011).

The ABA literature does not just provide evidence of effective practices in behaviour management in schools, but various examples of how to coach teachers to implement and maintain these practices (Hawkins & Heflin, 2011; O'Handley, Dufrene, & Whipple, 2018; Rathel, Drasgow, Brown, & Marshall, 2014; Simonsen, Freeman, Dooley, Maddock, Kern, & Myers, 2017). These are just a couple of examples of how behaviour analytic approaches can be used to increase academic engagement and decrease disruptive behaviours in individual classrooms that are effective and do not rely on punishment. Other ABA approaches have been developed to change behaviour on a whole school level (Sugai & Horner, 2015).

School-Wide Positive Behaviour Support

School-Wide Positive Behaviour Support (SWPBS) is also referred to as Positive Behaviour Interventions and Supports (PBIS) throughout the literature and in schools. SWPBS was initially developed in the USA in the late 1980s and early 1990s after an increasing interest by researchers and schools in effective behaviour management practices and the development of pupil social behaviours (Sugai & Horner, 2008). Sugai and Horner (2015) reported that 21,000 schools had implemented SWPBS in the last 20-year period.

SWPBS' underlying mechanisms are grounded in the principles of behaviour analysis (Putnam & Kincaid, 2015). These principles include that behaviour is learnt, and organisms are a product of their environments (Skinner, 1974). Therefore, in a positive environment

where pro-social behaviours are routinely taught, modelled, and reinforced the majority of pupils will behave pro-socially. As well as being grounded in basic behavioural principles SWPBS procedures also adhere to the basic dimensions of Applied Behaviour Analysis as set out by Baer, Wolf, and Risley (1968) (Anderson & Kincaid, 2005). In SWPBS the whole school is considered the unit of analysis and behaviours and interventions are clearly and precisely operationally defined. Other ABA principles at the core of SWPBS include the emphasise on the measurement of fidelity, and outcome data used to monitor and modify implementation of intervention (Putnam & Knoster, 2016). SWPBS is an example of ABA implemented on a large scale of social significance (Horner & Sugai, 2015).

The other defining feature of SWPBS is its framework, which is borrowed from public health, with an emphasis placed on prevention. SWPBS supports are split into three tiers; the primary tier which is used with all pupils in a school, a secondary tier for pupils who's behaviours are not responding to universal supports, and finally a tertiary tier which include intensive supports for pupils still exhibiting high levels of problem behaviours despite having the primary and secondary tier supports in place. Crucially all three levels focus on teaching and learning, antecedent manipulations and stimulus control, reinforcement, data based decision making, and evidence based practices (Eber, Hyde, Rose, Breen, McDonald, Lewandowski, 2008; George, Kincaid, & Pollard-Sage, 2008; Hawken, Adolphson, Macleod, & Schumann, 2008).

SWPBS may appear slightly different in every school as it is an individualised system tailored to each school's unique population, culture, and needs. However, there are some core elements that must be present in every school including; (a) a SWPBS committee or leadership team, (b) an overriding school philosophy made up of 3-5 values, (c) specific rules for each area of the school comprised of observable behaviours, stated positively, (d) an acknowledgement system to reward students who are following the rules, (e) specific,

consistent strategies for students who need extra support, and (f) a data collection and evaluation systems for problem solving (Curtis, Van Horne, Robertson, & Karvonen, 2010; Turnbull, et al. 2002).

Universal Supports

Universal supports are the preventative proactive foundations of SWPBS. They are proactive because they apply to all pupils regardless of their current behaviours and preventative as the universal tier's primary function is to prevent the development of problem behaviours (Turnbull et al. 2002). In order to develop and implement universal supports in schools, the schools must first establish a committee.

Committee

The committee, also referred to as the leadership team, is an essential part of all aspects of SWPBS. They should consist of representatives from all areas of the school, and are responsible for the development, implementation, monitoring, fidelity, and sustainability of the new culture change their school is under-going (Baker & Ryan, 2014). When forming the committee, invitation for members should be open to all staff, and even extended to parents. In this way expertise and viewpoints from all members of the school community can be heard and considered, and social validity is taken into account (George, et al., 2008). Once the committee is established an action plan is formed that is based on pre-existing school data where possible and includes measurable outcomes that are brought about by evidence-based interventions (Sugai & Horner, 2008).

Values, Rules, and Matrixes

Firstly, schools and committees must formally decide on their school values and rules. Schools decide what is important to them, and devise 3 to 5 simply and positively stated values (Burke, Davis, Lee, Hagan-Burke, Kwok, & Sugai, 2012). Examples include respect

yourself, respect others, respect property, or gentle hands, kind words, listening, showing respect for everyone, and doing your very best.

Once the values have been established, they are operational defined into specific behaviours or rules that stipulate how to follow the individual values in different environments around the school. If the rule is to respect others by tidying up after yourself in the dinner hall, pupils will be taught how to engage in behaviours in line with this rule explicitly, defining, modeling, practicing, and receiving corrective feedback. This will apply to every setting the rule is relevant in (i.e. toilet, classroom, lunchroom, etc.) (Horner, Sugai, & Anderson, 2010). The values and rules are written into a publicly posted school-wide behaviour matrix as prompts for appropriate behaviours around the school (Kelm, McIntosh, & Cooley, 2014) (See Appendix 1).

Rules are primarily taught at the beginning of every school year before pupils have had the chance to engage in any inappropriate behaviour, and then pupils are reminded of them continuously throughout the year through systems of acknowledgement and reinforcement, and corrective feedback (Horner & Sugai 2015).

Reinforcing Appropriate Behaviours

Once the rules have been initially taught a system of acknowledgement is implemented with the intended purpose of strengthening and maintaining prosocial behaviours consistent with the school matrix. The acknowledgement system is generally a mixture of tangible rewards and specific behaviour praise delivered frequently throughout the day (Simonsen, Sugai, & Negron, 2008). Tangible rewards can be in the form of, but not limited to, points that can be saved to make purchases from a school shop, raffle tickets entered into a lucky dip, and tokens used to vote for school wide rewards. Reward systems must be simple to implement, be accessible to all pupils, be age appropriate, function

separately from any punishment systems, be clearly defined, rely on a variety of backup reinforcers, and be able to be delivered by all staff across all areas of the school (George et al., 2008).

Behaviour specific praise has been shown in the literature to decrease problem behaviour in classrooms and is a key part of effective classroom management (Briere, Simonsen, Sugai & Myers, 2015). Specific praise refers to citing the exact behaviour a person has engaged in to warrant the praise statement for example, "Good job pushing your chair in". In a SWPBS setting teachers should be referring pupils back to school values "Good job pushing your chain in, that's showing respect to property". An optimal rate of specific praise or general praise has not been agreed upon amongst the evidence base, however it has been shown that either a ratio of 4:1 positive to negative comments (Reinke, Herman & Stormont, 2013), or between 6 and 10 positive statements every 15 minutes (Sutherlan, Wehby & Copeland, 2000) is sufficient to see positive pupil behaviour change. Recent research has shown that there is not a "golden ratio" and instead there is a correlation between a higher rate of praise than reprimands and higher observed on-task behaviour in the classroom (Caldarella, Larsen, Williams, Downs, Wills, & Wehby, 2020). A system is also designed by the committee to address inappropriate behaviours when they occur.

Consequences and Antecedent Interventions for Inappropriate Behaviours

Before developing a system to correct inappropriate behaviour, inappropriate behaviour must be operationally defined within the school and its specific population and wider community. In this way, all staff and pupils understand exactly when sanctions will be implemented, and data collection can become more accurate if definitions of inappropriate behaviours are universally understood (Horner & Sugai, 2015). Once inappropriate behaviour has been identified and operationally defined schools develop a hierarchy or continuum of

consequences based on various dimensions of inappropriate behaviour pupils emit for example frequency or magnitude (Kelm at al. 2014).

It is important to clearly define what the word consequence means within an education or SWPBS system. In ABA the word consequence refers to what happens after a behaviour (Cooper et al., 2020). Generally, throughout this thesis the word consequence will refer to what happens after an inappropriate behaviour to be consistent with education and SWPBS literature. Whilst consequences can involve forms of punishment, in SWPBS literature there is a larger focus on prevention of future behaviours through teaching and antecedent manipulations. Generally in a school using SWPBS staff are trained to react in the following way to instances of inappropriate behaviour whether the behaviour warrants further action or not: staff name the problem behaviour observed, and they then state what the expectation is in terms of school values "You've called out whilst I'm talking, this is not being respectful to others, raise your hand if you want to talk to show respect to others.". Staff would then model the appropriate behaviour and ask the pupil to imitate. Finally, staff should acknowledge and encourage the pupil for having engaged in the appropriate behaviour (George, et al. 2008).

Other SWPBS consequences delivered after inappropriate behaviours and antecedent interventions used to prevent inappropriate behaviours occurring again that are used throughout the literature include redirecting pupils engaged in inappropriate behaviour, changing seating arrangements or other environmental manipulations such as moving tempting items away, warnings, rewarding alternative appropriate behaviours, conferencing with parents and/or pupils, providing choices, contingencies contracts, and praising other pupils engaged in appropriate behaviours (Netzel & Eber, 2003; Reinke, Herman, & Sprick, 2011; Reinke et al. 2013; Sugai, Sprague, Horner, & Walker, 2000).

An emphasis is also placed on function of behaviour, meaning looking at why pupils are engaging in inappropriate behaviours. If a pupil is trying to escape a lesson and behaves in a certain way to be sent out of class, being sent out of class is unlikely to be an effective consequence for the inappropriate behaviour (Scott, Anderson, Mancil, & Alter, 2008). This is why the ability to track individual pupil behaviour through data collection that can later be analysed to spot patterns is important.

Data Based Decision Making

Another key feature of SWPBS is data-based decision making. This refers to whole school initiatives, but also individual pupils. To facilitate this schools must first come up with a data collection system (George et al. 2008). Data collection systems should be functional and meaningful, and contain key information including who, what, when, and where, to be enable a school committee to problem solve. One way in which many North American schools do this is by using Office Discipline Referrals (ODRs). A reduction in ODRs can reflect a reduction in inappropriate behaviour. ODRs include data on the individual pupils, and their behaviours, but they can also include data on certain settings or times of day. Subsequently if the issuing of ODRs remains high in the school canteen, or a sudden spike in ODRs on the playground appears then the school's committee can use this to decide where they need to divert resources to decrease inappropriate behaviours. Furthermore, if an individual pupil is receiving more than the average amount of ODRs then they too can be targeted for intervention. ODRs can then continue to be used to track if the interventions are having any effect on problem behaviours, or if further adjustments are warranted (Clonan, McDougal, Clark, & Davison, 2007).

It is recommended that schools using SWPBS adopt a problem-solving model for decision making. This means that firstly data-based decisions are made in the the SWPBS

committee meetings, which is why it is crucial senior management and the headteacher are members. There is an empirical logic to how interventions are chosen, monitored, and modified, and decision making has a formal structure. As part of the problem-solving model for decision making the process needs to be continuously monitored and informed by accurate and up to date data. Data collection systems also need to be simple enough that they can be accurately used by busy staff in the school, but contain all relevant information that is needed for decision making as previously stated (Newton, Horner, Algozzine, Todd, & Algozzine, 2008; Putnam & Knoster, 2016). Subsequently resources can be allocated, and their use justified, and a clear decision pathway can be followed with regards to extra support implemented for individual pupils. Without this data schools would not be able to accurately identify those pupils who made need secondary supports, and evaluate the efforts and resources they are using to implement the whole school systems (Ervin, Schaughency, Matthews, Goodman, McGlinchey, 2007).

Whilst a single data collection system should be designed school committees are also advised to use all data that is already available to them when evaluating SWPBS in their school. This includes data on suspensions, academic performance, and attendance. Qualitative measures with both staff and pupil are also suggested. Universal screening measures are advised to identify early on those pupils who may have emotional, social and behaviour difficulties. In this way prevention efforts at the tier 1 level can form a more complete picture of different aspects across a school, and make the committee already aware of pupils who may need secondary tier supports now or in the future (Putnam & Knoster, 2016).

Secondary Tier

Whilst all pupils in the school are subject to tier one interventions and efforts, these tactics are not always effective for every pupil. Pupil's receiving tier two, or secondary tier, interventions make up around 10-15% of the school population if tier one is being implemented with fidelity. The supports put in place at tier two are both a reactive approach to decrease pupil inappropriate behaviours and a proactive approach to prevent pupils' behaviours escalating further (Wolfe, Pyle, Charlton, Sabey, Lund, & Ross, 2016). Pupils receiving secondary tier supports are those who require extra support to achieve the same behavioural, and or academic goals as their tier one peers, or who need adaptation to the environment to reach their full potential, and the type of interventions delivered at this level are manualized in order to use resources effectively. This means that they are already designed, procedures and protocols are formally documented, and staff are familiar with their implementation. Whilst tier two, just like tier one, will vary from school to school, it has some key features; (a) interventions are manualized and all staff are trained in delivering them (b) once a pupil is referred for a tier two intervention it can be quickly implemented (c) tier two pupils are still subject to tier one expectations, therefore the interventions are designed to support these values, (d) data is taken to evaluate any affect the intervention is having on behaviours (e) whilst they are standardised interventions, they can also be adapted to meet different functional needs if appropriate (Hawken et al. 2008). The type of tier 2 intervention needed for a specific pupil can be identified based on functional assessments such as ABC charts or information from ODRs and teacher interviews, in order to spot patterns of behaviour and hypothesis reasons (Crone, Hawken, & Horner, 2015).

An example of a tier 2 intervention is the Behavioral Education Program (BEP), also called Check-In Check-Out (CICO) (Wolfe, et al. 2016). CICO is an approach that increases the amount of adult attention a pupil receives via regular feedback sessions. Through

feedback sessions pupils also get an increased exposure to and further explicit instruction around the school's rules. Pupils can earn extra to the school-wide tangible and social reinforcements through meeting behavioural goals and earning points, and CICO can increase consistency across staff when dealing with pupil's problem behaviours (Crone, et al. 2015). CICO has been found to be most successful for pupils who's behaviour is maintained by attention, however adaptations have been made to the usual CICO system to target escape behaviours (Klingbeil, Dart, & Schramm, 2019).

Tier 2 interventions can also be delivered through explicit instruction in social skills, when the use of this strategy has been insufficient at the universal level. An example of this is the Social Skills Club/Social Skill Training. This intervention can be used at the tier one level with the whole school. However it has been found most effective when used in small groups with those students who have emotional, social, and behavioural difficulties (ESBD), and when the generic curriculum is adapted to the pupils specific skill deficits or social context (Gresham, Sugai, & Horner, 2001; Lane, Wehby, Menzies, Doukas, Munton, & Gregg, 2003). It involves explicit teaching of prosocial behaviours in small groups with the behaviours modeled, practiced, and feedback given, and then the opportunities to practice, and be acknowledged for, the newly learned skills in other environments (Gresham et al. 2001). There are many more evidence based secondary tier interventions that also show a decrease in disruptive and increase in prosocial behaviours. However even when these interventions are implemented with fidelity, they are not always sufficient to meet the needs of all pupils. Subsequently tier 3 interventions can be developed.

Tertiary Tier

Tier 3, or tertiary tier, interventions require more investigation into the reasons why problem behaviours are occurring. They will be individual to each pupil based on their

specific profile. They can include adapted timetables, extra support from teaching assistants during times pupils are struggling, differentiated work or instructions, further individualised instruction in emotional and social skills, additional or adapted reinforcement schedules, functional communication training, and many other targeted practices that can be found in ABA literature (Turnbull, et al. 2002). This level of support is most effective as a wraparound approach that includes parents, outside agencies, behavioural, and academic supports. As with the other tiers data-based decisions are made, and a provision for the fading of such intensive supports when appropriate are considered. However, data that is collected is also more individualised and specific, for example rather than ODR data staff may collect direct frequency data on target behaviours. Tier 3 supports the SWPBS ethos that all pupils can be successful in schools when the environment is arranged effectively to support them (Eber, et al. 2008). Tier 3 supports are resource heavy, and subsequently should only be implemented after supports at a lower level have been shown to be in place with fidelity, but data shows them to be ineffective.

Implementation Fidelity

Implementation fidelity refers to the extent to which an intervention is being implemented as intended. Fidelity of implementation is a key element that will increase the likelihood of favourable behaviour change when implementing SWPBS (Horner et al. 2010). Schools who implement tier 1 SWPBS with high fidelity are also more likely to implement tier 2 and 3 supports with similar efficacy (Kim, McIntosh, & Hoselton, 2014), and have fewer pupils needing those higher level tier supports (Sugai & Horner, 2008). Subsequently a number of rigorous measures have been developed to gage levels of fidelity within schools.

The school-wide evaluation tool (SET) is the most widely used fidelity measure in schools and within research (Brandt, Chitiyo, & May, 2014). The SET is made up of 7

subscales which cover all main features of SWPBS systems. The 7 subscales used are Expectations defined, Expectations taught, Reward system, Violation System, Monitoring and evaluation, Management, and District support. Items on each subscale can be scored between 0-2. An average score or percentage is then calculated to give an over SET score. A score of 80% or average of 0.8 on the SET is classed as high fidelity, and suggests schools are implementing with enough fidelity to see changes (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004). The SET has an overall internal consistency Cronbach's coefficient alpha of .96, with a range of .56 - .92 for the 7 subscales. When compared to another measure of SWPBS it has a Pearson r = .75 for construct validity and has been statistically shown to be sensitive enough to detect changes in schools between times the SET is implemented. This suggests that the SET is a reliable and valid measure of SWPBS implementation fidelity (Horner, et al. 2004).

A secondary investigation into the psychometric properties of the SET was conducted by Vincent, Spaulding, and Tobin (2010), which found that the SET showed better validity within elementary schools, than middle and high schools but still demonstrated similar levels of internal validity overall. Their investigations also supported the SET's high construct validity when scored against a SWPBS schools self-assessment tool. However, they suggested that whilst the SET maybe sensitive enough to measure big changes on pre and post measures, it might not be sensitive enough to detect gradual changes throughout the implementation process. They also suggest it may not be sensitive enough to help schools implementing with high fidelity fine tune or problem solve areas that could still be improved upon. Other limitations of the SET include that it assesses only the schools universal supports, and not its tier 2 or 3 systems, and that it can be time consuming to implement, which can deter school staff from using it (Brandt, et al. 2014).

SWPBS in Welsh Primary Schools

As implementation impacts the positive effects of SWPBS research has been conducted into the factors that effect a school's ability to implement with fidelity. Many factors are found to affect implementation fidelity including staff buy-in, using and collecting data, leadership issues, funding, staff trainings, inconsistent implementation, staff disagreeing with reward systems, having sufficient time to understand, design, or implement SWPBS procedures, and philosophical differences between staff's values and the school's SWPBS approach (George, Cox, Minch, and Sandomierski, 2018; Kincaid, Childs, Blasé, & Walace, 2007; Lohrmann, Forman, Martin, & Palmierie, 2008). Whilst schools need to be confident they are implementing interventions with fidelity and be aware of potential barriers and facilitators, for systems to be effective they must also consider an interventions sustainability.

Sustainability

Systems changes cannot be considered truly effective if it is not sustainable. Sustainability refers to the degree to which an intervention continues to be implemented with fidelity over time (McIntosh, Horner, & Sugai 2008). If a practice is not sustainable, schools can end up in a two to three-year cycle of implementing an intervention, drifting from and abandoning the intervention, and then implementing a new intervention. This cycle is costly in money and time, and means that interventions that are likely to make a difference are diluted and branded ineffective (Mathews, McIntosh, Frank, & May, 2014).

Sustainability should be programmed for at the very beginning of any new practice, not added as an afterthought once the initial momentum has died down (Mathews et al. 2014). Systems should be continuously monitored and revised if schools experience a change in capacity to implement, or if any other significant changes occur within the school as an organisation (McIntosh et al. 2008). Committees, and frequent committee meetings are also vital in the sustainability of systems in place as they are in charge of reviewing data and

procedures (Baker & Ryan, 2015). Fidelity measures can also be used to ensure procedural drift does not occur (Cooper et al., 2020), which can lead to a decrease in effectiveness of interventions, which in turn can mean schools believe the intervention no longer works. The various procedures and elements of SWPBS are well documented in the literature, and a rationale for the intervention's effectiveness can also be found throughout. Next the evidence base for the positive outcomes SWPBS can have on a school is discussed.

Evidence Base for SWPBS outcomes

SWPBS as a whole school system of support has been studied for over a decade and subsequently has a large body of research discussing the various effects it has been found to have in schools (Chitiyo, May, & Chitiyo, 2012; Horner, Sugai, & Anderson, 2010; Mitchell, Hatton, & Lewis, 2018). One study ran in an elementary school implementing SWPBS found a 56.5% reduction in the amount of instructional days lost over the four years of implementation. This was measured through a decrease in the amount of suspensions, an increase in pupil attendance, and a decrease in the amount of time staff were spending dealing with problem behaviour (Curtis, Van Horne, Robertson, & Karvonen, 2010). Luiselli, Putnam and Sunderland (2002) also found an increase in pupil attendance, along with a decrease in the amount of detentions for aggressive and disruptive behaviours, and vandalism over a four-year period in a middle school. Metzler, Biglan, Rusby, and Sprague (2001) too found lower levels of aggressive behaviours with the implementation of SWPBS in schools, along with an increase in the proportion of student receiving positive reinforcement, and a decrease in Office Discipline Referrals.

Office Discipline Referrals (ODRs) and measurement

Office Discipline Referrals (ODRs) are a common way in the literature to measure disruptive behaviour in North American schools, as they are a standardised system across

many states and school districts. ODRs are filled in by staff when pupils have engaged in inappropriate behaviour and caused disruptions to class or other areas of the school. A decrease in ODRs is a common measurement in support of the effectiveness of SWPBS as a decrease in ODRs is considered to equate to a decrease in unwanted behaviours. The reliance on ODRs as the main measurement used on a whole school level in SWPBS literature has weaknesses as ODRs are an artifact of the tier 1 prevention framework, as opposed to a direct measure (Jarmolowicz & Tetreault, 2015). However, they are practical in that most schools are already using the system, and they contain vital information if functional assessments are required. The use of ODRs as a standard measurement also means that schools can collect measures themselves and are not reliant on employing extra staff or on researchers for data collection to make data-based decisions (Putnam & Knoster, 2016). The use of ODRs as a standardised measurement subsequently has been reviewed and emphasise is placed and guidance available on how to make sure these measures are consistent across schools (Sugai & Horner, 2015).

A decrease in ODRs in schools implementing SWPBS has been observed across age groups in elementary, middle, and high schools (Bohanon et al. 2006; Caldarella, Shatzer, Gray, Young & Young 2011; Gottfredson, Gottfredson, & Hybi, 1993; Horner et al., 2009; Lassen, Steele, and Sailor 2006; Sprague, Walker, Golly, White, Myers, & Shannon, 2001). McIntosh, Chard, Boland, and Horner (2006) investigated the implementation of SWPBS systems in elementary schools in one school district and compared their ODR data to those reported by the rest of the country. Results found that pupils in the school district received less ODRs, and that fewer pupils in the district were identified as needing additional behavioural supports than shown in the data recorded on a national level. Bradshaw, Mitchell, and Leaf (2010) used a longitudinal randomised effectiveness design across 37 schools, over

5 years and found that schools in the intervention group had a significant reduction in ODRs and suspensions.

Teacher and Pupil Wellbeing

Studies have also found an increase in teacher wellbeing when SWPBS is implemented (Reinke, Herman, & Stormont, 2013; Ross & Horner, 2007). In one study direct observations in classrooms in 33 elementary schools where SWPBS was reported as being implemented with high fidelity were carried out. Teachers also filled in self-efficacy questionnaires. When teachers were observed using SWPBS universal tactics such as high praise rates, and correctional feedback as opposed to harsh reprimands they reported feeling more efficacious with regard to classroom management. However, teachers using harsh reprimands, and who delivered lower rates of praise were found to have higher levels of emotional exhaustion than their colleagues (Reinke, Herman, & Stormont, 2013). Pupil wellbeing has also been addressed through the decreased use of punishment procedures that can evoke unwanted emotional consequences (Vargas, 2013), a reduction in bullying, and pupils reporting feeling safer in their school (Bradshaw, 2013; Caldarella, Shatzer, Gray, Young & Young, 2015; Good, McIntosh & Gietz, 2011; Horner et al., 2009). Perhaps most importantly though, depending on what the purpose of schools is, an evidence base for educational interventions needs to exist for a functional relationship between SWPBS implementation and academic attainment.

Academic Outcomes

Gage, Sugai, Lewis, and Brzozowy (2015) conducted a systematic literature review of the existing literature at the time between academic achievement and SWPBS. They found that at the time of publishing there was not enough evidence to support that SWPBS implemented in schools with fidelity had a positive impact on academic outcomes when

compared with control groups. Further research into SWPBS and academic achievement has since been conducted and the studies both before and since Gage et al., (2013) paper are presented below to represent the evidence that exists in relation to academic outcomes and SWPBS.

Lassen, et al., (2006) demonstrated an increase in pupils standardised math and reading scores over a three-year period of a middle school implementing SWPBS. Horner et al., (2009) used a randomised wait-list control design with 60 schools in two states in America. They reported a functional relation between fidelity of implementation of SWPBS and the number of pupils in the third grade who met or surpassed state standardised reading tests. Gage, Leite, Childs, and Kincaid (2017) studied ten years of historical academic attainment data in maths and reading on state-wide tests across 2033 elementary schools in the state of Florida. They found that schools that implemented SWPBS with high fidelity had statically significant more pupils at or above expected attainment levels in both maths and reading, than schools that were either not implementing SWPBS, or were implementing it with low fidelity.

Freeman et al. (2016) studied high schools implementing SWPBS from across 37 states. The purpose of the study was to investigate the effectiveness of SWPBS on academics, attendance, and behavioural outcomes in high schools. They used historical data dating back 7 years before SWPBS implementation had begun in the schools as control data. In total 883 high schools that had been implementing SWPBS for a variable amount of time, and with variable levels of fidelity were included in the study. Freeman et al. (2016) found that implementing SWPBS with high fidelity was associated with increased attendance rates, and a decrease in recorded school sanctions. However, they found that although there was a positive correlation between schools implementing SWPBS with fidelity and increased standardised tests scores, there was no statistically significant relationship between SWPBS

implementation and academics. Most schools had been implementing with high fidelity for less than two years, and questions were raised about the amount of implementation time at high fidelity needed to significantly affect academic attainment.

SWPBS Outcomes and Fidelity

Kim, McIntosh, Mercer, and Nese (2018) investigated if there was a correlation between the length of time SWPBS is implemented and academic and behavioural outcomes. They found across 477 schools that high fidelity was related to a reduction in discipline referral and suspensions, and this reduction was more pronounced in schools the longer they had been implementing SWPBS with fidelity. However, Kim et al. (2018) found no statistical relation between fidelity of implementation and student academic outcomes but did find a relationship between higher pupil academic achievement and schools that had been implementing SWPBS for 3 or more years. This evidence could suggest that whilst SWPBS can have almost immediate effects on social behaviours, to see an associated effect on academic measures schools need to implement SWPBS with fidelity for a longer period.

Cultural Context and Adaptations

Much of the research into SWPBS has been carried out in the USA, where whole-state programmes have been implemented and evaluated for over a decade (Gage, et al. 2017). More recently, studies have been carried out in countries across the world (Kelm, McIntosh, & Cooley 2014; Nelen, Blonk, Scholte, & Denessen, 2020, Sorlie & Ogden, 2015). However, no current research exists on the feasibility of implementing SWPBS in mainstream schools in the UK, or which issues would affect fidelity of implementation within a British school system. There are a number of elements in SWPBS that could be at odds with a UK audience including individual rewards and competitions for appropriate behaviours, the manner in which praise and corrections are delivered and the structure of the school and the

typical number and ages of pupils in the schools. These ideas will be explored throughout the thesis and revisited in the final discussion chapter.

SWPBS has been shown to have effects on both pupil behaviours and academic outcomes. The concern for increased disruptive behaviour in British schools, and the impact that could be having on pupils' academic chances is growing (Ofsted, 2014). Guidance on behaviour policies from the Department of Education (2016) are mostly punitive, and punishment is not always effective in decreasing disruptive behaviours (Payne, 2015; Vargas, 2013). Subsequently effective interventions for decreasing pupils' disruptive behaviours and increasing their academic engagement in schools need to be investigated within the UK setting.

Research Questions

This thesis seeks to address the following two research questions:

1. Are Applied Behaviour Analysis (ABA) and School-Wide Positive Behaviour Support (SWPBS) systems feasible to implement in North Wales Primary Schools?
2. Can these systems produce a positive change in pupil and teacher behaviour?

These research questions were chosen to address the issue of inappropriate behaviours in schools, and their impact on both pupil learning and teacher and pupil wellbeing. There is a large body of research on both ABA and SWPBS in mainstream schools, mostly coming from the USA, but little to no research on the use of these tactics in the UK. Subsequently this thesis seeks to address the gap in the research of whether these systems can be used as successfully in UK schools and their culture and systems, as they are in the research for other countries.

Chapter 2: The Use of School-Wide Positive Behaviour Support in North Wales Primary Schools: A Mixed Methods Study

Abstract

An independent review of behaviour in schools found that pupil disruptive behaviour is a growing problem in many schools within the UK. The report suggested that these problems needed to be tackled at the whole school level. School-Wide Positive Behaviour Support (SWPBS) is a systems level framework that prioritises teaching behaviours necessary for pupils to succeed in schools and fosters a predictable, consistent, and safe environment. Two studies were conducted in a mixed methods design. Study one investigated if SWPBS could be implemented with high fidelity in Welsh primary schools and if the fidelity of implementation has an impact on whole school pupil behaviour. Results showed that schools were able to implement SWPBS with high fidelity, and when they did, some but not all schools saw positive changes in their whole school behaviour data. Study two was an investigation into perceived barriers and facilitators staff experienced when implementing SWPBS in their schools. Staff from schools in study one were interviewed and a thematic analysis was used to analyse the results. Results were in line with previous findings in the literature.

Introduction

In recent years there has been a growing concern around the rising rates of pupil disruptive behaviours, and the impact this can have on academic engagement in schools (Ofsted, 2014). An independent review of behaviour in schools was commissioned by the Department for Education to investigate this. The review found that pupil behaviour was a problem within many schools in Britain and needed to be tackled at a whole-school level. The review defined common characteristics of schools in the UK that were deemed to have a good standard of behaviour and calm, safe environments. Common characteristics included: whole school policies that were implemented consistently across settings and communicated clearly and often to pupils and staff, pupils and staff who all had a clear idea of the school's rules and values, head teachers and strong leadership teams committed to implementing the behaviour policies, frequent staff trainings in the area of behaviour management, and a focus as a school on pupil wellbeing (Bennett, 2017).

These strategies have been identified as part of a School-Wide Positive Behaviour Support (SWPBS) approach. SWPBS is a decision-making framework that includes the use of a clear and consistent behaviour system that is relevant to all areas of the school. The behaviour system is used by all staff members and is understood by all pupils. SWPBS systems are evidence based and are implemented within a multi-tiered continuum of support for all pupils (Sugai & Horner, 2008). Tier 1 is referred to as the universal tier and is applicable to all pupils within the school, whilst tiers 2 and 3 gradually increase the amount of targeted support that pupils receive based on behaviour and academic data collected by the school (Horner, Sugai, & Anderson, 2010). The goal of SWPBS is to facilitate a school environment that is predictable, consistent, and safe (Horner et al., 2009). This is done through systematically teaching and acknowledging socially appropriate behaviour, in line with the school rules.

SWPBS in Welsh Primary Schools

Schools implementing SWPBS with high fidelity have reported increased attendance (Freeman, et al., 2016), an increase in academic achievement (Gage, Leite, Childs, & Kincaid, 2017), fewer Office Discipline Referrals being issued (McIntosh, Chard, Boland, & Horner, 2006), a reduction in rates of suspension (Horner, et al., 2010), a decrease in instructional time lost (Curtis, Van Horne, Robertson, & Karvonen, 2010), more positive relationships between pupils and teachers (Bradshaw, Koth, Koth, Thornton, & Leaf, 2009) when compared to schools that did not implement SWPBS. However, measures of behaviour when investigating the effects of SWPBS are generally indirect, for example measuring a decrease in disruptive behaviour by counting the number of Office Discipline Referrals (ODRs) issued. There are few direct measures of whole school behaviour in the literature. Despite the evidence of the effectiveness of SWPBS and its systems being consistent with Bennett's (2017) findings, to date there have been no examples of the use of SWPBS in the UK. Subsequently there is a gap in the literature. An investigation into whether SWPBS can be effectively implemented in UK schools and which factors facilitate successful implementation should be undertaken.

A high level of SWPBS implementation fidelity can take schools 2 to 3 years to achieve (Kim, McIntosh, Mercer, & Nese, 2018). Kim et al. (2018) also found that it can take up to three years to see significant impacts on pupil's behaviours and academic attainment once SWPBS has been successfully implemented. Fidelity is defined as the extent to which an intervention is implemented as designed (Mercer, McIntosh, & Hoselton, 2017). Many SWPBS tools have been designed in order for schools and researchers to measure the level of implementation fidelity (Bradnt, Chitiyo, & May, 2014).

There are several factors identified in the literature that can impact fidelity of implementation of SWPBS. These factors can be split into two categories: barriers and facilitators. Facilitators are elements that can enable or help a school to implement SWPBS

with high fidelity, whilst barriers have the opposite effect, potentially hindering fidelity (Kincaid, Childs, Blase, & Wallace, 2007). Kincaid et al. (2007) interviewed 70 participants from 26 schools in Florida who had all been implementing SWPBS for at least a year. They were asked about barriers and facilitators to implementation of SWPBS in their schools. Twelve barriers were identified as both relevant, and highly important to their school. The barrier that was stated twice as often as any other was a lack of staff buy-in. Other barriers included inconsistent implementation, data collection issues, and reward systems. Facilitators included support from the county and from the school's senior leaders, communication within schools, and staff trainings. These data were replicated 10 years on in a similar study by George, Cox, Minch, and Sandomierski (2018). Leadership, time and money were also identified as fidelity implementation factors in a survey conducted by Pinkelman, McIntosh, Rasplica, Berg and Strickland-Cohen (2015).

A lack of staff buy-in has been identified as a general barrier to implementation of evidence-based practice in education research and is not unique to SWPBS (Joram, Gabriele, & Walton, 2020). Staff buy-in is defined as the extent to which staff are willing to implement and report positively about an intervention. Lohrmann, Forman, Martin, and Palmierie (2008) identified five themes as to why staff may be resistant to the implementation of SWPBS in their school. The themes were: a perceived lack of support from their senior leadership teams, a hopelessness about change, competing philosophies, not seeing the need for Tier 1 supports and poor relationships between leadership and staff. Turnbull (2002) found that staff participation in interventions was not the same as staff buy-in, and that buy-in could be developed over time, reliant on factors such as school-level support, adequate resources, and training.

The first study investigates the feasibility of implementing SWPBS in 6 mainstream primary schools in Wales and whether implementing SWPBS with high fidelity will have any

effect on direct behaviour measures. The second study explores the perceived facilitators or barriers to implementation of SWPBS by staff from the schools involved in the first study.

Overall Thesis Research Questions

This chapter addresses the overall research question of whether SWPBS is a feasible approach to behaviour management in schools in the UK. This is explored not just through direct observation of behaviours and schools ability to implement SWPBS with fidelity, but also through interviews with staff to evaluate the main barriers and facilitators that UK schools could face when attempting to use this behaviour management approach.

Study One

Methods

Research Team

Table 2.1

Research Team and Roles. Includes estimated amount of time the researchers contributed to each element of the study.

Research Team	**Role**	**Contribution to study elements (with estimated time/involvement)**
Millicent Blandford – Elliott	Lead Researcher	Design (50%), Intervention Implementation (75%), Data Collection (60%), Data Analysis (50%)
Dr. Maggie Hoerger	Supervisor	Initial Concept (50%), Design (50%), Intervention Implementation (25%), Data Analysis (50%), Advisory, Editorial.
Stephanie Cartmel	GwE Collaborator (1st Year)	Initial Concept (50%), Recruitment of Schools/Participants (100%), Advisory
Dr. Richard Watkins	GwE Collaborator (2nd and 3rd Year)	Advisory and School Liaison
Prof. Carl Hughes	Second Supervisor	Advisory
7 MSc / PhD Research Students	Data Collection	Data Collection (40%)

The Research team was made up of 2 BCBA-Ds, 1 BCBA, and two professionals from GwE who both had previous teaching experience and advised schools across the region on a regular basis. All, apart from the lead researcher had previous experience of working in mainstream schools and implementing large scale research projects. However only the lead researcher's supervisor had experience in implementing SWPBS in a school. The MSc and PhD students were trained to collect data for this project using Behaviour Skills Training. The lead researcher collected IOA across all students to ensure a high standard of data collection (see IOA section for details). Only two students had previous experience of collecting direct observation data prior to starting the project.

Participants and Settings

Six schools in North Wales were part of the SWPBS Project. Primary schools across two counties were invited by GwE (the effectiveness and improvement service for North Wales) to collaborate with a researcher team on a project to develop SWPBS locally. Schools paid £1000 for the first year of the project and £500 for the following two years. The project received additional funding from the local authorities.

Table 2.2

School characteristics

School	Type of School*	Number of Pupils	Number of Classrooms	Percentage of Pupils Eligible for Free School Meals	Language**
1	Infant School	180	6	35%	Bilingual
2	Junior School	226	7	34%	Bilingual
3	Primary School	494	17	21%	Welsh / Bilingual
4	Junior School	108	4	19%	Bilingual
5	Primary School	206	7	23%	Bilingual
6	Primary School	209	6	52%	Bilingual

*Note. *Infant Schools = School years reception to year 2 only, Junior Schools = School years 3 to year 6 only, Primary Schools = Schools years reception to year 6. **Language refers to the language lessons were taught in, where bilingual denotes a mixture of Welsh and English.*

Data Collection and Measures

Direct observation data of student behaviour was taken in each school using interval timing before the intervention began and again a year later after intervention has begun. The behaviours observed were academic engagement and disruptive behaviour. Academic engagement was defined as behaviour that matched the ongoing teacher instruction, or if there was no direct teacher instruction, behaviour that was not contrary to the ongoing class and school rules. Disruptive behaviour was defined as inappropriate classroom behaviour that interrupted or was contrary to on-going teacher instruction, or class and school rules.

Academic engagement data was collected using whole interval timing methods, with 30 second intervals for 5-minute sessions per pupil. Observers used timers set to vibrate every thirty seconds. They would sit or stand in the classroom and observe at least 80% of pupils in turn in each classroom. If the pupil was academically engaged for the full 30 seconds they were recorded as displaying academic engagement. Academic engagement and disruptive behaviour were recorded at the same time. Disruptive behaviour data were collected using 30 second partial interval recording for five minutes per pupil. If the pupil engaged in any disruptive behaviour during the 30 seconds, they were recorded as engaging in disruptive behaviour. The overall disruptive behaviour for the pupil in a five-minute block was then calculated as the percentage of total intervals where the pupil had displayed the target behaviour. The mean for the entire school was then calculated by adding all the individual percentages together and dividing them by the total number of pupils that been observed. Whole school academic engagement was calculated in the same way. Depending on size of school, the whole school data collection took between 3 and 10 days per school.

The School-Wide Evaluation Tool (SET)

The SET was used in all schools to measure implementation fidelity. The SET is the most common tool used for this purpose in the literature (Bradnt, et al., 2014). The measure has seven subscales including values defined, values, taught, reward system, behaviour system, monitoring and evaluation, senior leadership, and county support. Each element within the subscale is scored between 0 and 2, based on interviews with headteachers, teachers and pupils, behaviour policy documents, and direct observations from around the school. If an average score is calculated as at least 80% across all subscales, a school is judged as implementing SWPBS with high fidelity. Low fidelity refers to any school with an overall SET score of below 80%. The SET has a Cronbach's alpha of .96 and a Pearson r score of .75 (Horner, et al., 2004).

Statistical Analysis

A one-way ANOVA was used to analyse the data between a school's fidelity score and academic engagement, and a school's fidelity score and disruptive behaviour. An independent t-test was used to analyse the data from time one to time two. An independent t-test was used because the pupils from time one to time two varied in the schools and data or specific observations were not matched (Fields, 2009).

Procedures

Once schools had joined the project and had an initial introduction to SWPBS, the lead researchers, along with postgraduate students visited each school in turn and collected pre-intervention data and administered the SET.

Committees, Project Meetings and Staff Trainings

A researcher on the project acted as a facilitator. The facilitator trained staff and helped to implement SWPBS in the schools. Each school formed a SWPBS committee that was responsible for developing the project within their institution. The committees consisted of teaching assistants, teachers, members of the senior leadership team, governors, and headteachers. Committees and the researcher met twice a term. Meetings were held every 6 weeks at a central location and were attended by representatives from each school, researchers from the university, and members of the regional effectiveness team. Staff trainings were provided by staff from the university. All schools were given initial staff trainings, with additional trainings delivered on request by schools. On average, in the first year of implementation the lead researcher visited each school once a month to observe, advise, and help move the project forward.

School Values, Rules, and Acknowledgement Systems

The committee at each school decided on their values systems that included 3 to 5 values. Examples of chosen values include: Gentle Hands, Kind Words, Listening, Showing Respect for Everyone and Doing you Very Best. Values were further explained as explicit rules for each area of the school and were taught explicitly at the beginning of the project and throughout the school year. For example, Showing Respect for Everyone in the lunchroom meant clearing your lunch things away, and Gentle Hands in the Classroom meant sharing school resources.

Acknowledgement systems were designed in each school to reward and acknowledge pupils who were following rules and demonstrating school values. The aim was to create a positive culture where appropriate behaviour was often recognised. Acknowledgement systems included a system of specific praise at high rates, and five out of the six schools in

the project adopted a system where pupils earnt tokens for engaging in behaviours in line with the school rules. Tokens were awarded by all members of staff and they were used by pupils to vote for various end of term treats that all school members were eligible to participate in. School 3 implemented a similar system that was class based rather than whole school based. End of term treats where free and accessible to all, for example a movie afternoon, and the purpose of tokens was to make the delivered praise more salient.

Behaviour Policies, Sanction Systems, and Data Collection

School committees reviewed their current behaviour policies. They were instructed to develop, with input from all staff members, functional documents that would act as a blueprint to staff and pupils about how appropriate behaviours would be acknowledged, and inappropriate behaviours dealt with. Staff considered which behaviours would be handled by teachers in the classroom and when behaviours would be referred to SLT. The function of the behaviour policies was to facilitate consistent implementation of behaviour management, both proactive and reactive, across the school. Finally, schools were introduced to develop a system to quantify the use of sanctions across the school and per pupil so data lead decisions could be used to review the SWPBS systems in place, and identify pupils requiring extra support.

Individualised School Support

School 1. When the project started school 1 already had a set of five values. With the help of the lead researcher these values were operationally defined into a matrix. The lead research also lead two staff meetings and workshops after school over the year where staff in small groups filled in a flow chart around inappropriate behaviours they expected to deal with in the classroom and inappropriate behaviours they expected senior management to deal with,

alongside developing a behaviour management system. These ideas were then put together by the senior management.

School 2. School 2 held monthly committee meetings made up of the headteacher, teacher in charge of behaviour in the school, two teaching assistants and two school governors. The lead researcher attended these monthly meetings where it was reviewed what the school had in place, and further actions were decided upon for the following month. These were generally actioned by the teaching assistants and the lead researcher provided them support where necessary. The lead researcher also presented to the whole staff team twice, once on positive behaviour support strategies in the classroom and once on ways to support pupils with emotional regulation. Two teachers also received one to one support, see Chapter 3.

School 3. Initially the lead researcher supervisor presented to all staff on positive behaviour support strategies in the classroom. The lead researcher then met with the two teachers implementing the project in the school three times before the launch of the project in the school. During these sessions a behaviour management for acknowledging positive behaviours was designed, alongside a specific system for addressing inappropriate behaviours in the playground. On a inset day before the launch of the project across the school the lead researcher presented the rationale behind the systems to the staff, along with general positive behaviour support ideas for managing low level behaviour in the classroom. Once this launch day had occurred, despite regular attempts to make contact with the teachers at the school organising the project, due to other issues in the school the lead researcher did not provide any further support to the school on the tier 1 level during the intervention period, other than the termly all schools meetings.

School 4. The headteacher took the lead on the project in School 4. The lead researcher had regular meetings at the school, on average every 1 – 2 months, with the headteacher to

discuss the school's behaviour policy, whole school behaviour issues, and whole school acknowledgement systems. One teacher from the school also had one to one support, see Chapter 3.

School 5. The lead researcher and their supervisor presented to all staff and the governors about the project including values and the matrix. They also discussed the rationale behind the whole school change, and positive behaviour support in the classroom. Despite repeated attempts to get in contact with the headteacher who was leading the project no further tier 1 support was given to the school other than the termly all schools meetings.

School 6. The lead researcher visited School 6 initially to explain the rationale behind the project to the headteacher who had not been at the initial launch meeting. The lead researcher then attended a meeting with the headteacher and the SLT to develop an action plan and timeline for launching the project in the school. Following this the lead researcher met with the two teachers who were in charge of the project for the school on four separate occasions over a three month period to develop different aspects including values, the matrix, school behaviour and acknowledgement policy, and staff training for tier 1 SWPBS for their school.

Interobserver Agreement (IOA)

Interobserver agreement (IOA) was taken across at least 20% of all data collected, for each behaviour across all schools and phases. A second observer sat next to the first using the same interval timer and without conferring apart from agreeing on which pupil to observe. Data were collected by postgraduate students and the primary researcher. IOA was calculated by counting the number of total agreements and dividing that by the total number of agreements and disagreements, then multiplying it by 100. IOA is reported per school. The IOA for School 1 was 95%, School 2 was 83%, School 3 was 79%, School 4 was 99%, School 5 was 92%, and School 6 was 87%.

Results

Academic Engagement

Results show that after one year of the project four out of the six schools were implementing SWPBS with high fidelity (had a SET score over 80%). Figure 2.1 shows that three out of four schools that implemented SWPBS with high fidelity saw an increase in their school's average overall academic engagement, and an independent t-test demonstrated that these changes were statistically significant (see Table 2.2). A one-way ANOVA was used to determine whether there was a significant difference in behaviour change between high and low fidelity schools. The results of the ANOVA show that there was no statistically significant difference of changes in academic engagement between high and low fidelity schools from pre to post intervention data collection: $F(1.8)=1.32$, $p=.28$.

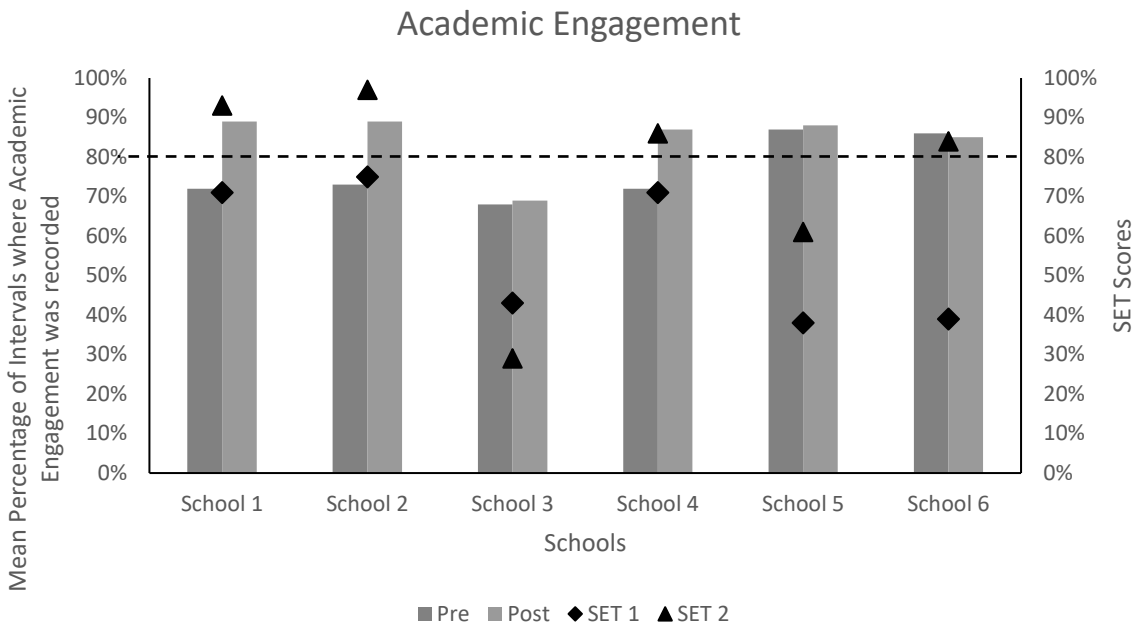

Figure 2.1 shows the mean percentage of academic engagement across each school from pre intervention to 1-year post. Displayed on the secondary y-axis are the corresponding SET scores from the first data collection and the second.

Table 2.3

Mean and Standard Deviation (SD) for academic engagement for each school pre and post intervention, and the p value from time one to time two.

School	Academic Engagement Pre		Academic Engagement Post		*p*
	Mean	**SD**	**Mean**	**SD**	
School 1	.72	.30	.89	.22	<.001
School 2	.73	.31	.89	.20	<.001
School 3	.68	.34	.69	.32	.61
School 4	.72	.31	.87	.21	<.001
School 5	.87	.24	.88	.23	.88
School 6	.86	.20	.85	.23	.83

Disruptive Behaviours

Of the four schools implementing SWPBS with high fidelity after one year three were observed as having a decrease in disruptive behaviour (see Figure 2.2). Of those three, only one decrease was assessed as statistically significant (see Table 2.3). School 3 showed a decrease in its overall fidelity score from pre to post measures and had a statistically significant increase in disruptive behaviour. Like academic engagement there was no statistical significance between fidelity of implementation and a change in disruptive behaviour: $F(1,8)=1.14$, $p=.32$.

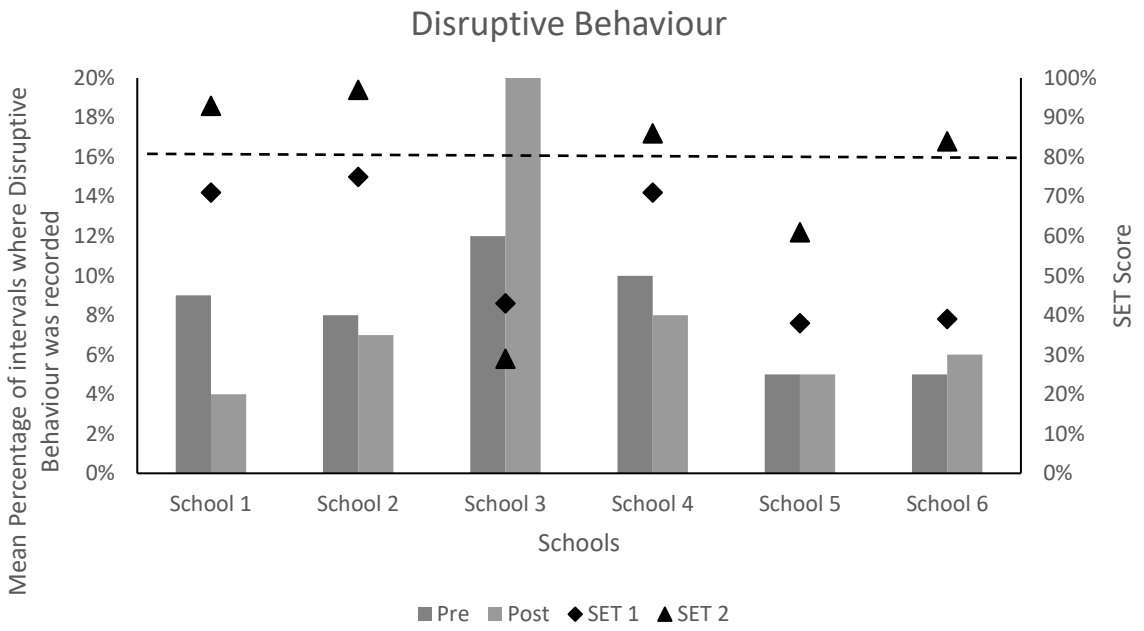

Figure 2.2 shows the mean percentage of disruptive behaviours across each school from pre intervention to 1-year post. Displayed on the secondary y-axis are the corresponding SET scores from the first data collection and the second.

Table 2.4

Mean and Standard Deviation (SD) for disruptive behaviours collected from each school pre and post intervention, and the p value of data from time one to time two.

School	Disruptive Behaviours Pre		Disruptive Behaviours Post		*p*
	Mean	**SD**	**Mean**	**SD**	
School 1	.09	.18	.04	.09	<.001
School 2	.08	.17	.07	.14	.57
School 3	.12	.22	.20	.28	<.001
School 4	.10	.19	.8	.15	.38
School 5	.05	.12	.05	.09	.93
School 6	.05	.09	.06	.10	.44

Discussion

Four out of six schools were running SWPBS systems in their school with a SET score of 80% or higher after one year of implementation. One of the six schools had a decrease in their SET score after the intervention. Of the four schools who were implementing SWPBS with high fidelity by the second data collection, three had statistically significant increases in academic engagement and one of those saw a significant decrease in disruptive behaviour. The school with a decrease in their SET score saw a significant increase in disruptive behaviour. There was no statistically significant relationship between implementation fidelity of SWPBS and direct measures of behaviour change across the six schools. However, the fact that three schools with high fidelity saw significant change in

behaviour data, whilst those with low fidelity saw no significant change, or significant change in the wrong direction is encouraging.

These results are promising in terms of SWPBS implementation in the UK, with four schools in Wales implementing with high fidelity, and half of the schools in the project seeing positive changes after only one year of implementation. It is perhaps not surprising that two schools did not reach high fidelity as literature suggests it is most likely to take two or three years to reach full implementation (Kim, et al., 2018). Whilst this is a good indication that SWPBS may be feasible in UK schools, more information needs to be gathered about factors that can facilitate and hinder the approach to make implementation as successful as possible. Study Two investigates perceived facilitators and barriers of SWPBS implementation experienced by the staff from the schools in study one.

Study Two

Methods

Research Team

Table 2.5

Research Team and Roles. Includes estimated amount of time the researchers contributed to each element of the study.

Research Team	Role	Contribution to study elements (with estimated time/involvement)
Millicent Blandford – Elliott	Lead Researcher	Design (50%), Interviews / Data Collection (100%), Data Analysis (75%)
Dr. Maggie Hoerger	Supervisor	Design (50%), Data Analysis (25%), Advisory, Editorial.
Dr. Richard Watkins	GwE Collaborator	Advisory and School Liaison
Prof. Carl Hughes	Second Supervisor	Advisory

Participants and Settings

All participants were from the six schools described in Study One. Interested members of staff were invited to take part in interviews, via emails to their headteachers and school committee members. A varying number of participants from each school agreed to participate. Interviews were conducted over Zoom by the lead researcher. Participants were either in their school or at home when participating in the interviews.

Table 2.6

Participant characteristics

Participant	School	Role	Gender
1	School 3	Deputy Head / Class Teacher	F
2	School 4	Class Teacher	M
3	School 1	Deputy Head / Class Teacher	F
4	School 1	Teaching Assistant	F
5	School 1	Headteacher	F
6	School 1	Class Teacher	F
7	School 5	Class Teacher	F
8	School 3	Class Teacher	F
9	School 6	SLT / Class Teacher	F
10	School 6	Class Teacher	F
11	School 4	Headteacher	M
12	School 2	SLT / Class Teacher	F
13	School 2	Headteacher	F

Data Collection and Analysis

Once the participants had registered their interest by contacting the lead researcher, they were sent participant information forms and given the chance to ask further questions about the study. They were also provided upon request, with the questions to be asked in the interview. A convenient time was then arranged, and a Zoom meeting invite sent. During the Zoom meeting, but before the recordings started, the lead researcher reminded the participants that the meetings were being recorded, that they could refuse to answer any questions without reason, and that they could request a copy of their interview transcript. They were asked to answer honestly and informed that there were no right or wrong answers,

or any specific answers the interview was looking for. Interviews lasted between 18 and 54 minutes, were recorded using the Zoom audio recording function and were transcribed verbatim by an audio transcription service.

A semi-structured interview was conducted with the same questions for all participants. Questions included an invitation to the participants to give their thoughts on the project and SWPBS. Prompts were given around behaviour change in pupils and staff, whether they believed the project would be maintained in their school, if their feelings about the project had changed over time, and any changes they had personally made to their classroom, or changes they were aware of that had been made to the school behaviour policy as a result of the project. Staff were asked to identify the main factors they felt helped implementation. Further prompts were provided if certain topics had not been covered from the literature on facilitators and barriers. Finally, interviewees were asked if the intended to continue the project in their school, classroom, or practice depending on job role (see Appendix 2 for the interview schedule). The aim of the interview was to assess how many elements of the project staff felt had been implemented in their school, and to survey their opinion on the barriers and facilitators that may have impacted the project.

Interview transcripts were analysed through Thematic Analysis following the six steps laid out in Braun and Clarke (2006). A deductive and semantic approach was taken to the analysis. The researcher was mindful of reporting bias and how data can be interpreted differently by different researchers. While these effects can be minimised by having more than one researcher code and develop themes, this was not possible due to the limited scope of this PhD research project. However, the PhD student was monitored by their supervisor and given guidance by another member of staff in the department familiar with the Thematic Analysis. The researcher was also mindful of not influencing any staff or asking leading questions. This was a distinct possibility as the researcher had worked alongside each school

and subsequently already had prior knowledge of specific barriers and facilitators that could have been more relevant to certain schools than others. The researcher listened to the staff's responses to questions and did not comment or ask leading questions even if their experience with the staff's school had been different to what was being stated by the staff member currently. Then when coding and developing themes they did not allow who the staff member was or which school they came from to be a factor in how dialogue was coded. Operational definitions were developed for each code and theme based on the existing research, and subsequently the criteria for what staff said were objectively defined in this way, as opposed to based on researcher experience or opinion.

Results

One barrier and six facilitators were identified across participants as helping or hindering the implementation of SWPBS in the six schools. A lack of staff buy-in was considered a barrier, while leadership, consistency of approach, researcher input, involving all key stakeholders, collaboration between all project schools, and cost were identified as facilitators. Figure 2.3 shows the number of participants who discussed each theme during interview. Each theme is discussed in turn, with quotes to support the authors findings.

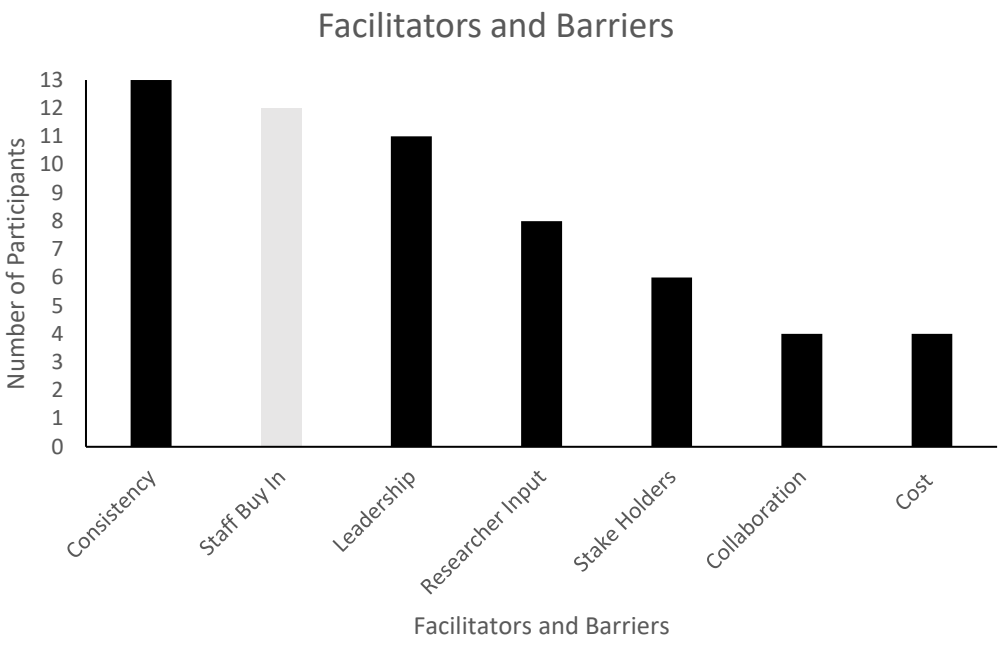

Figure 2.3. Number of participants who discussed each identified theme. Bars in black represent facilitators, whilst bars in grey represent barriers to implementation.

Consistency of Approach

"Every child and member of staff knows exactly what the expectations are. They all know what to do in a certain situation. And I think when you know what to do next, whether you're a child or an adult, you naturally feel more relaxed and you're naturally more likely to succeed." Participant 13 (School 2, Headteacher, High Fidelity).

Consistency of Approach was a facilitator identified by all 13 participants across the schools in both initial implementation and for keeping SWPBS going. Consistency is one of the foundations of a SWPBS approach and can refer to both the use of the systems and the whole school approach. Participants stated that consistency of expectations and behaviour management across all settings were important aspects of the project and something that made them want to start implementing it in the first place, or a reason why they would like to see it continue.

"More consistency. 'Cause now we've got this student behaviour management process that's in every classroom, it's up in the hall. You know, it's everywhere the children go. So all staff, now, are singing off the same hymn sheet… everybody should be treated equally and fairly throughout the school, and I want that to continue." Participant 9 (School 6, Class Teacher/SLT, High Fidelity)

"…I think for the children it's important to have the continuity, and that every adult that they see in school is saying the same kind of thing… so if they're in the corridor or if they're in the classroom or anywhere like that, that they've got the same message coming..." Participant 1 (School 3, Class Teacher/Deputy Head, Low Fidelity).

"[Talking about the behaviour policy] It wasn't clear, it wasn't consistent. I'd been there four years and I still didn't know which types of behaviour I should be dealing with within a classroom setting…it's nice to know that we've got this plan that we're all on the same page with everything. So I think that's had a really good impact on the school and on the behaviour in class and, yeah, I think that was great and helped a lot of staff get on board." Participant 6 (School 1, Class Teacher, High Fidelity)

Staff Buy In

Staff Buy-In refers to the staff's willingness to implement SWPBS in their classrooms or school. If staff do not buy-in they are unlikely to implement initiatives fully or with fidelity. All participants felt that buy-in to a new project was important for its success.

"You get the buy-in from the kid, you get the buy-in from the teaching assistant, you get the buy-in from everyone, and it works, but it takes time." Participant 11 (School 4, Headteacher, High Fidelity)

Twelve participants interviews thought that a lack of staff buy-in had been a barrier to implementation in their schools. It made it harder from them to implement initially, and for some schools they never overcame the issue completely.

"Barrier-wise… just that initial getting every onboard, persuading them, "Look, this is gonna work," which happens with any new initiative that you take on any way. You always get the odd one or two that are wary… You lead by example and you just keep positive… show them the little rewards that are happenings… and the children, getting them enthused about it staff can't say no. Once you've got enthusiastic children that love something, that's it." Participant 12 (School 2, Class Teacher/SLT, High Fidelity).

"…we all had to live it, we all had to believe it. I think that was one of the really hard challenges to get everyone onboard, like with any sort of project or any initiative. Getting everyone to buy into it really was the tricky part, and I don't think some would ever buy in to anything. I think they've been in teaching a little bit too long, and they believe they've seen everything come and go, haven't they." Participant 3 (School 1, Class Teacher/Deputy Headteacher, High Fidelity)

Some participants believed a lack of buy-in from staff came from them not seeing the need for the new approach.

"… one of the main barriers was mobilising, motivating certain members of staff initially, some staff were like, "Well, we don't need it. We haven't got a problem with behaviour in my classroom."… it's like a universal culture change, isn't it? You know, and I think that takes time and it's gonna be an ongoing process." Participant 9 (School 6, Classroom Teacher/SLT, High Fidelity).

Others felt that a lack of buy-in was down to a difference in philosophies between SWPBS and teachers' personal beliefs.

"… the old-fashioned belief that, "well, it wasn't like this in my day when we had proper discipline." That's been a real barrier to get over." Participant 5 (School 1, Headteacher, High Fidelity)

"…some staff found it difficult to be positive with the little things, the minor things – walking in a nice line- because, well, they should be doing that any way. You know, that kind of mentality." Participant 2 (School 4, Class Teacher, High Fidelity).

Leadership

Eleven participants discussed leadership as having an impact on the implementation of SWPBS in their schools. Participants felt that for SWPBS to be successful the senior leadership team had to make sure staff were following the behaviour policies and systems.

"[Headteacher] has kept that really sort of clear that actually this is the way we do things in school. You know, there's no backing out of it. This is how we do things, so if you're not onboard then you need to adapt…" Participant 3 (School 1 Deputy Head/Class Teacher, High Fidelity)

Headteachers were responsible for either making the project a priority or for letting it be forgotten about.

"The project, to us, in our catchment became our priority and we put it in a bit of a school improvement plan. So I think for some that would be an issue because other things take over as more important. But for us at the time this was what was important and we went with it as top priority." Participant 5 (School 1, Headteacher, High Fidelity)

"…there was lacking of leadership and staff members just kind of forgot about lots of the project… the team members, we tried our best, but we weren't given enough opportunity

to meet, to come together, to work on the policies." Participant 8 (School 3, Class Teacher, Low Fidelity)

If Leadership were enthusiastic about SWPBS and modelled SWPBS language and policies when interacting with pupils and staff, staff felt that this was a priority in the school. The leadership team were also crucial for staff morale and keeping the project going.

"What they [headteacher and deputy headteacher] would do is, because you would naturally have days where you've had a bad day with your class and you'd go, "This isn't working," and they would say, "But this isn't gonna be an overnight success. This isn't something that's going to work for you after two or three lessons, and you're gonna have bad days." And they would point out X-child in the classroom that's responding really well to it… And then you get a pick-me-up that way." Participant 2 (School 4, Classroom Teacher, High Fidelity)

School 3 faced a particular problem with leadership with Participant 1 stating there had been "a lot of changeover with management" and that they felt like other things had taken priority or were more important in the school at the time.

Researcher Input

Eight participants discussed that having the researcher, and the researcher's supervisor's guidance and input was "invaluable".

"So when I met [Researcher's Supervisor] and you, and when you opened up the world of research to say, "Look, this works and this is why it works," and the evidence that backed it up, it just gave that strength of conviction that, A, what I believe is true and B, here it is. Here it is, that's worked. And C, here it is in action, it's fascinating. Absolutely brilliant." Participant 11 (School 4, Headteacher, High Fidelity)

The researchers' presence meant participants were able to ask questions and develop a deeper understanding of the rationale for the systems. Participant 13 felt that having the lead researcher onsite also meant that systems could be tailored for them, and that they were being listened to about their needs as a school. Other participants liked knowing that SWPBS is evidence based.

"What was nice is knowing it had been used in other classrooms or whatever… and that it wasn't just a theoretical thing based on somebody who's written a book somewhere about their opinions." Participant 2 (School 4, Class Teacher, High Fidelity)

Participants also spoke about enjoying the researcher collecting data and giving feedback so they could see concrete changes in their school.

"You know, even though at the onset our data was quite good for us any way, but for us to see that 12 months later that had improved again, that was just fantastic to see and it just showed that everyone did get onboard with it. It'd be interesting if we did it again… it would be interesting to see if it'd gone up even more." Participant 12 (School 2, Class Teacher/SLT, High Fidelity)

Involving all Stakeholders

Six participants said that the ability to involve all the stakeholders in the project had been a facilitator to implementation.

"…I think they've been really worthwhile for teaching assistants to become part of a whole-school project… it gives them a bit of sense of ownership and a sense of belonging to the school as well, you know, that they're working as a team and the governors then being involved. That's been really good because they've seen what work we actually do with the children, how much we do, and the difficulties that some of our children actually have…" Participant 12 (School 2, Teacher/SLT, High Fidelity)

"We involved the parents as well, so we sent the letters home to the parents letting them know that this is how we will be encouraging the children to follow the [School Name] Values and ideas of things they could do at home." Participant 3 (School 1, Class Teacher/Deputy Head, High Fidelity)

"I think it was good the way you had a committee and there was staff from different backgrounds on it, so it wasn't just top-down leadership, where the head was there and we sort of enforced it on staff. It wasn't like that, because there was obviously myself, but there was, you know, the teacher in charge of behaviours, there was teaching assistants but also governors as well. I think it did need the whole-school ownership." Participant 13 (School 2, Headteacher, High Fidelity)

All Schools Collaborations

"I've enjoyed working collaboratively with other schools and with outside agencies." Participant 9 (School 6, Class Teacher/SLT, High Fidelity).

Four participants mentioned the half termly whole-school meetings and the ability to collaborate with those who were also participanting in the research as a facilitator. Staff thought this was motivating and helped them with ideas of how other schools were approaching certain situations.

"…it was really nice to have the meetings that we had. It was really nice to come together and listen to what other people were doing and you know, how it was working. I found it really helpful, and I think that was a really good aspect of the project that we were allowed time to meet and it was useful to hear what other schools were doing and what worked and possible what didn't. I really valued that time." Participant 7 (School 5, Class Teacher, Low Fidelity).

Participant 3 discussed how these meetings helped to move along the project in their school. They said that when they remembered a meeting was coming up it served as a reminder to review what they had in place and look at what they still need to develop in their school.

Cost

During the interviews four participants discussed cost. When asked about facilitators Participant 4 said:

"… the low-cost element of it, because the minute someone comes back with an idea that gonna cost money, it doesn't happen." Participant 4 (School 1, Teaching Assistant, High Fidelity)

Schools have a limited budget. It is important to staff that the project was affordable within their own budgets. Some participants spoke of professional signs being commissioned for the school or other resources being purchased, whilst others described how easy it was to use the resources they already had in school.

General Discussion

Six primary schools in North Wales took part in a SWPBS project to investigate if SWPBS could be implemented with fidelity in UK primary schools, whether implementation would have any effect on direct behaviour data, and what where the main factors that impacted the implementation of SWPBS. After one year, four out of the six schools were implementing SWPBS with high fidelity (SET scores of over 80%). Three schools implementing SWPBS with high fidelity saw a statistically significant increase in academic engagement across the school, one of which also observed a statistically significant decrease in disruptive behaviour. Schools identified a strong and involved senior leadership team, along with consistent implementation of SWPBS principles, as themes that supported

implementation in their schools. Many also identified researcher input, key stakeholder participation, collaboration between the schools in the project, and cost as other facilitators to implementation. A lack of staff buy-in was identified by 12 out of 13 participants as a barrier.

These results are consistent with previous findings in the literature that show SWPBS can have positive changes on pupil behaviour (Curtis, et al., 2010; Gage et al., 2017; Horner et al., 2010). Most measures of whole school inappropriate behaviours in the SWPBS literature are indirect. For example, a reduction in suspensions or fewer ODRs being issued (Horner et al., 2010; McIntosh, et al., 2006). In this study, behaviours were directly observed and measured to assess the effectiveness of SWPBS in reducing or increasing target behaviours, adding a new measure to the literature. Themes identified in the interviews in study two were also consistent with previous literature on facilitators and barriers to implementing SWPBS (Kincaid, et al., 2007; George, et al., 2018), suggesting that implementation literature from North America is also relevant to a UK setting.

An independent report for the Department of Education (Bennett, 2017) concluded that there was a whole school behaviour problem in many schools in the UK, and positive approaches that included clear expectations and comprehensive behaviour policies would go some way to tackling these behaviour problems. Findings from study one supports these ideas as schools that implemented these tactics saw positive behaviour changes in their behaviour data. Bennett (2017) also stated that schools with strong leadership teams are less likely to have major behaviour problems. This idea was reflected in the results from study two. Schools where staff identified their leadership teams as effective in leading and supporting the project saw positive changes in their fidelity scores. This idea is further supported by one school who saw a statistically significant increase in disruptive behaviour over the year and did not have a consistent senior leadership team throughout. Results from study one and two could suggest that for schools to implement SWPBS with fidelity they must have stable

management who are willing to actively participate in the process and manage staff in doing so also.

Study two also revealed that a lack of staff buy-in was considered a barrier to implementation in the project schools. Staff buy-in is cited as an important factor in implementation across educational research literature (Joram, et al., 2020), not just SWPBS literature (Kincaid, et al., 2007; Lohrmann, et al., 2008). Before SWPBS is implemented in schools, work could be done to investigate the level of resistance the new intervention might face, and leadership must be willing to work with staff to ensure their participation (Turnbull, 2002).

Four out of six schools implemented SWPBS with high fidelity after one year. Literature suggests that whilst it is possible to achieve whole school behaviour change in one year, on average it takes two to three years for most schools to implement SWPBS with high fidelity, and can take longer for positive results to be reported (Kim et al., 2018). Two thirds of schools in the project were able to implement with high fidelity, and half saw some form of positive behaviour change in their schools after one year. This supports the idea that SWPBS is a feasible system for implementation in UK primary schools, and positive results can be replicated by doing so.

There were several limitations to the project across both studies. Firstly, as previously identified due to COVID-19 the researchers could not finish collecting control school data. This meant that in study one there was not a control element to the study, making it a quasi-experimental design and not as planned. Fewer schools than initially planned also meant that there were fewer degrees of freedom when running the ANOVA to analyse the relationship between fidelity and behaviour change, which could have affected the results. Another effect of schools shutting early due to COVID-19 was that recruitment for interviews for study two

could not be done in person. Instead the researcher had to rely on headteachers and members of the committee passing on the information to colleagues who were working from home. If the researcher could have gone into schools, they would have been able to recruit more participants to make the Thematic Analysis more powerful. The researcher could also have recruited participants who may have been less engaged with the project to get a wider range of views.

Results from the Thematic Analysis were also limited in that more staff from high fidelity schools volunteered to take part in the study than those from low fidelity schools. Headteachers from low fidelity schools were not available to interview or did not reply to emails, whilst all but one head teacher from high fidelity schools participated. This meant that we were unable to analyse themes comprehensively in terms of fidelity. However, the fact that fewer staff and senior leaders from low fidelity schools took part in interviews could provide an indication of the level of commitment to the project from those schools.

The method of data collection used for study one was both a strength and a limitation to the project. It was considered a strength because as was previously discussed, whole school direct measures of behaviour do not appear in the SWPBS literature, making the method from this study a new contribution to the current research on the effectiveness of SWPBS on behaviour change. However, this form of data collection was time consuming and could be a reason why other studies do not exist that collect direct behaviour data at the whole school level. It took on average one week per school to collect the data with the help of between one and three postgraduate students. With 10 schools, including the control schools, this meant that initial data collection took 10 weeks to carry out.

Future areas of research should focus on whether implementation of SWPBS is also feasible in secondary schools within the UK which generally have more staff and pupils than

primary schools. Also results showed that School 6 implemented SWPBS with high fidelity but did not see any change in their behaviour data. However, academic engagement and disruptive behaviour in School 6 at the pre-intervention stage was similar to the levels seen by the other three high fidelity schools at the post-intervention data collection. Future studies should investigate if there is a ceiling to improvement in academic engagement and disruptive behaviour when SWPBS is implemented.

Despite limitations around methodology both studies contributed to the current literature on SWPBS. Firstly, it is a promising example that SWPBS can be implemented with fidelity in UK primary schools. Demonstrating that evidence based whole schools' systems consistent with recent behaviour management suggestions published by the Department for Education can be implemented with fidelity in the UK. Secondly it adds to the literature about facilitators and barriers in SWPBS implementation and provides initial indication to UK schools wanting to implement SWPBS that factors already present in the literature are relevant to the UK context.

Chapter 3: Brief Feedback to increase teacher behaviour specific praise in the classroom: A single subject design

Abstract

Low-level disruptive behaviour by pupils in the classroom is experienced by teachers in both primary and secondary schools, stealing valuable teaching time. Behaviour Specific Praise (BSP) has been shown in the literature as an effective method for decreasing disruptive behaviours in the classroom. A multiple baseline across participants design was used to investigate whether an intervention with brief researcher feedback was sufficient to increase teacher BSP, and if in turn this had an effect on pupil on-task behaviour, or disruptive behaviours. Results demonstrated a function relation between a change in teacher behaviour and a positive change in pupil behaviour. However, follow up results were variable. Future research into sustained change in teacher behaviour after teacher training should be conducted.

Introduction

Primary and Secondary school teachers in the UK report that low-level disruptive behaviours have a negative impact on learning in the classroom. Three quarters of teachers surveyed by Ofsted (2014) reported spending time in every lesson managing pupil low-level disruptive behaviours, with some spending as many as 10 or more minutes of every hour doing so. Furthermore, a third of all teachers stated that they accepted low-level disruption as a fact of life in their classroom despite its impact on learning. Low-level disruptive behaviour can mean different things to different teachers but generally includes calling out, playing with equipment whilst the teacher is talking, answering back, swinging on chairs, silly noises, and pupils distracting themselves and others from work (Cook et al, 2017; Tennant, 2004).

Teacher's praise of pupil behaviour is an effective behaviour management tool (Blaze, Olmi, Mercer, Dufrene, & Tingstom, 2014; Chalk & Bizo, 2004; Cook et al, 2017; Sutherland, Wehby, & Copeland, 2000) and a key component of School-Wide Positive Behaviour Support (SWPBS) and Tier 1 behavioural supports (Sugai & Horner, 2008). Acknowledging positive behaviours is an efficient and low-intensity strategy that can be used by teachers with a variety of student abilities, backgrounds, and ages (Duchaine, Jolivette, & Fredrick, 2011; Ennis et al. 2018; Hawkins & Heflin, 2011). In classrooms where a higher ratio of praise to reprimands is observed, higher rates of on-task and socially appropriate behaviours are observed, as well as a decrease in low-level disruption (Cook et al., 2017; Caldarell, et al., 2020).

General praise can be distinguished from Behaviour Specific Praise (BSP). General praise is a positive statement that does not specify the aspect of behaviour being praised. For example, "brilliant" or "good job". BSP is more meaningful and effective as the teacher provides the learner with specific feedback on the appropriate behaviours, helping with

learning and understanding. For example, “Well done for walking down the corridor, that’s how we stay safe in school” (Floress, Beschta, Meyer & Reinke, 2017; Hattie & Temperley, 2007). Chalk and Bizo (2004) found that increasing praise in both ways increased on-task behaviour, although only BSP increased it to statistically significant levels. BSP is also effective in decreasing disruptive behaviour. Dufrene, Lestremau, and Zoder-Martell (2014) demonstrated in their multiple baseline across classrooms study that when teachers were taught to increase their BSP in the classroom, disruptive behaviour decreases. Furthermore, the use of BSP in the classroom as a behaviour management tactic has been shown as a preferred method over reprimands for both teachers and pupils (Hollinshead, Kroeger, Altus & Trytten, 2016).

The literature also shows that when teachers use reprimands they are more effective at reducing behaviour when reprimands are private or quiet, delivered in a neutral tone, and implemented consistently for each rule violation (Madsen, Becker & Thomas, 1968; Jones & Miller, 1974; Houghton, Wheldall, Jukes & Sharpe, 1990). Furthermore, reprimands for inappropriate behaviour should include corrective feedback, naming the specific rule broken, and statements of the appropriate replacement behaviour. Rules which corrective feedback are based on should be stated positively, and pupils should have been involved in writing them (Vargas, 2013).

Effective reprimands and BSP can increase positive behaviours and decrease disruptive behaviours in the classroom. However effective methods for coaching teachers to use these tactics are needed. Hawkins and Heflin (2011) used video self-modelling to increase secondary school teachers’ use of BSP. They found that whilst the intervention did increase teachers praise behaviour, these effects only maintained for one of the three participants when the intervention was withdrawn. Simonsen et al. (2017) investigated the use of weekly email prompts by the researcher reminding the teachers to use BSP, and self-

management procedures on increasing teacher BSP. Self-management in this study meant that teachers were asked to estimate the amount of BSP they currently used, set a goal of what they would like to increase it to, collect data on their use of BSP, and then reinforce themselves with a chosen reward when they achieved their goal. Results showed that the use of these strategies increased teacher's BSP rate, but once again behaviour rates were not maintained at follow up, one to two weeks later.

O'Handley, Dufrene, and Whipple (2018) investigated the use of a tactile prompt and performance feedback to increase teachers' use of BSP. The research was carried out with three teachers, using a multiple baseline design across participants. All teachers had previously been given information in SWPBS tactics, but behaviour data from their classrooms did not improve after this information was delivered. A Motivader® was worn by the teachers in the study and was set to vibrate every 2 minutes. Teachers were also given 15 minutes of feedback once a week during their planning time. Results showed that all three teachers increased their use of BSP immediately after the intervention was implemented, however no significant effects on the teachers use of reprimands, or pupil behaviour was observed. Tactile prompting, video modelling, and self-data collection all increased teacher BSP delivery. All three can be considered intrusive to the participants as they are being filmed, physically prompted, or are having to collect data during teaching time. The effectiveness of less time consuming and intrusive interventions should be investigated.

Performance feedback was used in all three of the above interventions as part of their procedures. It has also been used as part of other package interventions in the literature to increase teacher praise (Cossairt, Hall, & Hopkins, 1973; Rathel, Drasgow, Brown, & Marshall 2014; Reinke, Lewis-Palmer, & Merrell, 2008). Performance feedback is defined as giving a person relevant information on their performance regarding target behaviours and is generally reported by participants as an acceptable intervention format (Floress, et al., 2017).

SWPBS in Welsh Primary Schools

Strohmeier, Mulé, and Luiselli (2014) investigated the social validity of different training methods used to increase treatment fidelity with teachers. They found that participants rated performance feedback as the most likely to increase their fidelity and the most effective training method over other options presented including online training and financial incentive. Whilst there are many strategies in the literature that have been shown to increase positive behaviour management, feedback has advantages. Firstly, as just stated it has social validity. Secondly, feedback can be delivered very briefly and, in a variety of convenient mediums. Finally, performance feedback can mirror BSP, which is an effective method for strengthening desired behaviours.

This study investigated whether an intervention including a short interactive information training session, and brief feedback would be sufficient to affect teacher's behaviour who had already received SWPBS training. This study also sought to add to the already existing research that praise is effective in decreasing disruptive behaviour and increasing on-task behaviour in mainstream classrooms and their population.

Overall Research Questions

This chapter addresses the second overall research question looking at what effects instructing teachers in ABA and SWPBS approaches to behaviour management can have on teacher and pupil behaviour. To some extent it also addresses the feasibility of using these approaches through social validity questionnaires and evaluation of direct behaviour data to assess whether a change in behaviour occurs.

Methods

Research Team

Table 3.1

Research Team and Roles. Includes estimated amount of time the researchers contributed to each element of the study.

Research Team	Role	Contribution to study elements (with estimated time/involvement)
Millicent Blandford – Elliott	Lead Researcher	Design (90%), Participant Recruitment (100%), Intervention Implementation (100%), Data Collection (80%), Data Analysis (100%)
Dr. Maggie Hoerger	Supervisor	Design (10%), Advisory, Editorial.
2 MSc Research Students	Data Collection	Data Collection (20%)

Setting and Participants

The participants were 3 primary school teachers (see table 3.1). Participants were from two Junior schools. Teachers were nominated for the intervention by head teachers. All teachers had previously had training on the principles of Tier 1 SWPBS and both schools had been implementing Tier 1 SWPBS for at least one year at the time of the study. Head teachers referred participants either because they were newer members of staff, or because the teachers had requested extra support.

Table 3.2

Participant Characteristics

	Teacher 1	**Teacher 2**	**Teacher 3**
Age	35	32	37
Years Teaching	7	8	5
Gender	Female	Male	Male
School Year Taught	3/4	4	3/4/5

The schools each had a behaviour policy with a clearly defined graduated system of how to address behaviour infractions and how to escalate the consequences in each instance. The policies also included strategies for how to acknowledge and reward appropriate behaviours. The information from the policies was posted in every classroom. In school 1 approximately 33% of pupils received free school meals, with 16% in school 2.

Measures

Teacher Behaviours

Frequency data were collected on how often teachers delivered praise, specific praise, and reprimands. Praise was defined as comments or gestures intended to acknowledge an aspect of behaviour that is appropriate to the environment. Examples of praise include thumbs up, high fives, and positive statements such as “Well done!”. Behaviour Specific Praise (BSP) was defined as praise which specifies the behaviours the teacher is acknowledging (e.g. “I like that you’re being respectful by looking at me when I am talking”). Reprimands were defined as comments or gestures intended to convey that some aspect of the behaviour is undesirable (an example of gestures include the teacher using their hand to signal to the pupil to leave the classroom). Teacher behaviour was measured in 30-

minute periods split into ten 3-minute sessions. Praise was reported as the total number of praise and BSP statements. BSP was counted as the number of those praise statements that met the previous definition.

Pupil Behaviours.

Dependent variables measured for pupil behaviours were disruptive behaviour, and on-task behaviour. *Disruptive Behaviour:* inappropriate classroom behaviour that interrupted or was contrary to on-going teacher instruction. This included, but was not limited to, shouting out without permission, making loud noises that drew the attention of the teacher and/or the class, entering the classroom late, throwing objects, aggressive (verbal and physical) behaviour, nonaggressive verbal outbursts, inappropriate behaviours that caused the teacher to stop what they were doing and redirect their attention towards the inappropriate behaviour. Disruptive behaviours were collected as count over a 30-minute period by researchers. *On-task behaviour:* the pupil engaged in behaviour that was consistent with the ongoing instruction and/or rules of the class. On-task behaviour was measured using an adapted momentary time sampling technique. Data were collected every 3 minutes, for 30 minutes researchers counted the number of children who were on-task in the classroom, divided it by the total number of pupils in the classroom, and multiplied it by 100. The mean from the whole 30-minute session was then calculated.

Social Validity

Social validity was assessed with a five-question survey where teachers responded using a four-point Likert Scale. The survey included questions about how helpful specific praise and feedback sessions were, if they intended to continue to use BSP in the future and how much of their time the intervention took (See Appendix 3). The questionnaire was

administered after the follow up session. Teachers were emailed the questionnaire in a word document, which they filled in and emailed back to the researcher within two weeks.

Experimental Design

A multiple baseline across participants design was used. The design consisted of three phases, baseline, intervention, and follow up.

Procedures

Baseline

Prior to the start of the study participants all signed permission forms indicating they agreed to be observed, but the specific behaviours being observed were not discussed at this time. Baseline data for Participant 1 was collected for three observational sessions. Due to time constraints and teachers' requests to start intervention, the next interventions were implemented after five, and then seven sessions. Whilst this is not ideal for a multiple baseline design, the practical constraints of the project were such that two sessions in between introduction of the intervention were required to make the experiment viable with the schools. A limitation of the multiple baseline design is that some participants can stay in baseline conditions for long periods of time. Whilst this was explained to participants and senior leaders at the beginning of the project, schools became impatient to start accessing the intervention phase.

During baseline data collection the researcher sat behind pupils with a clear view of the teacher and all pupils in the room. The researcher would move around the edges of the room in order to always keep an unobstructed view of the teacher if necessary. The teachers were asked not to leave the room during the observation periods. If they left, the session was stopped, the data discarded, and a new session began when they re-entered the room. This only happened once during the study.

Feedback Sessions

Teacher were given initial feedback sessions about their baseline data. These sessions took place after the school day for two of the teachers, and during PPA time for the other. Participants were talked through a 30-minute generic PowerPoint presentation including research on the benefits of a higher praise to reprimands ratio, specific praise, consistent consequences, and effective reprimands. A 20 to 30-minute specific feedback session was also given where the baseline data on their behaviour, and the pupil's behaviour was shared with them. Specific examples of when they did and did not follow the evidence-based strategies or implement the school's behaviour policy consistently were also provided. The intervention was kept as brief as possible and partially generic to take up as little of the teacher's time as possible, but still contain all key information and allow time for questions.

Intervention data collection sessions then commenced in the same fashion as in baseline, with one difference. After the observations, the teacher was given brief feedback about their positive to negative ratio, number of BSP statements used and their use of reprimands in line with the school's behaviour policy, and the literature on effective reprimanding. Twice it was not possible to deliver the feedback immediately due to the school timetable, so feedback was given prior to the next intervention data collection. Feedback was typically given in the classroom after a session, but once it was given on the playground whilst the teacher was on duty. The researcher had to be flexible to make it a realistic intervention for a busy school environment when no cover for classes or other duties was available. Intervention sessions took place with each teacher twice a week and brief feedback took approximately 5 minutes.

Follow up

Follow up data was taken 5-8 weeks after the last intervention sessions.

Interobserver Agreement (IOA)

Interobserver Agreement (IOA) was taken for 21% of all sessions in the study.

Praise, Specific Praise, and Reprimands

Two observers stood or sat side by side sharing an interval timer but did not interact during the observation period. IOA was calculated by dividing the number of agreements by the total number of agreements and disagreements and multiplied by 100. The mean IOA was 85% (range 80%-90%).

Disruptive Behaviour

The disruptive behaviour IOA was carried out in the same manner as praise, specific praise, and reprimands. The mean IOA was 90% (range 70%-100%).

On-Task Behaviour

Two observers stood or sat next to each other sharing a timer but did not interact during the observation period. Before observation sessions began, they agreed on which pupils they would start with and in what order they would take the data. Observers marked each box on a grid with a tick or a cross to indicate whether the pupil was engaged in on-task behaviours. The number of agreements for corresponding boxes on each observer's grid was then divided by the total number of agreements and disagreements and multiplied by 100. The mean IOA was 93% (range 80%-100%).

Results

Figure 3.1 depicts the number of specific praise statements, total praise statements and reprimand statements delivered in a 30-minute session by each teacher. All teachers increased their number of BSP and praise statements during intervention. Teacher 1 and Teacher 2 also decreased their number of reprimands during intervention. At follow up BSP remained higher

than baseline levels for all three teachers. Praise statements only remained above baseline levels for Teachers 1 and 2. Teachers 1 and 2 were also the only teachers to keep reprimands below baseline levels at follow up.

Figure 3.2 shows the number of discrete disruptive pupil behaviours that occurred during the same observation sessions as reported in Figure 1. For Teacher 2, the level of pupil disruptive behaviour in the classroom decreased immediately in the first observation session after the intervention was introduced. The same change in pupil behaviour was not observed for Teacher's 1 and 3 during the intervention phase. Pupil disruptive behaviour in all three classrooms remained at intervention level during follow up.

Figure 3.3 shows the average percentage of pupil on-task behaviour during observation sessions. Pupils in Teacher 1 and 2's classrooms showed an increase in on-task behaviour after the intervention was introduced to the teachers. This on-task behaviour remained high in the two classrooms at follow up. However, on-task behaviour only had a slight increase in level during intervention, but then fell to below baseline levels during follow up.

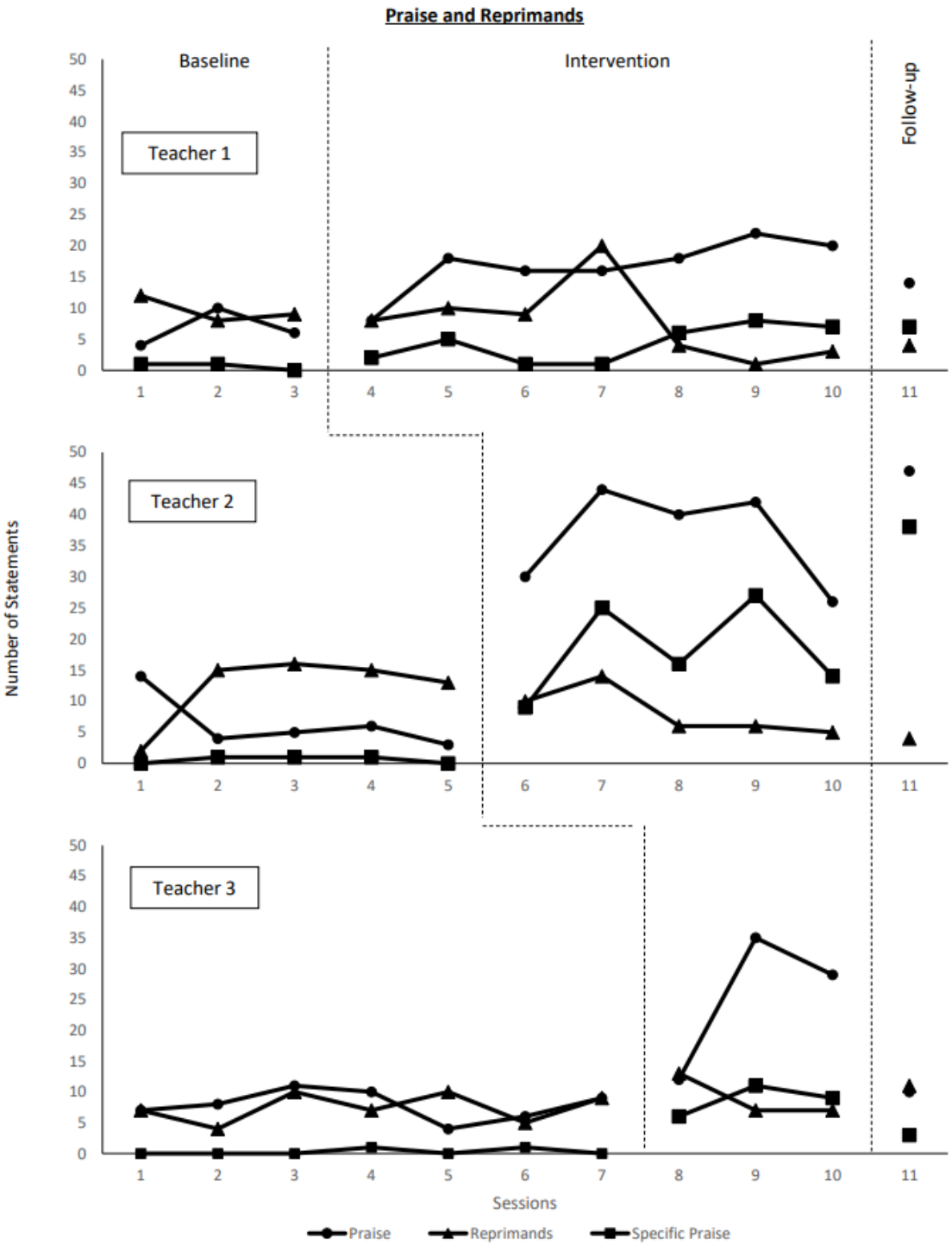

Figure 3.1 Number of BSP, Praise, and Reprimand statements delivered by teachers in 30-minute observation sessions.

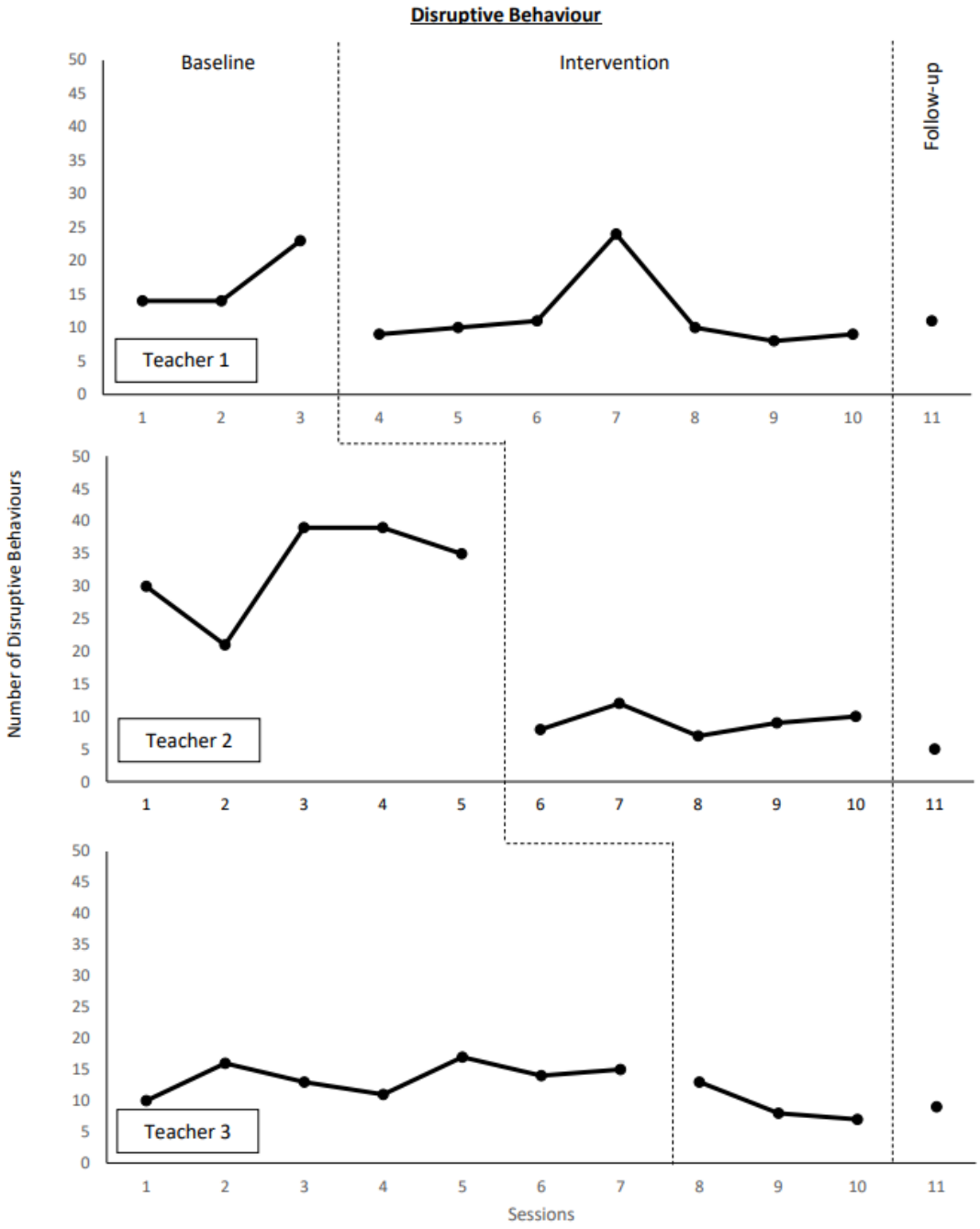

Figure 3.2 Number of Pupil Disruptive Behaviours in a 30-minute observation session teacher's classrooms.

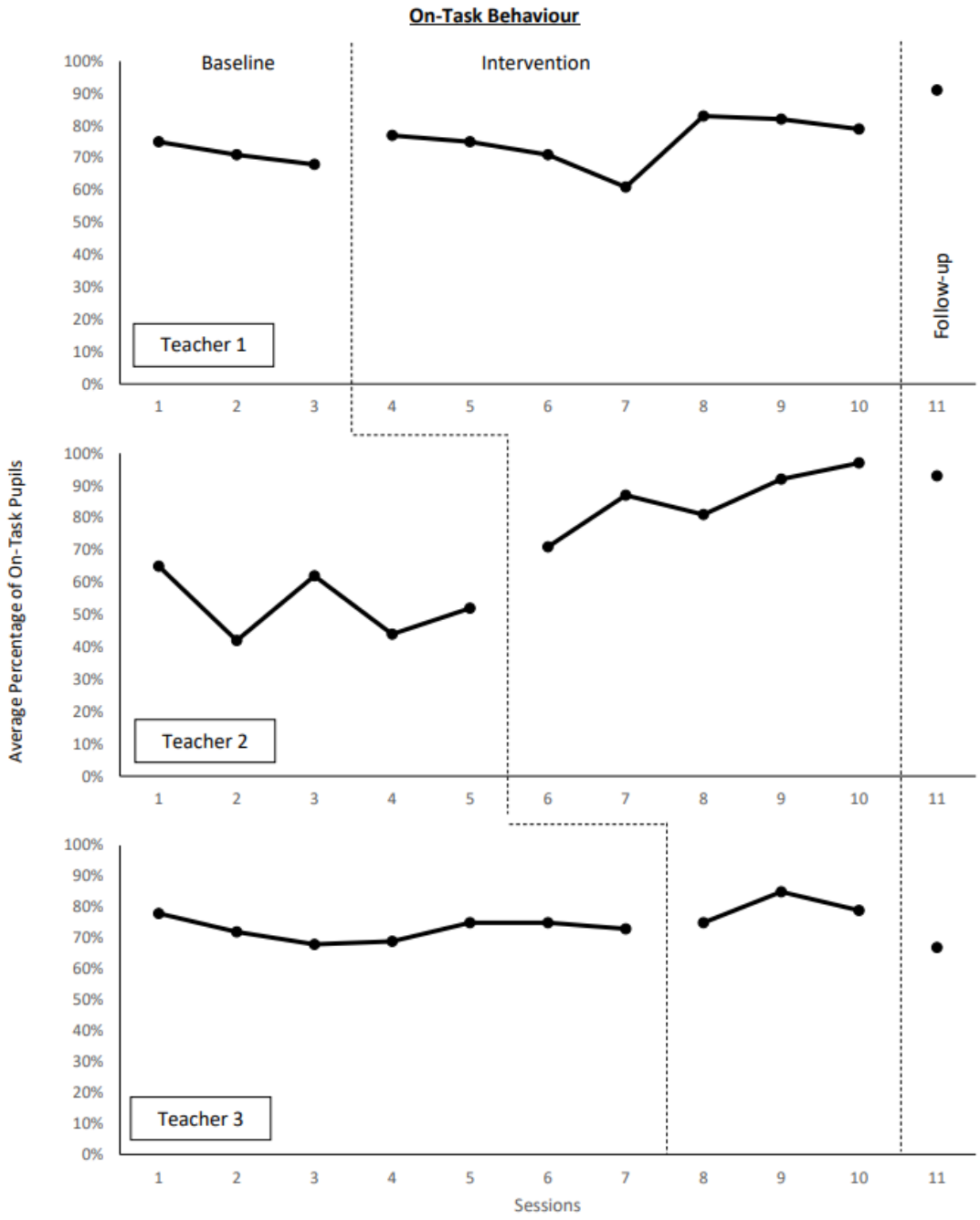

Figure 3.3 Average percentage of pupil's on-task behaviour during a 30-minute observation session using momentary time sampling.

Social Validity

All three teacher either strongly agreed, or agreed with the following statements; I believe specific praise helps the pupils in my class, I would recommend to other teachers to

use specific praise to assist them with pupil behaviours in their class, I will continue to use specific praise in the future, and the feedback sessions were useful. Similarly, all three teachers disagreed or strongly disagreed with the statement; the feedback sessions took too much of my time.

Discussion

Low- level disruption is one of the major challenge's teachers face in the classroom and wastes valuable teaching time. The results of this study were in line with the already existing body of research that demonstrated a functional relationship between increased BSP by teachers and an increase in positive pupil behaviours (Sutherland et al., 2000). The study added to the existing body of research around effective training methods for teachers. The social validity results also mirrored previous research suggesting feedback was an acceptable form of training for teachers (Strohmeier et al., 2014).

The first research question addressed whether a partially generic training session, plus brief individualised feedback sessions, lasting no longer than 5 minutes, and delivered flexibly around the teacher's schedule, would be significant to change the teacher's behaviour. The results of the study showed a change in teacher BSP behaviour after the intervention was implemented. For two teachers a change was also seen in praise and reprimand statements delivered. However only one teacher's behaviour remained changed at follow up. This suggests while short term behaviour change was achieved, for long-term behaviour change further intervention and supports may need to be implemented. This too is consistent with other literature showing teacher behaviour did not maintain at follow up (Hawkins & Heflin, 2011; Simonsen et al., 2017).

The second research question investigated whether the change in teacher behaviour would lead to a change in pupil disruptive and on-task behaviour. The results showed a

functional relation between teacher behaviour and pupil behaviour. When teacher behaviour changed, pupil behaviour also changed. When teacher behaviour remined the same, as did the pupils. Teacher 2 had the greatest behaviour change, which was then mirrored by the largest behaviour change in the behaviour of the pupils in his classroom. This supports research that positive and consistent behaviour management strategies can decrease disruptive behaviour and increase positive behaviours (Caldarell, et al. 2020; Cook et al., 2017). Follow up data showed that if teacher behaviour maintained, as did the changes in pupil behaviour.

As previously discussed, praise and BSP is a simple, free, and low intensity way to behaviour manage in the classroom (Duchaine, et al., 2011; Ennis et al., 2018; Hawkins & Heflin, 2011). The teachers were encouraged to do this through a generic evidence-based PowerPoint presentation and specific feedback. This was also resource efficient in terms of money and time. It did not involve disrupting the teachers or classrooms through filming, teachers colleting data, or getting physical prompts, making it minimally intrusive. The sessions and data collection were carried out by the lead researcher who was a PhD student helping to implement SWPBS in the schools. However, it is feasible that if teachers are struggling with behaviour management that a member of the school leadership team could carry out similar interventions with semi-regular observations and specific feedback based on positive behaviour management principles.

All the teachers in this study had already received some form of training on SWPBS tactics and were in schools where their colleagues had buy-in to this behaviour management style. In both of these schools the head teachers were the driving force of the project and modelled and encouraged positive and consistent behaviour practices and policies. Teachers who are in schools where this is not already part of the school culture may struggle more to implement and then maintain this style of behaviour management, especially if the school's environment is more punitive.

Other limitations of this study include starting interventions after an unstable baseline and only having two data points between participants before introducing the next intervention. This was due to time constraints, and pressure from staff to begin the intervention. Data was not always collected in the same lessons at the same times of day due to school timetables changing, and teacher and researcher availability. Although every lesson or time captured in the baseline was then captured at least once during the intervention phase, there could have been more consistency around the settings of the data collection, especially for teacher 3 who taught different classes throughout the week.

The follow up data collected was also a limitation of the study. Firstly, there was only one data point. Also follow up data was not consistent across teachers, where only one teacher and pupils from their classroom had a clear maintenance of behaviour at follow up. The other two teachers and their pupil's follow up data was variable. If more follow up data was collected a clearer pattern may have emerged about the efficacy of the interventions effect on long term behaviour change.

Behaviour specific praise, and praise were distinguished from each other in the study. However, reprimands and effective reprimands were not, despite teachers being trained in the difference between the two. This was a limitation of the study, as there was no way to know whether this element of the training was successful in changing reprimanding behaviour. This was an oversight of the research design, as the primary investigation was into BSP, but it became apparent during the study that this too would have been a valuable measure to have collected around teacher behaviour.

A final limitation of the study was that teachers were not instructed to increase their BSP, or praise rates, they were simply instructed in the research about the benefits of doing so. Along with the research presented they were also presented with rationale for not shouting

at pupils and being consistent with the imposition of negative consequences. Subsequently how much of the behaviour change in the pupils was down to increased BSP, and how much can be attributed to consistent behaviour management and fewer raised voices in their classrooms is unknown. However at least one of the teachers had previously been instructed in consisted use of the behaviour policy and the delivery of effective reprimands in whole staff meetings.

Future research in the field should focus on the efficacy of BSP as an intervention with older pupils. In this study the pupils were all junior school age. Further investigation needs to be done on whether the same results can be achieved with secondary school pupils. In this study only one data point was collected for a maintenance check and follow up data was mixed. To really investigate whether the intervention was sufficient for long term behaviour change more data should be collected and data should also be collected after a longer period. Follow up data could be different in schools that have a SWPBS approach and schools that are not currently pursuing that strategy.

As stated earlier one oversight of the study was to not collect data on effective reprimands. Future research should look at whether there is a difference in teacher behaviour after training in effective reprimands, and if there is a change in teacher behaviour, whether this will effect pupil behaviour. Further suggestions for future research are to investigate interventions that were successful at achieving short term behaviour change, and how to translate this success into long term results. Finally, most existing research in this area consists of single subject designs and interventions are delivered on an individual level. Further research should investigate if similar results can be captured on the group level, where multiple teachers receive intervention at once to even further increase the efficiency of interventions given and further extend the existing research.

Chapter 4: Teacher Training in Positive Behaviour Management Tactics: A reflection on the research process

To extend the previous chapter's research an experiment was designed to replicate the findings of Chapter 4 using a group study. The benefits of group design research are that it can extend the generality of the findings and reach an audience that may not be trained to interpret single subject data. Differences to study were that training would be delivered in a group setting over three weeks to investigate whether this would have the same effect as seen in the previous single subject research. Furthermore, whether giving teachers one off feedback of their praise, behaviour specific praise (BSP) and reprimands, as opposed to multiple feedback sessions across the project would have the same effect. This system of less contact, with more teachers, could be an effective model for behaviour management training if it has the same observed effects as the more intensive model designed in the previous chapter. Participants were recruited, and baseline data had begun to be collected. However due to schools closing in early 2020 because of COVID-19, the project could not continue.

Study Protocol

Methods

Setting and participants

Teachers were recruited from all six North Wales counties. Headteachers were emailed inviting them to pass information along to their staff about the study. Participants were also recruited via the North Wales Regional Effectiveness (GwE) bulletin. This is published monthly and is accessible directly by teachers across the region. The study needed a minimum of 30 participants to run. Participants were asked to volunteer themselves, and not be put forward for training in behaviour management by headteachers or senior leaders to ensure teachers wanted to take part in the research of their own accord.

Measures

Measures were collected on both teacher behaviour and pupil behaviour. Measures were the same as used in Chapter 4 and are presented below in Table 4.1.

Table 4.1

Operation Definitions of Target Behaviours

Behaviour	Operational Definitions	Measure
Teacher Behaviour – Praise	Comments or gestures intended to acknowledge an aspect of behaviour that is appropriate to the environment.	Frequency Count over 30-minute observation period
Teacher Behaviour – Behaviour Specific Praise (BSP)	Praise which specifies what pupil behaviours the teacher is acknowledging.	Frequency Count over 30-minute observation period.
Teacher Behaviour – Reprimands	Comments or gestures intended to convey that some aspect of the pupil's behaviour is undesirable.	Frequency Count over 30-minute observation period.
Pupil Behaviour – Disruptive Behaviour	Inappropriate classroom behaviour that interrupted or was contrary to on-going teacher instruction	Frequency Count of 30-minute observation period.
Pupil Behaviour – On-Task Behaviour	The pupil was engaged in behaviour that was consistent with the ongoing instruction and/or rules of the class.	Adapted momentary time sampling over 30-minute period.

Social Validity

A new measure added to this project was the Teacher Wellbeing Scale (Collie, Shapka, Perry, & Martin, 2015) as a social validity measure to see if the project had any effect on the student interaction well-being sub scale. The Teacher Wellbeing Scale is a 16-item questionnaire that asks questions about three factors: workload wellbeing, organisational well-being, and student interaction well-being. The student interaction well-being sub scale has a Cronbach's alpha score of .82. The scale was given to all teachers during the initial data

collection and they were asked to fill it in and bring it with them to their first workshop (for both groups).

Experimental Design

A waitlist control design was proposed. Baseline data would be taken for all participants. In the next stage, all participants would be randomly allocated to either a control waitlist group or an intervention group. The participants in the intervention group would be invited to three, one-hour workshops in a central location, taking place one week apart. The workshop would include time for the researcher to give each teacher their own personal feedback in private, and each workshop would focus on one of three main elements of evidence-based behaviour management. After the workshops, data would be collected again across both groups. Finally, the control group would be invited to attend the three workshops.

Procedures

Pre-intervention data collection

Teachers were given participant information forms that included how their data would be used, and what the study was investigating. Teachers were also asked to sign consent forms to take part in the current research. Headteachers were given information sheets containing similar information and asked to sign consent forms allowing data to be taken in their schools. A time was then agreed between the teacher and researcher for the initial data collection to take place. Data was collected across participants based on availability of the teacher and when suitable lessons were taking place. For example, should teachers indicate they would be in assembly at a certain time that time was avoided. Data collections were carried out both in the mornings and afternoons, and across academic subjects provided they were led by a participating class teacher. The lead researcher collected the data in each school for approximately 2 hours. During this time pupil and teacher data were collected, the

researcher made notes on behaviours to specifically feedback to participants, and the teachers and headteachers had time to ask any questions they still had about the project. The researcher sat on the side of the classroom with an unobstructed view of all pupils and the teacher. At points it was necessary for the researcher to move around the classroom to keep the view unobstructed. The teacher was asked not to leave the room at any point during data collection and if the teacher left the timer was paused until they returned.

Intervention

Participants in the intervention group were invited to attend the three workshops. Each workshop would be held twice. In the first workshop, the lead researcher would present information on evidence-based behaviour management in terms of classroom rules. The lead researcher would ask the teachers to revise their own classroom rules based on the information presented. In a separate room from the group, participants would receive their brief individualised feedback including the data collected by the researcher. This would include any examples observed when they used consistent evidence-based tactics, or examples of when they did not. After the first workshop teachers would be asked to teach their new classroom rules to their pupils.

In the second workshop the lead researcher would present information on praise and behaviour specific praise. Teachers would be asked to practice using behaviour specific praise in their classrooms in relation to their rules. They would also be asked to self-monitor their praise to reprimands ratio. The final workshop would include reactive tactics to inappropriate behaviours.

Once all participants in the intervention group had attended all three workshops the second data collection would be carried out across both groups of participants. The data collection would be the same as in baseline. When all post data was collected, and all post

teacher wellbeing scales had been returned, the control group would be invited to attend the same workshop delivered to the intervention group and have a chance to receive private individual feedback in the same manner.

IOA

IOA will be taken for at least 20% of sessions by a postgraduate student previously trained in this type of data collection by participating in another project with the researcher. All frequency data will be recorded by dividing the 30-minute recording session into 10, 3 minute sessions. IOA would be calculated by the number of agreed upon sessions divided by the number of overall sessions, multiplied by 100.

Data Analysis

A paired t-test would be carried out to look at statistical significance of any change in data observed.

Preliminary Findings

Baseline

At the time schools shut 23 participants had signed consent forms to take part, of those 23, baseline data was collected for 21 of them.

Table 4.2

Participant's baseline data

Participant	Praise	BSP	Reprimands	Disruptive Bx.	On-task bx.
1	16	12	46	31	60%
2	14	3	22	24	86%
3	19	3	8	18	88%
4	26	3	42	67	74%
5	24	1	56	67	72%
6	23	3	17	23	94%
7	8	1	19	41	86%
8	7	1	19	32	84%
9	10	3	17	22	90%
11	4	0	19	33	45%
12	47	5	9	8	97%
13	12	3	3	2	95%
14	27	10	9	10	88%
15	30	2	19	20	84%
16	12	1	7	23	85%
17	37	0	0	2	95%
18	22	1	23	30	81%
20	16	0	30	29	70%
21	14	7	10	16	88%
22	11	0	9	13	86%
23	14	0	6	5	80%

Reflections on the Study Process

Observations were made about the study process. Firstly, when recruiting we made it clear to schools that teachers should volunteer themselves, and not be volunteered by headteachers or senior members of staff if they were unwilling or disinterested in the project. This could have skewed the sample because teachers who might already have an interest in positive behaviour management tactics may be more likely to implement things learnt in training, as opposed to teachers who are indifferent to learning new behaviour management techniques. Sixteen of the 23 teachers for whom baseline data were collected had 80% or higher on-task pupil behaviour in their classrooms with 5 classrooms above 90%. This could mean that whole class tactics may not have made much difference to pupils who were not attending within these classes, or to increase the amount of engagement primary school teachers can get from a whole class over a 30-minute period without targeted interventions.

Whilst it was difficult to recruit the full number of participants needed for the study when the inclusion criteria was broader, future studies may wish to narrow their inclusion criteria to teachers with below 80% on-task behaviour from their pupils to better see behaviour change, and increase validity of the project.

Initially it was planned to recruit all participants before baseline data began. This was so all participants could be randomly assigned to groups and given appropriate information about dates and times of workshops, and when their next data collection would be, when researchers visited schools to collect baseline data. Due to the recruitment process taking longer than initially anticipated, baseline data collection began before all participants were recruited. This meant that teachers and headteachers questions about when and where workshops would take place were not answered, leaving participants with uncertainty around how long the project would take to complete and what time commitments were needed.

In future this study could be conducted with PGCE students. PGCE students may be more willing to volunteer to learn about evidence-based behaviour management techniques as they are used to being instructed by others. Additionally, they would not have a long learning history with other behaviour management techniques so may find it easier to initially change their behaviour. This could allow them to maintain the tactics in the long term if they are effective in contacting reinforcement from low levels of pupil disruption, and high levels of pupil on-task behaviour.

In conclusion, with this study the researchers sought to further the research presented in Chapter 4. The main aims were to investigate how the intensive intervention used with three teachers could be adapted successfully to be used with more teachers using fewer resources. Recruitment for the project did not go as expected, as even though pupil behaviour is often cited as reasons for teacher attrition and poor emotional wellbeing (Ofsted, 2014), teachers did not volunteer for the project as readily as the researchers predicted. Whilst the project was not completed due to school closers in early 2020, reflections from the study may be useful for future related projects.

Chapter 5: Using Applied Behaviour Analysis to Reduce Restrictive Practices in a Pupil Referral Unit: A Quasi-Experimental Design

Abstract

Pupil Referral Units (PRUs) in the UK are alternative, short stay provisions for pupils whose educational needs are no longer being met in a mainstream setting. Pupils in PRUs are generally characterised by having emotional, social, and behavioural disorders, and a disproportionate number have additional educational needs and are from socio-economically deprived backgrounds. Due to a high level of aggressive behaviours, the behaviour management strategies used with these pupils are often restrictive. Government guidelines, and investigations from the literature support an evidence-based approach consistent with ABA methodology to increase the likelihood pupils will be successful in the classroom and to reduce restrictive practices such as restraints and seclusion. A quasi-experimental design was used to collect restraint data in a Key Stage One PRU, and seclusion data for three pupils. Results showed that ABA strategies were effective in reducing the use of restraints but had mixed results for the reduction in use of seclusion for individual pupils.

Pupil Referral Units (PRUs)

Pupil Referral Units (PRUs) are short stay provisions for pupils who are no longer successful in their mainstream environment usually due to social, emotional, and behavioural problems. Despite being cited as short stay provisions, pupils are often in these units for multiple school years, or in and out of them allowing no continuity to their learning requirements (Ofsted, 2007). Exclusion from schools to PRUs are more common for pupils who come from socio-economically deprived backgrounds, children with additional special educational needs (Ford, Parker, Salim, Goodman, Logan, & Henley, 2018), and restrictive practices such as physical restraints and seclusions are common (Estyn, 2012).

Educational outcomes for pupils who attend PRUs are bleak, with the Department of Education reporting in 2006 only 1% of pupils in PRUs achieved five A*-C grade GCSEs or equivalent (DCSF, 2008). Pupils do not just leave PRUs with poor qualifications, they can also find it hard to imagine positive futures and articulate their aspirations. Mainwaring and Hallam (2010) interviewed pupils in their last year of compulsory education in a PRU and in a typical secondary school about their future aspirations and the psychological construct of 'possible selves'. They found that the pupils from the PRU found it more difficult than their peers from the secondary schools to form concrete plans for what they wanted to do after leaving school. Pupils from the PRU who could identify future goals found it more difficult than the pupils from the secondary school to state a plan of how to achieve their goals, and formulate a backup plan of what to do if their plans did not work out. Alternatively, all pupils interviewed from the PRU could identify what could go wrong in the future, some offering more than one scenario. This was in contrast to the mainstream pupils who were comparatively optimistic in their views of what could go wrong in the future; they were able to state what could go wrong, and then problem solve ways to fix it. The pupils from the PRU were not able to do this in their interviews. Furthermore, pupils from the secondary school

shared the belief that nothing was impossible in their futures, whilst pupils from the PRU did not.

Emotional, Social, and Behavioural Difficulties

Pupils who attend PRUs are arguably some of the most vulnerable and at-risk children and young adults in our society. They are often characterised by low self-esteem, poor academic abilities, and a lack of coping strategies to deal with life in schools and in their wider community (Solomon & Rogers, 2001). As well as having various statemented special educational needs, the behavioural characteristics of many pupils in PRUs are similar to those who have emotional, social, and behavioural difficulties (ESBD). Pupils with ESBD often present with behaviours that are incompatible with mainstream classrooms and may find it difficult to regulate their emotions. These behaviours often get in the way of their education due to high levels of aggression, poor emotional regulation, and an inability to socialise appropriately (Cooper, 2011). Aggression towards peers and staff, and self-harming behaviours can lead to the use of restrictive practices such as seclusion and restraints (Department of Education, 2013).

Restrictive Practices

Seclusion in an education setting can be defined as "supervised confinement and isolation of a child or young person, away from others, in an area from which they are prevented from leaving, where it is of immediate necessity for the purpose of the containment of severely disturbing behaviours which poses a risk of harm to others." (Dinenage & Zahawi, 2019, p.10). Whilst physical restraint is defined as "a restrictive intervention involving direct physical contact where the intervener's intention is to prevent, restrict, or subdue movement of the body, or part of the body by another person." (Dinenage & Zahawi,

2019, p.9). The use of these practices are common and are not always regulated appropriately.

A report by Estyn (2012) found that not all PRUs had sufficient policies in place for the use of restrictive practices. This meant that staff were not trained consistently throughout the provisions, and that within the same provision there was a wide variety of methods being used. They also found that not all PRUs consistently collected and reviewed data on the use of these restrictive practices within their provision. Subsequently available data on the use of this practice is estimated to be lower than in practice. Furthermore, the lack of monitoring of this data and data on pupil behaviours means that senior management are often unable to make data led decisions. Data led decisions would enable behaviour management strategies to be proactive, and based on behaviour patterns, meaning behaviours could be prevented from happening in the first place. Finally, the report remarks that monitoring the use of seclusion within PRUs is also inadequate and concerns of its use for punishment, not just safety, are raised.

Guidance was published in 2019 by the British Government (Dinenage & Zahawi, 2019) aimed at reducing the use of restraints and restrictive practices for pupils in special educational settings, but also cited as relevant to PRUs. The authors call for a positive and proactive approach to behaviour support for all pupils to reduce the need for restrictive practices. They suggest this should be done through a clear hierarchy of responses, calm and positive environments, staff training, and help from external expertise. Proactive approaches taken should include identifying triggers and functions of behaviours and teaching communication skills to pupils to better express their needs and feelings. These recommendations of functional assessments and communication skills are echoed by current NHS guideline (2017) when dealing with challenging behaviour.

Applied Behaviour Analysis

Pupils who display challenging behaviours may do so because they do not have the skills to effectively communicate their needs. When these challenging behaviours become dangerous to the person displaying them, or to others around them staff in schools are advised to use restrictive practices to minimise harm (Department of Education, 2013). In order to reduce restrictive practices for pupils, replacement behaviours to their challenging behaviours can be taught and skill building strategies can be implemented that enable them to access reinforcement in a socially appropriate, and safe way. Applied Behaviour Analysis (ABA) can be used to support this approach.

ABA is an empirical approach to the study of behaviours. It is underpinned by the assumption that behaviours are learnt, and the behaviours a person engages in depends on their environment and contingencies of reinforcement (Skinner, 1974). Therefore, environments can be arranged so that new behaviours can be learnt. Function of behaviour refers to why a person is behaving in a certain way or what they are trying to access. For example, to avoid an unpleasant situation, or to gain someone's attention (Cooper, Heron, & Heward, 2020). Functional assessments are a tool commonly used in ABA to investigate why a person engages in a behaviour or set of behaviours. Kamps, Wendland, and Culpepper (2006) used functional assessments with pupils with ESBD in a classroom setting. They found that with the introduction of function-based behaviour plans, inappropriate behaviours decreased. Once the reason for a pupil's behaviour can be discovered other ABA techniques can be used to teach them functionally equivalent replacement behaviours for their inappropriate behaviours. ABA can also be used to proactively teach behaviours pupils need to be successful in a classroom environment, including academic and social skills, and emotional regulation.

SWPBS in Welsh Primary Schools

Lewis, Hudson, Ritcher, and Johnson (2004) published a review of effective evidence-based practices for emotional and behavioural disorders. They identified research supported practices teachers can use in the classroom to support pupils with ESBD to be successful. These practices included teacher praise/reinforcement, opportunities to respond during instruction, using such practices as Direct Instruction (DI), and ABA approaches such as teaching replacement behaviours and explicit social skill instructions.

Teacher Praise and Reinforcement

Despite these recommendations, ESBD pupils tend to receive less praise and are subject to more negative interactions with their teachers than pupils without these behavioural deficits (Shores, Jack, Gunter, Ellis, DeBriere, & Wehby, 1993). Research has shown that when teachers are taught to increase their social reinforcement for pupils' appropriate behaviours through praise and behaviour specific praise, the on-task behaviour of pupils with ESBD increases (Sutherland, Wehby, & Copeland, 2000; Allday, Hinkson-Lee, Hudson, Neilsen-Gatti, Kleinke & Russel, 2012) and disruptive behaviour decreases (Pisacreta, Tincani, Connell, & Axelrod, 2011). This is a simple but effective way to change pupil behaviour by altering the environment, so more reinforcement is available for appropriate, than inappropriate behaviour. It can minimise low-level disruption, which can escalate to challenging behaviour, and then the need for restraints and seclusion to manage the risks of behaviours (Department of Education, 2013).

Other ABA reinforcement strategies that have been shown to be effective with various populations are token economies. During a token economy, pupils can earn tokens or any other placeholders such as ticks or points, for appropriate behaviour, that can later be traded for back up reinforcers such as toys or activities (Doll, McLaughlin, & Barretto, 2013). These systems can be made more time efficient by implementing them on a whole class level, rather

than for specific individuals (Anhalt, McNeil, & Bahl, 1998). The effectiveness of token economies can be enhanced when a level system is added (Lyon & Lagarde, 1997). A level system is where pupils can move up or down different levels depending on meeting specific behavioural goals. Moving up levels is generally associated with better or additional reinforcement, whilst moving back down a level can mean a restriction on privileges the individual is able to access. Pritchard, Penny, and Mace (2018) used a token economy with levels in a residential school for pupils who exhibited aggression, property damage, and inappropriate sexual behaviours. All pupils showed a decrease in problem behaviour as they worked their way through various levels.

Levels systems are effective because they shape behaviours, gradually requiring closer and closer approximations to the terminal goal that is the ultimate desired appropriate behaviour. Shaping can be effective for pupils with long learning histories of low rates of appropriate behaviours, or who currently do not have appropriate social skills within their repertoires, rather than expecting large behaviour changes straight away. Furthermore it makes it more likely they will contact reinforcement, early in the intervention and then as the requirements to come into contact with reinforcement slowly change the expected change to their behaviour is not so large they are now unable to immediately contact reinforcement (Cooper, et al. 2020).

Teaching New Skills

Direct Instruction (DI) is an instructional approach based on the principles of ABA. It is a scripted form of teaching that maximises pupil engagement through frequent opportunities to respond and a fast-paced delivery of content and instructions (Kinder & Carnie, 1991). Owen, Watkins, Beverley, & Hughes (2020) used DI as part of a package to

teach maths skills to pupils in a Key Stage 2 PRU and found the approach promising in developing early maths skills for pupils who engaged in regular sessions.

Previously stated guidance from the government on reducing restraints (Dinenage & Zahawi, 2019) and suggestions around effective practices for pupils with ESBD (Lewis et al., 2004) suggest interventions involving teaching desired behaviours and communication skills, which can reduce problem behaviours and increase academic attainment (Ashdown & Bernard, 2012). Explicit instruction is a way of teaching that involves giving direct, structured coaching, that can include a rationale and modelling of the skills, and the chance for pupils to use and practice the skill (Hughes, Morris, Therrien, & Benson, 2017). Once the skill has been acquired, or if it is found that the pupil already has the skill, interventions can focus on enhancing the performance of the skill, which can be done through reinforcement procedures and arranging the environment so the skills can be practiced more often (Miller, Lane, & Wehby, 2005).

Many of the interventions suggested as effective for the reduction of restrictive practices and working with pupils with ESBD evidence lies in the behavioural science literature that was developed by ABA researchers and practitioners. Therefore, when bringing in outside expertise for staff training and implementation, a natural choice is for behaviour analysts to oversee approaches. The following study is a quasi-experimental design, implemented over two-years, investigating if using ABA methodology in a PRU leads to a reduction in restrictive practices.

Overall Research Question

Chapter 5 addresses the overall research questions of feasibility and effectiveness of the use of ABA and SWPBS approaches in UK school settings on pupil behaviour. It does this through evaluating different sources of data; restraint, seclusion, and social significance

from teacher interview. The approach taken in this chapter to address the questions is exploratory, and direct behaviour data is not presented. However, the feasibility of the ABA approach to a PRU in the UK is evaluated and discussed.

Methods

Research Team

Table 5.1

Research Team and Roles. Includes estimated amount of time the researchers contributed to each element of the study.

Research Team	Role	Contribution to study elements (with estimated time/involvement)
Millicent Blandford – Elliott	Lead Researcher	Design (40%), Intervention Implementation (10%), Data Analysis (40%)
Dr. Maggie Hoerger	Supervisor	Design (60%), Intervnetion Implementation (10%), Data Analysis (40%), Advisory, Editorial.
Sara Moosa	BCaBA, Reserchер	Intervention Implementation (60%), Data Collection (80%), Data Analysis (20%)
Gareth Lloyd	Class Teacher, Researcher	Intervention Implementation (20%), Data Collection (80%)

Setting and Participants

The study was set in an emotional, social and behaviour resource base that served as a foundation phase PRU for pupils from across the county aged 4-7. It was based within the building of a mainstream primary school where the Headteacher for the school also managed the resource base. The study was part funded by the school and a grant from the North Wales Effectiveness and Improvement Service (GwE) and supported by Bangor University. GwE is a service ran on behalf of the 6 counties in North Wales to ensure schools are meeting pupil needs and providing effective learning environments through collaboration and monitoring, staff training events, and providing opportunities for schools to become research partners with higher education institutes (GwE, n.d.).

Staff

In the first year of the study the resource base was staffed with one qualified teacher, a Higher Level Teaching Assistant (HLTA), and a level one Teaching Assistant (TA). Staff also included an unpaid Board Certified Assistant Behaviour Analyst (BCaBA) who worked in the classroom as part of her clinical training. The BCaBA was overseen by the lead researcher who was a Board Certified Behaviour Analyst (BCBA), and the lead researcher's PhD supervisor who was a Board Certified Behaviour Analyst with a relevant Doctorate (BCBA-D). In the second year of the study, the resource base was staffed with the same qualified teacher, a HLTA, and a paid level one TA who had completed a masters in ABA and was being supervised by the BCBA, and BCBA-D. Board Certified Behaviour Analyst, and associated titles, are awarded and regulated by the Behaviour Analyst Certification Board (BACB) and are achieved through completing various theoretical and practical competencies and experiences depending on level of qualification (BACB, 2020).

Pupils

During the two-year period of the project the largest number of pupils in the unit at any one time was 8, with the smallest being 3. Pupils were all between the age of 5 to 7. The population of the provision was transient. Some pupils came during their reception year and stayed until the end of year 2. Other pupils completed 6-week placements before transitioning to other settings or back to their original school. Pupils also spent a varying number of days in the unit every week. Most attended Monday to Thursday and returned to their home schools on Friday. Some pupils attended increasingly fewer days if they were transitioning to other placements. This variability made capturing progress in educational outcomes or class-wide behaviour data difficult. It also meant that individual programmes designed for pupils could not always be completed before they transitioned out of the PRU.

Pupils had various diagnosis such as Attention Deficit Hyperactivity Disorder (ADHD), Autistic Spectrum Disorder (ASD), Moderate Learning Difficulties (MLD), and attachment disorder. All pupils displayed emotional, social, and behavioural difficulties. For pupils to be referred to the PRU they had to engage in inappropriate behaviour that was a serious disruption to their learning. The behaviour was often characterised as aggressive or dangerous by their home schools. Home schools must have shown that their efforts were not successful in supporting pupils and they could no longer meet their needs. Pupils came to the resource base for an initial 6-week assessment, and then the provision was reviewed every 6 weeks. As the provision was for foundation phase pupils only, after Year two the pupils transitioned to other resources. During the two years of the project, three pupils transitioned back to their home schools, two pupils transitioned to the mainstream primary school the PRU was attached to, two went to MLD units attached to their home schools, one went to the county special education provision, and one pupil transitioned to the KS2 PRU. A further pupil left the county.

Data on seclusion for three pupils who displayed aggressive or dangerous behaviours, who were in the PRU for the full academic year 2018/19 and accessed seclusion frequently is presented. Three pupils, as opposed to whole unit seclusion data is offered due to the transient nature of the pupils, who could join or leave the unit at any point during the school year, meaning continuous data from the whole unit around use of seclusion cannot be meaningfully analysed, especially as seclusion data from previous years, before the project began is not available.

Aggressive or dangerous behaviours were characterised as behaviours that presented a serious risk of harm to themselves, staff, or other pupils, for example, hitting, kicking, biting, throwing large or heavy objects, and hitting others with objects. Pupil 1 was a 6 year-old-male. He was a Year 2 pupil with a diagnosis of attachment disorder. Pupil 1 engaged in aggressive behaviours towards peers and staff, inappropriate name calling, noncompliance, self-injurious behaviours characterised by eye poking and hitting his head with his hand, and PICA of dangerous items such as batteries, and non-dangerous items such as paper.

Pupil 2 was a 6-year-old male in Year 2 who towards the end of the 2018/19 school year was diagnosed with ASD as part of a county statutory assessment. Pupil 2 had been in the resource base since his reception year. He attended his home school for half days on Fridays only when a member of support staff from the unit was available to attend with him, at the request of his home school because of reports of aggressive behaviours. Pupil 2 engaged in aggressive behaviours towards peers and staff, and noncompliance around academic demands. Pupil 3 was a 6-year-old male. He was a Year 2 pupil with no formal diagnosis but displayed behaviours consistent with attachment disorder. Pupil 3 engaged in aggression towards pupils and staff, and noncompliance. Pupil 3 did not like loud noises or environments and had specific issues with emotional regulation around peers teasing him. He had been in the resource base since his reception year.

Measures

Restraint Data

It was a practice of the unit that staff were required to fill in a form supplied by the county any time they carried out a restraint on a pupil. These data were collected before and during the intervention. The form included information on the date and time, the pupil for whom the restraint was implemented, and the staff that delivered the restraint. There were also sections about the behaviour that led to the restraint being necessary and how long the restraint lasted. These forms were kept in storage at the school. Any single form filled in equated to one restraint being performed. The number of completed forms were counted for the two school years prior to the project, and the two years of the project to measure the frequency of restraints being carried out in the unit.

Seclusion

Prior to the start of the study no data were taken on the frequency or duration of seclusion that was being used in the provision. On commencement of the study when seclusion was used an ABC chart was filled in. ABC charts are used in functional assessments in order to predict a pattern and function of behaviours (Cooper, et al., 2020). The ABC chart included sections for the data and time of the seclusion, the pupil involved, what happened before the behaviours occurred that led to seclusion, what the behaviours that led to seclusion were, and what the staff had attempted to do before seclusion was necessary. The length of time a pupil was secluded, and any behaviours they engaged in during seclusion were also recorded by a member of staff. The seclusion area in the PRU was called the calm room. Pupils were secluded in the calm room, or their space was restricted within the room they were in when their behaviours became dangerous to themselves, other pupils,

or members of staff. Seclusion practices were ended when the pupil was no longer engaging in dangerous behaviours.

Social Validity

A semi structured interview was conducted between the lead researcher and the classroom teacher via Zoom after the study ended. Questions were asked about the specific practices that had been used such as the reinforcement systems and explicit instruction. The teacher was also asked about teacher and pupil wellbeing, and views on ABA, restraints, and seclusions.

Procedures

Pupils attended the unit Monday to Thursday. Tuesdays to Thursdays were structured so that routines could be learnt and easily followed. They included academic sessions, explicit instruction in social, emotional and behavioural skills, choice times, outdoor play with the rest of the school, and various opportunities for staff and pupils to interact positively throughout the day. Literacy and Maths sessions were delivered in small ability groups allowing for frequent interaction between staff and pupil, multiple opportunities to respond, and lessons to be face paced. Literacy sessions also included time on Headsprouts Early Reading Programme© (Rigney, Hixson, & Drevon, 2020), a computer-based DI reading programme, and Learning for Language (Ganz & Flores, 2009), a DI programme that focuses on language skills, and understanding and following instructions.

On Monday's pupils went to the woods, or the beach in the summer term. These days were less structured but still included instruction on emotional, social and communication skills. During these trips pupils also visited playgrounds, shops, and cafes. The aim was to encourage generalisation of social and emotional skills learnt in the classroom to other

environments. The trips were noncontingent, which meant the pupils did not have to earn them or could not be excluded from them for behaviour reasons.

Universal Behaviour Plan

A universal approach to behaviour management was used, meaning all pupils in the unit were initially provided with the same supports. The plan was split into proactive and reactive strategies. The plan was written and agreed upon by all members of staff and the ABA team, and ongoing staff training was provided by means of modelling and feedback from the ABA practitioners. The aim of the plan was to increase socially and school appropriate behaviours through a consistent approach that involved teaching alternative behaviours, teaching pupils to communicate and regulate their emotions, and promote a positive, consistent, and safe culture. The aim was also to reduce challenging behaviour, and subsequently the need for restrictive practices.

Levels Token Economy. A levels system token economy called STEPS was used to reinforce pupil's prosocial behaviours. The system consisted of 7 levels, split across two "houses". As the students achieved their behaviour targets, they climbed the steps to the next level. The first three levels were in "blue house" and pupils could earn points they exchanged for backup reinforcers during 3 choice times each day. The more points they earnt the more highly preferred reinforcers they could access. In red house points could be saved and exchanged for higher level rewards from a catalogue in addition to regular choice times. Free operant preference assessments were conducted by the ABA team to determine pupil's preference for different reinforcers.

As part of the level system, the school day was divided into 15 sessions. During each session students could earn up to 4 points by following the classroom rules: complete activity, follow instructions, use respectful language and gestures, and stay in your area. See

Table 5.2 for a definition of each rule. At the end of a session pupils were given specific feedback. Pupils' points were recorded on their daily STEPS sheet (See appendix 4).

Table 5.2

STEPS Rules and Operational Definitions

Rule	Operational Definition
Complete activity	Engaging in activities for a predetermined amount of time or completed a predetermined quantity of activities.
Follow Instructions	Engaging in behaviours that were in line with what the staff directed the pupil to do. Three warnings could be delivered across the session in relation to this rule before a point was not earnt.
Use Respectful Language and Gestures	Using polite words, sharing with others, and not engaging in aggressive physical or verbal behaviour towards staff, pupils, or property.
Stay in your Area	Staying in the predefined area for the session.

STEPS worked on the principle that by engaging in appropriate behaviours pupils could earn points which they could exchange for preferred activities. Points became conditioned reinforcers for appropriate behaviours. An additional layer of reinforcement came from moving up house floors for sustained appropriate behaviours, whilst pupils could also move down floors for not maintaining appropriate behaviours. STEPS allowed for frequent explicit instruction in appropriate behaviours. Staff used consistent language and behaviour specific praise to reinforce the behaviours ("I like that you've stayed in your area while you wait for your friends to come back"), as feedback ("Your area was the carpet, you did not stay in your area") or as instructions ("Stay in your area, the carpet is your area"). It

also meant that vicarious reinforcement could be delivered to pupils following rules, and as a prompt to other pupils who had not yet engaged in the appropriate behaviour.

Explicit Instruction in Emotional Regulation and Social Skills. Every day, a 15 to 20-minute group session was delivered on topics of emotional regulation and social skills for example staying calm when you think something is unfair. The curriculum was initially based on an emotional and social evidence-based curriculum called PATHS© (Domitrovich, Cortes, Greenberg, 2007) and overtime the lessons were individualised for the current population of the PRU. Sessions were led by the classroom teacher, and staff and pupils sat in a circle on the carpet. Explicit instruction was delivered around four skills: tyring your best, being respectful, good ignoring, and emotional regulation. Trying your best meant pupils engaging in activities that for them required a large response effort. Examples of being respectful included listening to others, using appropriate tones of voice, and turn taking. Good ignoring meant continuing your activity if others were engaged in a distracting behaviour. Emotional regulation referred to pupils remaining calm in situations that were highly stimulating either because they were exciting or frustration etc., it also meant once engaging in a highly stimulating activity bringing their level of arousal back down to one appropriate for the next activity.

The teacher used puppets, each linked to a specific skill to tell stories and problem solve with the pupils. Stories were based on behaviours and scenarios pupils in the unit had previously engaged in, for example hitting another pupil who had knocked over their block tower. Stories were also told about upcoming events were the teacher anticipated problem behaviours were likely. The four principles were used throughout the day to give pupils behaviour specific praise, or specific feedback. They were also used as prompts to remind pupils of strategies, for example before and during playing a board game. Tokens were given to pupils on a variable ratio schedule to reinforce behaviours consistent with the previously

stated operational definitions for trying your best, respectful, good ignoring, and emotional regulation. Tokens could be exchanged for a backup reinforcer from the surprise box. When pupils first entered the unit 15 tokens were needed to exchange for items from the surprise box, after this first exchange, 30 tokens were then needed. Items from the surprise box were small toys or edibles, pupils earnt around 3-5 tokens throughout the day.

Reactive Strategies. Staff used reactive tactics throughout the day consistent with the universal behaviour plan when pupils engaged in inappropriate behaviours. Staff remined pupils of the STEPS rules, what they were supposed to be doing, and redirected them back to their current activity or area. If a pupil continued to engage in inappropriate behaviour, for example running around the classroom, teasing other pupils, hiding under tables, using offensive language or refusing to leave an area, the teacher would use a neutral calm tone to redirect the pupils. Now and next boards or visuals were used to minimise attention and support the pupils understanding of what was being asked.

Staff tried to minimise attention they gave pupils during episodes of inappropriate behaviour, spoke using calm and neutral tones, and gave positively stated instructions. Once a pupil was again following classroom rules staff engaged positively, provided attention, and moved on from the incident. Points on the STEPS system were awarded on a fixed interval schedule, meaning sessions would finish, and new ones would start regardless of pupil behaviour.

Restrictive Practices. Physical restraints and seclusion were written into the universal behaviour plan and were used if pupils engaged in behaviours that put themselves, other pupils, or members of staff at a significant risk of harm. Restraints and seclusions were not intended as punishment procedures contingent on aggressive behaviour, they were conceived as safety procedures to keep staff and pupils from harm. Restraints or seclusion

were used for instances of aggression where; 1) staff moving away from the pupil in order to avoid pupil's attempts to make physical contact with them, staff moving to a different area of the classroom allowing the pupil space on their own were unsuccessful, or 2) staff attempts to use their hands to physically block pupils from making contact with the staff's body had been implemented, or were not possible, and the risk of harm remained. All members of school staff in the resource base were restraint trained to the same standard. A two-person seated restraint was used with pupils on a custom-made bench which was big enough for the pupil to sit between two members of staff, one on each side, who held the pupils arms, and placed their leg on top of the pupil's legs.

Seclusion included pupils being secluded in the calm room, or a member(s) of staff restricting a pupil's space within a larger room, for example, physically blocking or redirecting them into a safe corner of the classroom if they were intent on making contact with a particular person or object, was also used. Pupils would be instructed to go to the calm room. If they did not comply and safe to do so a guided walk was used, if the pupils resisted or dropped to the ground contact was immediately broken. If a guided walk was not possible then the pupil's space was restricted where they were with help from additional staff if necessary. Staff would attempt to restrict space in a manner that guided pupils towards the calm room if the restricted space they were in was still not considered safe or a guided walk was implemented if the pupil allowed. The calm room did not have a door, if pupils attempted to leave the calm room, they were physically redirected or blocked. Once pupils were calm, they could re-join an activity or stay where they were until they chose to re-join the activity, although they were encouraged by staff to resume normal timetable activities as soon as possible.

Logic Models for Interventions

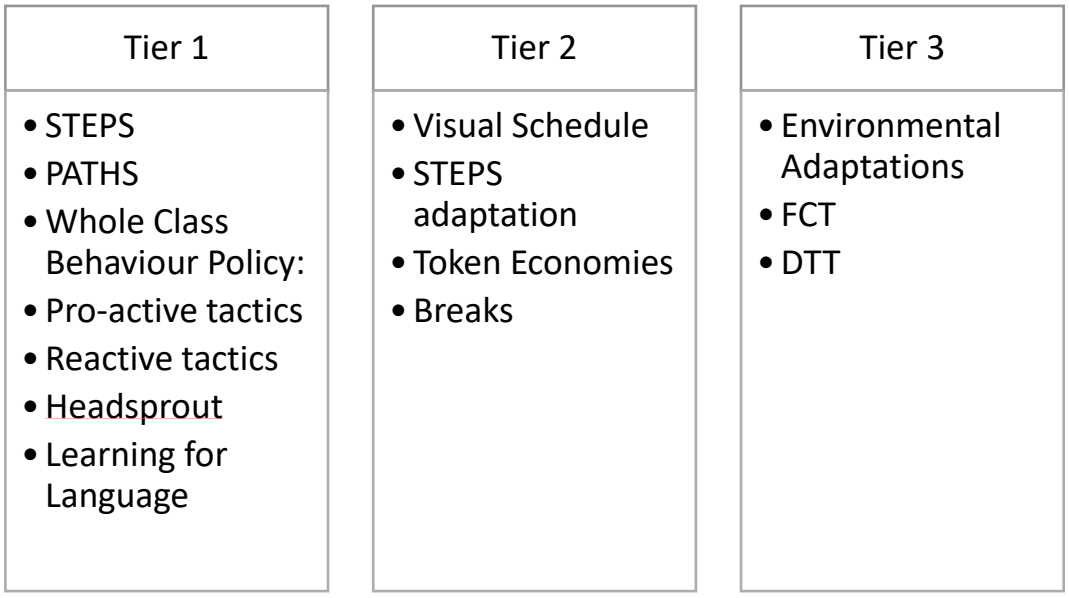

Figure 5.1 Logic Model of Tier 1, 2, and 3 interventions used in the unit.

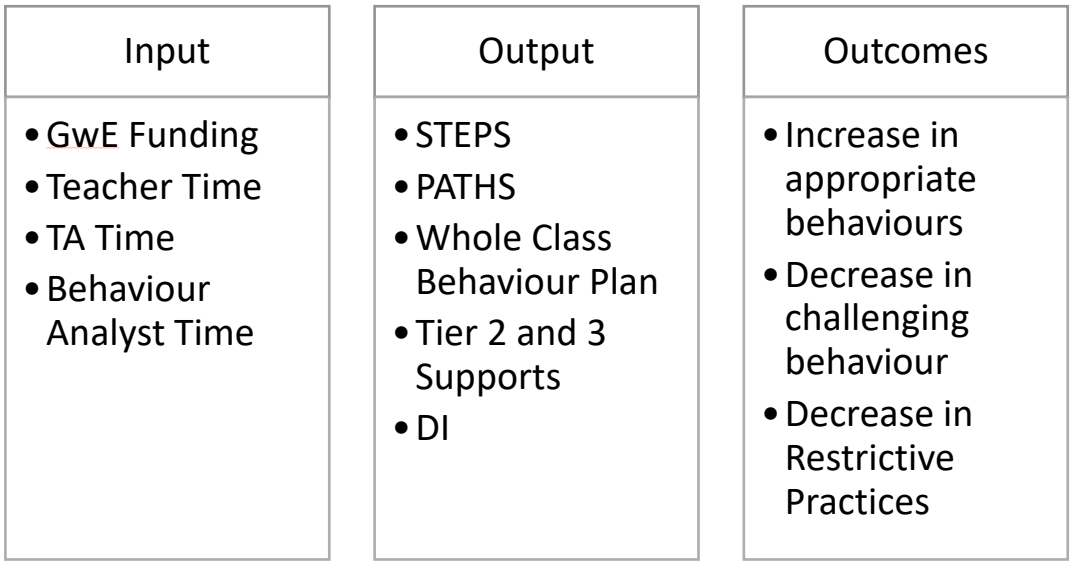

Figure 5.2 Logic model of interventions chosen for the Unit

Function Based Behaviour Plans

Data led decisions were made to adjust the universal behaviour plan for individual pupils that needed additional support in target areas. Function based behaviour plans were created by using ABC data gathered from across the day, at times when seclusion was necessary and from STEPS sheets.

Pupil 1. When Pupil 1 first entered the PRU staff used proactive and reactive tactics consistent with the universal behaviour plan when dealing with his inappropriate behaviours. However, there was a concern around the duration and frequency of his access to the calm room as seclusion, due to his frequency of aggressive behaviours. The ABA team along with staff in the unit reviewed the ABC charts that had been filled in during incidents of aggression, or when Pupil 1 had been secluded to hypothesis a possible function for aggressive behaviours. They also looked for any patterns in points that were not earnt on his STEPS sheet in terms of times of day or specific rules. It was found that Pupil 1 was consistently not earning his point for respectful words and gestures across the day, with no pattern in times of day. As Pupil 1 was not earning points for respectful language and gestures he was rarely accessing the highest level of reward during choice time. The analysis of the ABC charts led to a hypothesis of attention from staff and pupils as the maintaining function for inappropriate behaviours.

Following the analysis an individualised behaviour plan was written that included adapting Pupil 1's STEPS system so that an extra choice time was added and criteria for earning the highest reward was reset more often. If Pupil 1 earnt his point for respectful language and gestures he was also given a respectful token to place on his token board, all members of staff would praise him enthusiastically and his peers would be prompted to do the same. During times when Pupil 1 was more likely to engage in aggressive behaviour such

as group instruction a member of staff would sit next to Pupil 1 and provide positive attention in the form of quite private praise, arm or hand squeezes, smiles, and other positive gestures. Pupil 1 was given prompts around how to gain other pupil's attention during free play and was supported in appropriate initiations in the playground and during group times such as in the lunch hall. All other aspects of the universal behaviour plan were still in place, including when it would be appropriate to use restrictive practices.

Pupil 2. Once again after a concern around the amount of seclusion being used with Pupil 2 despite the universal behaviour plan being implemented with fidelity, Pupil 2's behaviour data was reviewed. An increase in noncompliance leading to aggressive behaviours was observed during maths lessons with the hypothesised function of escape. Staff from the unit first determined that the level of work presented to Pupil 2 was appropriate for his academic ability. A functional behaviour plan was written to reduce aggressive behaviours at this time and increase the number of maths tasks being completed.

The functional behaviour plan included providing Pupil 2 choice around academic tasks and environment, breaking tasks down into smaller tasks, making sure Pupil 2 was aware of how much was expected and when a task would end, providing prompts before the lesson around trying your best and emotional regulation, and finally providing an increased number of trying your best and emotional regulation tokens and behaviour specific praise. Tasks were presented throughout the session, and if necessary, represented in the following maths session. If inappropriate behaviour occurred and in the case of dangerous behaviours Pupil 2 was only secluded within the classroom where instruction was occurring, not taken to the calm room.

Pupil 3. The universal behaviour plan was used initially to support Pupil 3. Due to a concern in an increase in inappropriate behaviours and use of seclusion Pupil 3's ABC charts

and STEPS sheets were analysed in the same manner as Pupil 1 and 2's. Escape and sensory functions were identified in different situations across the day. A functional communication plan was introduced to teach Pupil 3 to ask for a break from high demand activities, ask for time to calm down away from what was upsetting him, communicate what was upsetting him, and to ask for noise blocking headphones before he went to a place he knew to be noisy, for example the lunchroom, or if a room became too loud for him. These were strategies added in addition to the universal behaviour plan which remained in place.

Results

Restraints

Figure 5.1 shows the number of two person restrains carried out per term over a four-year period in the resource base. In the two-year period prior to the project, 62 two-person seated restrains were recorded being used with various pupils in the unit. Whilst there is not Summer term 19/20 restraint data recorded because of school closures due to COVID-19, for two school years that pupils were in the resource base after the project had begun 0 two person restrains were used despite staff still having the option to use these interventions if they felt appropriate to do so.

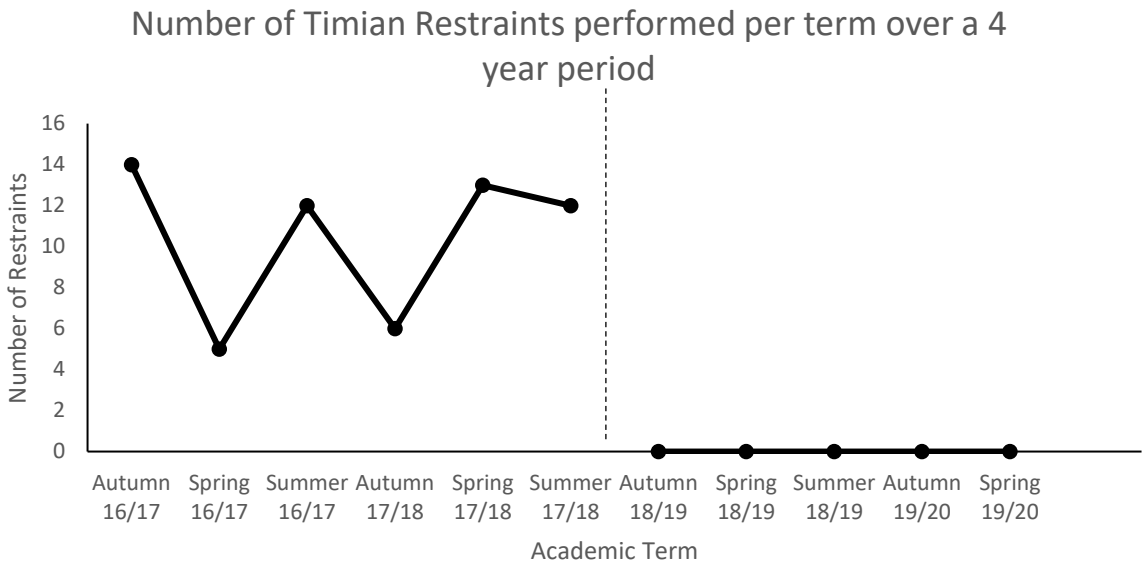

Figure 5.3 shows the number of two-person seated restraints performed per term two years before the project was implemented, and for the two years of the project. The phase line denotes when intervention began.

Seclusion

Pupil 1

Figure 5.4 shows the cumulative number of minutes Pupil 1 spend in the calm room per week. The data runs across every week (Monday to Thursday) of the school year. After the first half term, adaptions to Pupil 1's behaviour plan were introduced, and the amount of weekly time Pupil 1 spent in seclusion initially decreased but remained variable for the rest of the school year.

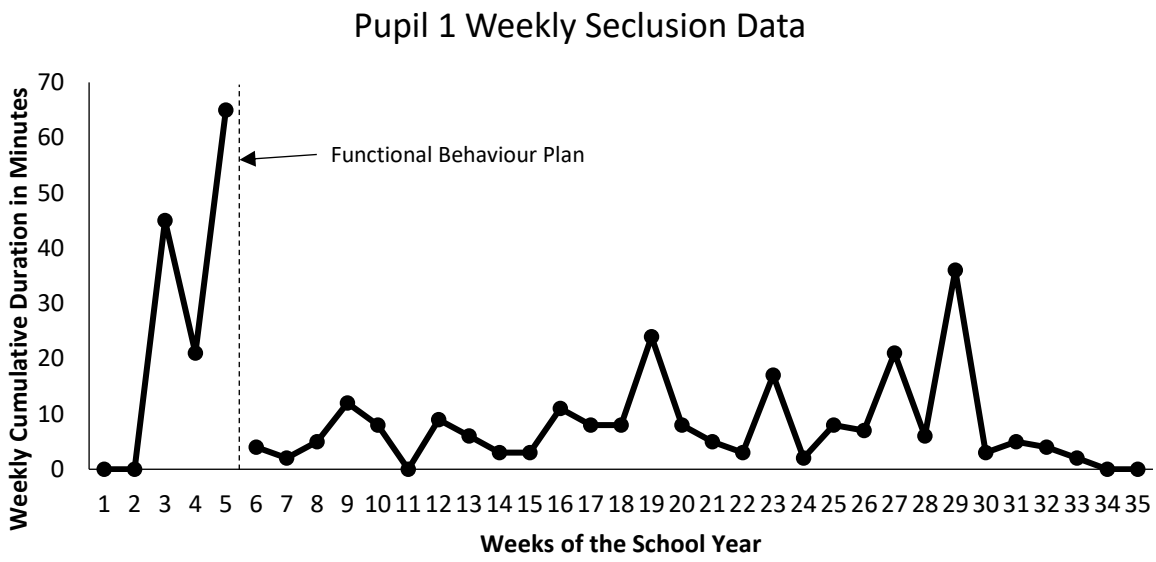

Figure 5.4 Cumulative duration in minutes Pupil 1 accessed the calm room across the 2018/19 school year.

Pupil 2

Figure 5.5 shows the cumulative minutes Pupil 2 spent in seclusion each week throughout the school year. The week before the intervention had been introduced there was a drop in minutes spent in seclusion, immediately after the plan was introduced the minutes spent in seclusion increased to their highest point. The weekly duration for the following weeks then reduces but remained variable for the rest of the school year.

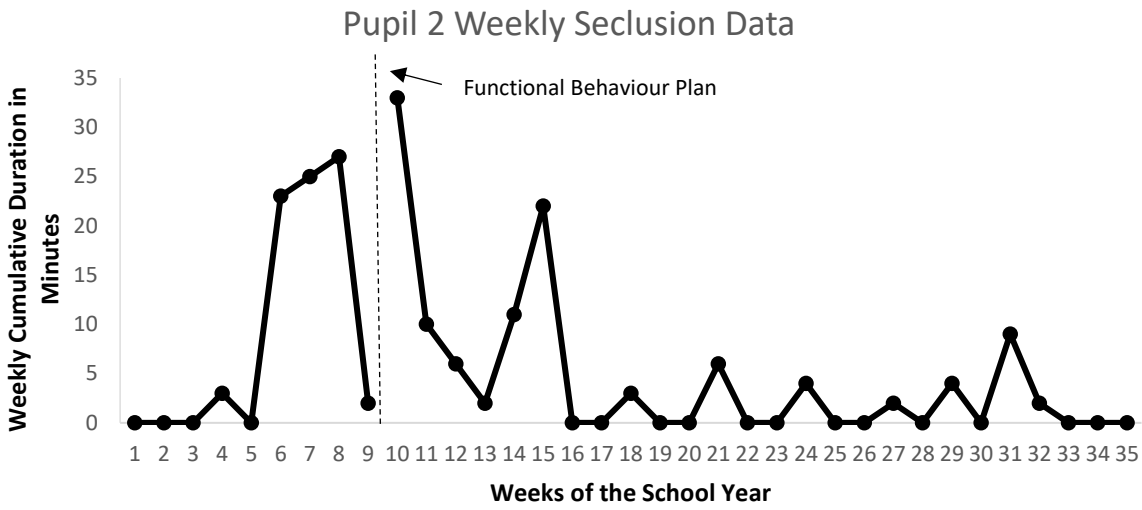

Figure 5.5 Cumulative duration in minutes Pupil 2 accessed the calm room across the 2018/19 school year.

Pupil 3

Figure 5.6 shows weekly duration of seclusion for Pupil 3. No functional relation is shown between the introduction of functional communication training, and weekly seclusion duration. After functional communication training was introduced the data remains high and variable, with the highest single data point occurring after the intervention was introduced.

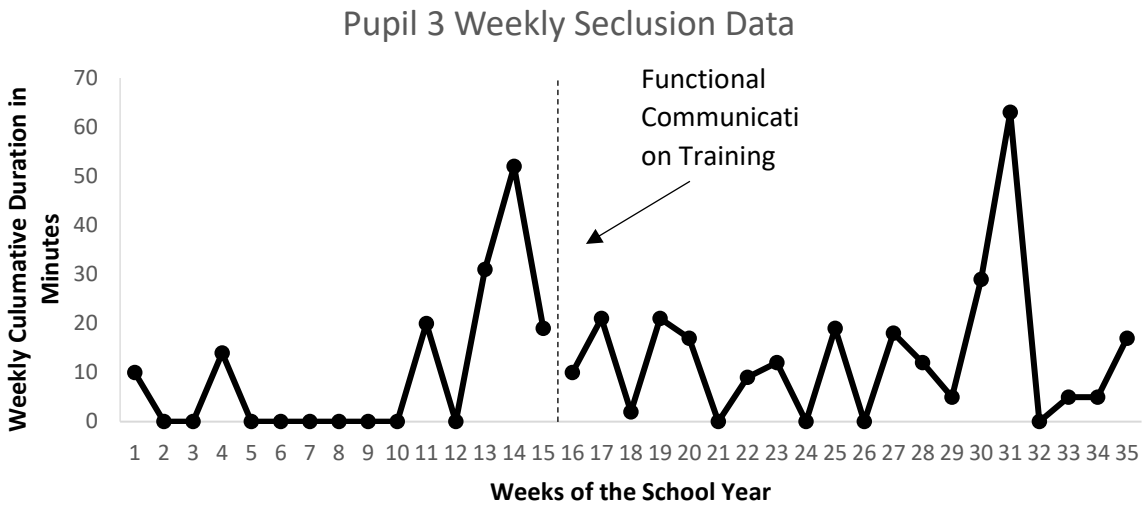

Figure 5.6 Cumulative duration in minutes Pupil 2 accessed the calm room across the 2018/19 school year.

Data shows that the use of seclusion in the unit remained variable for pupils despite the introduction of function-based behaviour plans.

Social Validity

Classroom Teacher Interview

The classroom teacher reported that he believed the pupils in the unit were happier since the study began, and this was evident by the decreased episodes of aggressive behaviours, and the increased amount of work that they were doing. He also believed they were better able to regulate their emotions and felt safe because the systems in place were explicit and they understood exactly what was expected of them.

The class teacher was asked how he felt about using ABA in his classroom. He said that he had not heard of it before the project but now believed that is was "integral to establishing a positive learning environment." He stated that this was especially true when the pupils in his classroom experience of education at around the age of 6 was already negative

and closed off. He went on to explain that "schools often discussed creating positive learning environments for pupil's but it is usually done in a subjective way", where as he felt ABA meant that these systems could be evaluated and data based decisions could be made.

When taking about staff wellbeing the classroom teacher felt there had been an increase in staff wellbeing because staff knew exactly what was expected of them in their role and staff were being supported in their jobs. He said "From my perspective, staff wellbeing, I think it's the best it's been in the time I've been in this school. I'm happy in my job, I enjoy my job".

The class teacher also reported positively about the specific systems used such as STEPS and the emotional social learning systems. He said once learnt they were easy to use, and adaptable to different situations. He enjoyed having phone calls from parents where they would tell him about how their child had been using, and in some cases teaching to siblings, the emotional and social learning principles at home. "So they're able to identify when it's appropriate to prompt someone else about that, and they are able to use the principle in context as well."

Restrictive practices were also discussed by the classroom teacher. "When I first started [restraint] was necessary because the children's physical behaviours were such, as the systems in the provision have developed and evolved it's been such that we have been able to ensure the environment is so that we can teach new behaviours safely by using less restrictive interventions and also reduce physical contact completely… Yes we still do use physical redirection but it is planned for and its specifically aimed at certain children in the provision." He went on to discuss how some pupils that come to the resource base expect adults to respond physically or confrontationally to behaviours, and they engaged in behaviours to evoke this confrontation. This was something that was hard to change, but with the help of

the systems in place it meant that there was not always the need to respond physically, and staff would always remain calm, so this learning history could be rewritten.

Discussion

This study described an evidence-based practice approach to supporting early years pupils in an alternative educational setting and how it could be used to reduce the use of restrictive practices with pupils with ESBD and statemented special educational needs. Results showed that the use of restraints was eliminated, and staff were invested and enthusiastic about the model of implementation. The use of seclusion still remained, and functional behaviour plans worked for two out of three pupils to reduce the use of seclusion.

Seclusion data presented were for the three pupils who seclusion in the unit was used consistently and most often with. Instances of escalation of Pupil 1's behaviours to levels that required seclusion were reduced after the implementation of the function-based behaviour plan, however the same results were not seen for Pupil 3. Anecdotally both spikes in Pupil 3's behaviours corresponded with him having contact with a parent that it had been court ordered he should no longer have contact with. The spike in Pupil 2's behaviours after the implementation of the functional behaviour plan was not unexpected due to an element of extinction used in his behaviour plan. The sudden drop in seclusion the week before the behaviour plan could anecdotally have been due to staff reducing the amount of high-level demands placed on him during maths lessons due to their learning histories of his behaviours during this time. A functional relation between the reduction in seclusion and the introduction of the behaviour plan cannot therefore be confidently be tacted, although an overall reduction in seclusion was seen.

The school initially bought in to the project with a small amount of money and agreed to have the BCaBA placed there full time unpaid in the first year of implementation. They

then invested further in the second year by paying for a member of behaviour analytic staff. However, the level of input from outside expertise was more than what was being paid for by the school. If the school had had to pay average rates for a full time BCaBA in the first year or an unqualified but skilled behaviour analyst in the second year, a BCBA, and an experienced BCBA-D they may not have been willing or able to do so. This level of input if not paid for appropriately outside a research model could be unsustainable for a single provision alone.

These preliminary results support the findings that ABA approaches are effective practices with ESBD pupils (Lewis et al., 2004). It also replicates work that have shown explicit instruction in social and emotional skills and level token systems to reduce problem behaviour (Askdown & Bernard, 2012; Pritchard et al., 2018). The systems used were also in line with current NHS and government guidelines around the use of functional assessments, and the reduction of seclusion and restraints (Dinenage & Zahawi, 2019; NHS 2017). However, there is still limited research about the use of ABA methodology in PRUs, or with pupils with ESBD in Britain. More must be done to investigate these procedures in the context of British PRUs at all ages, and as early intervention procedures for pupils with ESBD in mainstream schools so pupils do not get to the point where PRUs are an appropriate placement for them.

The classroom teacher was satisfied with the intervention and believed that an ABA approach was appropriate and effective within his resource base. He was open and willing to collaborate with the ABA team, as were the rest of the staff at the unit. Therefore, the ABA team could focus on developing programmes and systems. Pupils with ESBD generally receive more punishment due to higher rates of inappropriate behaviours than peers (Shores eta al., 1993). Staff from the unit could see the benefit of an alternative approach and were open to change. However, whilst they no longer felt behaviours were dangerous enough to

warrant restraints, they still exhibited an over reliance on using seclusion when the proactive tactics in place failed. For example, there was a bias towards secluding a pupil, over moving other pupils to a different room when behaviour escalated. Currently more work is being aimed at reducing seclusion further through staff training and further embedding proactive and function-based tactics within the provision.

Although the use of ABA was sufficient to reduce the use of restraints across the whole unit and a reduction in seclusion was observed for a pupil with ASD, the results for the use of ABA with pupil's with attachment disorder were inconclusive. This is perhaps unsurprising as there is currently little evidence in the literature to show that ABA is effective with this population, and therefore some pupils may have benefited from additional evidence-based supports, or further behaviour assessments.

Limitations also existed in the form of data collection and research design. Firstly, no seclusion data prior to the start of the study existed so it is not possible to conclude whether seclusion was used less with the current systems in place, than it had been used before. Also, no control settings were able to be identified before the project began, and due to the intervention being based on a universal behaviour plan, and the potentially dangerous nature of some pupil's behaviour it was not practical or ethical to withhold intervention for certain pupils to allow for control. Furthermore even if it had been possible to implement a baseline element for individual students or the setting as a whole, most pupils exhibited "honeymoon" periods where they generally did not exhibit any aggressive or inappropriate behaviours for varying lengths of time when they first entered the setting, or when the systems were first changed, as can be observed in the seclusion data for most pupils.

Other limitations of the study were that pupils' lengths of time in the resource base varied. This was partly due to their behaviours, but also due to the home school's willingness

to allow the pupils to transition back. The length of pupil placement in the PRU was beyond staff's control. Some pupils remained in the resource base and displayed no inappropriate behaviours for a whole year, whilst others were still engaged in inappropriate behaviours at such a level to access the calm room, but still transitioning back to their home schools. Pupils could also join the unit at any point during the year. This limited the amount of data that could be taken for each pupil and for the unit as a whole. It also limited the number of individual programmes where pupils met a termination criterion and made resource allocation difficult with pupils joining unexpectedly with various behaviours and needs.

In conclusion this research provides preliminary evidence to support the use of ABA to the reduce restrictive practices within a PRU setting and goes some way to describing what these systems could look like. Future research in the area should have a control element to better investigate the model of implementation. Follow up data should also be collected on whether pupils who transitioned to other settings, especially those who transitioned to mainstream schools, were successful in those settings.

Chapter 6: General Discussion and Conclusion

SWPBS in Welsh Primary Schools

The Purpose of this thesis was to investigate Applied Behaviour Analytic approaches such as School-Wide Positive Behaviour Support, reinforcement of appropriate behaviours, and explicit teaching of social and emotional skills in UK schools. Problem behaviour in schools accounts for hours of lost learning time during lessons every week and can have a significant impact on pupil's futures (Ofsted, 2014). Pupils exhibiting high rates of problem behaviour are less likely to have positive interactions with staff within school (Shores et al., 1993), and are more likely to be subjected to restrictive practices such as seclusion and restraints (Department of Education, 2013). Effective practices within the literature have been identified to not only decrease low level disruptive behaviour at a whole school level, but also provide guidance on classroom level strategies, and support individual pupils with emotional, social and behavioural disorders (ESBD) (Ennis et al., 2018; Lewis et al; 2004; Sugai & Horner, 2008).

Chapter Summaries

In Chapter 2 we reported that when schools implemented SWPBS with high level fidelity a statistically significant increase in academic engagement data was observed. The use of direct behaviour data to measure this increase in academic engagement adds to the SWPBS literature and provides a starting point for further research to be conducted in UK schools to bring about positive behaviour change in schools. Two thirds of the schools in the project were able to bring about whole school systems change that had a direct benefit to pupil behaviour in only one year. Factors that contributed to this were investigated in the second half of the mixed methods design in Chapter 2. An investigation into the perceived barriers and facilitators in the implementation of SWPBS as reported by the staff working in the intervention school was carried out. It is important to understand not just what effects an intervention can have, but also how and why these changes can occur. In this way we can facilitate the replication of the benefits found and create a deeper understanding of the

systems involved. A Thematic Analysis was used to investigate common themes from semi structured interviews with staff ranging from headteachers to teaching assistants. It was found that the barriers and facilitators faced by the schools were similar to those already investigated within the SWPBS literature (Kincaid et al., 2007; George et al., 2018). The facilitators identified by staff were consistency of implementation, leadership, researcher input, involving all stake holders, collaboration with other schools, and cost. Whereas a lack of staff buy-in was considered a barrier to the implementation of SWPBS by participants.

The research in Chapter 2 sits alongside other literature that indicates SWPBS can have a positive effect on pupil behaviour in the classroom (Gottfredson, et al., 1993; Sprague, et al., 2001; Horner et al., 2009; Bohanon et al. 2006; Caldarella, et al., 2011; Lassen, et al., 2006). The direct behaviour data collection method deployed in this design was one of the first examples of direct whole school behaviour measures used to evaluate effects of SWPBS. Kim et al. (2018) discovered that it can take up to three years for schools to reach high levels of fidelity when implementing SWPBS. The success of four out of six schools reaching high fidelity within one year of implementation suggests that schools within the UK are able to engage with SWPBS tactics and see results after the first year. However, the fact that not all schools reached this level of implementation is consistent with Kim et al.'s (2018) findings.

The research also adds to literature that shows SWPBS can be effectively implemented in schools outside of North America (Sorlie & Ogden, 2015; Nelen et al., 2019). No previous literature exists on the use of SWPBS in mainstream schools in the UK. SWPBS relies on whole school participation and as we have discussed if the changes clash with staff philosophies then they are less likely to be implemented with fidelity. Therefore, it is important to investigate whether the positive changes found in schools in the USA can be replicated within a British school system when the cultures and resources of the two institutions differ. The findings of the study suggested that implementation of SWPBS with

fidelity is possible in primary schools in UK and is in line with suggestions from independent reports published by the government into establishing whole school systems (Bennett, 2017). Further research needs to be done into the feasibility of a similar approach in British secondary schools.

Interviews with staff revealed that factors that effected the implementation of SWPBS within the Welsh primary schools were the same as those already found in the literature, with the main barrier described by most participants as a lack of staff buy-in. (George et al., 2018; Kincaid et al., 2007; Pinkelman et al., 2015). This suggests that facilitators and barriers to the implementation of SWPBS in schools are universal. Interviews revealed that schools that implemented SWPBS with high fidelity had strong leadership and systems were being implemented consistently across the schools. Three out of these four schools saw a positive change in behaviour. This supports claims that strong leadership teams, and consistent implementation of initiatives are important factors that effect behaviour in schools (Bennett, 2017).

The studies in Chapter 2 led to the creation of the investigation in Chapter 3 on the request of two schools from the initial project. Chapter 3 included a multiple baseline across participants investigation into whether brief feedback sessions would be sufficient to increase teachers use of praise and behaviour specific praise (BSP). Results showed that all teachers increased their use of BSP relative to baseline, but this change did not maintain for all teachers at follow up. Further measures were collected on pupil on-task behaviour and disruptive behaviours to gage whether the change in teacher behaviour had a functional relationship with a change in pupil behaviour. It was found that when teachers increase their use of praise and BSP, and decreased their use of reprimands, class wide disruptive behaviour decreased, and academic engagement increased.

Recently Caldarella et al., (2020) observed that higher the praise to reprimands ratio in a classroom the high levels of on-task behaviour are found. The change in pupil behaviour, relation to teacher behaviour is in line with these and other findings (Chalk & Bizo, 2004; Dufrene et al., 2014). Maintenance of teacher behaviour was mixed across the participants. This too is consistent with previous findings in that some teachers continue to use higher levels of praise and BSP after the intervention has been removed, and others do not. This effect is found across intervention methods (O'Handley, et al., 2018; Rathel et al., 2014; Simmonsen et al., 2017).

Measures of social validity found that feedback was an acceptable form of intervention for teachers which is also consistent with previous investigations about various training methods to increase treatment fidelity (Strohmeier, et al., 2014). Whilst the intervention was socially acceptable to all participants it was not sufficient to change all participants behaviour to observe positive effects on pupil data, and to maintain the teacher behaviour at follow up. Therefore, in the future other more involved methods may be needed for some teachers to effect behaviour change, and an investigation into sustained behaviour change methods is needed.

Chapter 5 contained an investigation into the use of ABA to reduce the amount of restraints and seclusions used in an infant resource base where all pupils were identified as having emotional, social, and behaviour difficulties (ESBD). Through the use of explicit teaching, token economies, and functional behaviour plans physical restraints were eliminated in the setting, and a reduction in seclusion for some pupils was recorded. Methods used to reduce the use of restrictive practices when dealing with challenging behaviour within the PRU addressed concerns about the practise raised by Estyn (2012) and followed guidance published by the UK government and the NHS (Dinenage & Zahawi, 2019; NHS, 2017).

SWPBS in Welsh Primary Schools

This research adds to current literature that suggest ABA based approaches are effective practices for pupils with ESBD in educational settings (Lewis et al., 2004). Previous literature showed explicit instruction in social and emotional skills is effective in reducing disruptive behaviours (Askdown & Bernard, 2012). This is a simple proactive tactic that can be easily individualised but still delivered in a small group setting. Explicit instruction in social and emotional skills in the PRU was brief, but embedded across the environment, generalised out in the community, and supported with a token economy. It was an acceptable intervention to those implementing it and anecdotally generalised to home settings also as reported by the final teacher interview. Further, the research in Chapter 5 replicates work that has shown manualised whole class level token systems are effective in reducing challenging and inappropriate behaviour (Anhalt, et al., 1998; Pritchard et al., 2018).

When the universal behaviour plan was not sufficient in supporting pupils, a functional assessment was used. Previously functional assessments had been shown to be effective in decreasing inappropriate classroom behaviours with pupils with ESBD (Kamps et al., 2006). These results were replicated for two out of three pupils who functional assessment was used to reduced seclusion and challenging behaviour. For one pupil an individualised behaviour plan based on a functional assessment was not sufficient in reducing problem behaviour and seclusion. More research should be conducted into what other supports pupils who display behaviours consistent with attachment disorder may need.

Methodological Limitations

The biggest weakness in methodology for Chapter 2 and Chapter 5 was the fact that there were no control elements. This meant that any conclusions made about the effectiveness of the interventions were limited. For Chapter 2 this also meant that there were fewer degrees of freedom to analyse lowering the chance of finding significant results for the impact of

fidelity on behaviour. Other limitations were that data collection was time consuming and resource intensive. Most measures in the SWPBS literature do not include direct behaviour observations. However, the lead author has a single subject design background, with a focus on measures that include direct observations. Therefore, time sampling was used to collect data, focusing on individual behaviours for at least 80% of pupils across each school, with each individual pupil being observed for 5 minutes each. This meant that depending on the size of the schools, and the number of available grad students data collection took anywhere between four days and two weeks per school. Between the 10 schools originally in the study this meant that pre intervention data collection took approximately 12 weeks to complete. Therefore, if the intervention were to be scaled up to include more schools it would be very difficult to collect a similar type of data.

Whilst IOA levels were acceptable, this method also meant a lot of different data collectors had to be trained, coordinated and deployed. School staff were not always accommodating to having graduate students with timers and notebooks in their classrooms, and at times students were asked to leave, or "get out of pupils' faces" by classroom teachers. Observers could not always collect enough data in one block due to school activities, meaning they had to return the next day or at a later time. IOA meant that at times two observers would be in the classrooms, and graduate student availability meant that if one student did not finish collecting data in a classroom one day, then a second different student may need to go back to that classroom the next day. Reactivity may have been high and the study methods were not acceptable to all people involved in the intervention. It is worth noting however that it was a minority of staff who were openly disagreeable around the observations, as teachers were asked before data collection when a good time to come would be so they would be expecting observers, and observers always asked permission to enter a classroom, and left immediately if directed to. Some class teachers during interviews even

commented on enjoying the data collection process, and asked researchers to return to collect more. Nevertheless, alternative, more socially acceptable and less intrusive observation protocols could be designed in the future.

This method of data collection is also not a viable method for the schools to use themselves to continue measuring the impact SWPBS. However, schools were encouraged and supported in developing their own data collection methods, that contain the same information as Office Discipline Referrals (ODRs) from the SWPBS literature, that could be used independently going forward.

Other less time-consuming methods but still involving direct observation could have been used. For example, in the second study disruptive and on-task behaviour data was taken for the whole class during 30-minute observation sessions. Developing this kind of direct observation session would mean that investigations would not have to rely on by-products such as ODRs to measure behaviour data, but also that less observers would be needed, and observation sessions would be shorter, which might be more socially acceptable to staff.

Methodological limitations also existed within the qualitative element of Chapter 2. Of the thirteen participants interviewed ten were from high fidelity schools and only three were from low fidelity schools. This could have impacted the results of the Thematic Analysis. Many themes considered to be facilitators were reported, but only one barrier was identified. If more staff from low fidelity schools were interviewed results may have been different, and conclusion draw might have been more balanced across implementation factors.

Further methodological weaknesses were found in Chapter 3. A multiple baseline across participants design was used. In a multiple baseline design the ability of the independent variable (IV) to change a participant's behaviour is identified when other

participant's behaviour, where the IV has not been introduced, does not change. This is then replicated across all participants, introducing the IV one by one, to demonstrate repeatedly that behaviour change observed with other participants only occurs when the IV is introduced. Through this a functional relation between the IV and behaviour can be established. In order for this to happen a sufficient number of data points must be presented between one participant being introduced to the IV, and the next. The time between one participant being introduced to the IV and the next is important for visual analysis to verify predictions that if the IV had not been introduced to the first participant the observed behaviour change would not have happened.

In the research in Chapter 3 only two data points were left between one participant receiving the intervention and the next. This did not allow adequate data for visual analysis and a confident verification of predictions that teacher behaviours would not have changed without the introduction of the intervention. This was due to previously discussed limitations in an applied setting. However, as the purpose of the data collection was research, and not purely clinical more should have been done to secure buy-in from participants waiting for intervention to allow adequate time between one participant starting intervention and the next.

Implications for Practice

The research presented in this thesis shows that the use of Applied Behaviour Analysis in educational settings has a positive and meaningful effect on pupil behaviour. Not only can ABA be used for individual pupils, it can be used proactively on a group level to support and promote appropriate behaviour, this has implications for practice.

Universal Behaviour Management Approaches

Schools in the UK have been identified as having a problem with behaviour that impacts pupils' education (Bennett, 2017; Ofsted, 2014). All three investigations within this thesis demonstrated that the use of universal behaviour management tactics that apply to every pupil in a setting can decrease disruptive behaviours and increase academic engagement. This approach is time and resource efficient. Schools do not have endless money and personnel to fire fight every individual problem behaviour that occurs. Deploying proactive universal tactics that can be effective for 80% of a school population (Sugai & Horner, 2015) means that the majority of inappropriate behaviours are prevented from occurring in the first place, and those that do occur can be delt with quickly and consistently.

As part of SWPBS pupils are explicitly taught and reinforced for engaging in prosocial behaviours. Chapter 5 showed that this kind of explicit instruction can be delivered in a group setting, but still individualised to the population of the group, where pupils are identified as having ESBD and typically need extra support. Once again making the interventions time and resource efficient and meaning many pupils can receive effective interventions quickly. The approach also meant that many pupils who had previously been reported by their home schools as engaging in aggressive behaviours no longer exhibited them. These aggressive behaviours are generally identified as the reason why pupils can no longer attend their mainstream settings. If explicit instruction in emotional and social skills and consistent behaviour management tactics could be integrated into mainstream schools from reception onwards then pupils may be more successful in their mainstream setting. This in turn would reduce the need for pupils attending alternative settings.

Cultural adaptations

SWPBS in Welsh Primary Schools

Chapter 2 demonstrated that SWPBS could be ran with fidelity in North Wales Primary schools without any major cultural adaptations. Whole school rewards were used as in line with a tier 1 ethos. Minor adaptations were made to the SET inline with a UK audience, mainly rather than asking what would staff do if a stranger with a gun came into school they were asked what they would do if a stranger came onto the playground. Study two in chapter 2 showed that barriers and enablers across the project were the same as was found in the already existing American literature. Chapter 3 that specifically looked at teachers increasing their delivery of praise and the type of praise they were giving also demonstrated that this was an acceptable intervention for a UK audience, despite most of the literature originating in the USA. Overall cultural adaptations were few and far between and the research presented throughout this thesis demonstrated that SWPBS was relevant and practical for a UK audience.

Teacher Training

Teacher behaviour management in the classroom has a direct effect on pupils' life chances, with pupils whose behaviour is not effectively managed sent to alternative settings (Ofsted, 2007; Ofsted, 2014). Teachers are often advised to use reactive and punitive practices (Department for Education, 2017), despite the fact that many of these tactics are found to be ineffective and have a host of other side effects (Payne, 2015; Vargas, 2013). If positive, evidence-based behaviour management strategies were taught to teachers during initial teacher training most pupils' disruptive behaviours could be managed effectively in the classroom. Behaviour Specific Praise (BSP) is a tactic commonly used in classrooms that are part of schools implementing SWPBS and is effective and efficient (Ennis et al., 2018). It was used in Chapters 2, 3, 4 and 5 with the effects directly investigated in Chapter 3. This is just one example of low-intensity strategies that could be taught during initial teacher

training, that could have a large impact on pupil behaviour within the classroom, but would cost a school nothing in terms of money or other resources.

Time and other implementation factors

All schools in the project did not reach a high level of implementation fidelity for SWPBS. Kim et al. (2018) previously discussed that on average it takes schools two to three years to reach an 80% score on the SET. This is an important implication for practice. School leadership and practitioners wanting to implement SWPBS within their setting must not expect the intervention to be in place or take effect in a single year. Before schools implement a commitment to the project for at least three years should be made, and governing bodies or decision makers should not expect to see meaningful results in the short term.

Another factor to consider before schools implement SWPBS is whether they have sufficient capacity to do so. This includes a strong and dedicated leadership team, where the head teacher is prepared to invest time and money, model new behaviours, and support staff in their behaviour change efforts. If schools are not in a position to make such large changes due to a problem with leadership then any efforts made to implement SWPBS may not be effective, and the initiative may be prematurely abandoned. Also, before SWPBS is implemented tactics to gain staff buy-in should be addressed, and all key stake holders should be consulted. As seen in Chapter 2, all of these issues can have an impact on successful implementation of SWPBS.

BCBA Input

The use of ABA for all schools across the various projects meant that less punitive and restrictive practices could be used, and when these practices were used, they were monitored and accounted for. In order for ABA to be implemented effectively BCBA input is

important (BACB, 2020). The school identified that having the researcher, who was a BCBA on site was a facilitator to implementation, and Chapter 5 showed promising results with the input of many ABA specialists. For an approach to be considered Applied Behaviour Analysis then it must contain certain dimensions (Baer, Wolf, and Risley, 1968), having a BCBA meant that all interventions used met these criteria. It also meant that other members of staff could be supervised when implementing ABA practices. Schools or PRUs who wish to implement similar practices in the future should do so with BCBA guidance and supervision to make sure that no harm is done, an ethics code is followed, and that interventions can be implemented as designed. This could be considered especially important when working with challenging behaviours that could be potentially dangerous. For example, in Chapter 5 one pupil who an individualised behaviour plan was written for engaged in PICA with dangerous materials such as batteries, and eye poking and head hitting behaviours. If the plan was not carefully considered, controlled and monitored by professionals who had previous experience of dangerous behaviours any intervention put in place had the potential to evoke these behaviours more frequently or increase their intensity.

Research Questions

This thesis sought to address the following two research questions:

1. Are Applied Behaviour Analysis (ABA) and School-Wide Positive Behaviour Support (SWPBS) systems feasible to implement in North Wales Primary Schools?
2. Can these systems produce a positive change in pupil and teacher behaviour?

Firstly Chapter 2 addressed whether it would be feasible to run Tier 1 SWPBS within mainstream primary schools within North Wales. It was found through fidelity data that schools were capable of running such an intervention to a high standard, and through direct observation data that when the systems were implemented with fidelity they could produce a

positive change to pupil behaviour. Chapter 3 showed that these systems could then produce positive changes to teacher behaviour, which in turn had an effect on pupil behaviour. Finally, Chapter 5 demonstrated the effectiveness of using ABA tactics to change pupil behaviour. The two research questions have been addressed throughout this thesis and whilst there were limitations, and further investigation and replication is needed, it has been demonstrated that it is feasible to use SWPBS and ABA approaches in schools in North Wales, and that these systems can have a positive effect on pupil and teacher behaviour.

Conclusion

We found that the use of School-Wide Positive Behaviour Support and Applied Behaviour Analysis can have positive effects on levels of academic engagement, disruptive behaviours in mainstream primary schools, and the use of restraints and seclusion in a Pupil Referral Unit (PRU). We also found that factors that affect the implementation of SWPBS in UK schools are the same as those previously identified in other fidelity literature. In conclusion ABA and SWPBS are feasible and effective interventions for use in British education that enable pupil pro-social behaviour, and subsequently could have an impact of their overall life chances.

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Appendix

Appendix 1

Aim to learn, learn to succeed ~ Anelu at ddysgu, dysgu i lwyddo

	Corridor & Cloakrooms	Outdoor Areas	Collective Worship	Dining Hall	Off – Site	Toilets	Classrooms
Parchwch ein hunain **Respect Ourselves**	Keep own property tidy Think before you react Be polite	Tell a teacher if you see/hear something wrong Have fun with other children	Good sitting & listening Stay Focused Ignore distractions	Eat tidily Try new foods Use 'please' and 'thank you'	Listen to adults Keep your eyes on where you are going	Wash and dry hands after using toilet Be as quick as possible	Listen carefully Work hard/try your best Ignore distractions Get involved/have a go
Parchwch ei gilydd **Respect Each Other**	Open doors Walk sensibly Walk on the left Use a quiet voice	Play sensibly Include others Share equipment	Do not distract others Respect personal space of others	Line up sensibly Use your table manners	Walk safely & sensibly Act sensibly on transport Be interested	Leave the toilets as you expect to find them Make sure the toilet flushes after use	Listen carefully to others Help others when asked Let others learn
Parchwch ein hysgol **Respect Our School**	Keep tidy Look after displays Close doors quietly	Put litter in the bins Use outdoor furniture and equipment properly	Come in and leave quietly Applaud sensibly Take part in the service	Use a quiet voice Clean up after yourself Scrape and stack your tray	Show our school in a good light Show respect for the general public	Make sure you use the taps carefully Keep toilets clean and tidy	Keep the classroom clean and tidy Only use equipment/materials with permission Follow class rules Try your best

Appendix 2

PR4L Interview Questions

Before we begin the interview I would like to remind you that all interviews are anonymous and will be used for research purposes only. You can request a copy of your transcript afterwards. I would also like to ask you to be completely honest throughout as this is a great opportunity for us to learn and explore both what went well, and how researchers can better support schools, in the future. We are not looking for any particular answers to the questions, there are no right or wrongs, we just want to get a greater understanding of your experience and views.

First I'd like to start with you telling me a little bit about your teaching career?

> (How long you have been teaching, where you have taught, what job roles you have held, and about your job role now?)

Next I'd like to talk about the PR4L project in your school. What are your thoughts on the project?

(Was it successful? Was it useful? Has pupil behaviour changed? Has staff behaviour changed? Did you like it? Will it stick? Have your feelings about it changed over time? What, if anything, did you change in your classroom, school, or behaviour policy due to being part of the PR4L project?)

What were the main things that you feel helped your school implement PR4L?

What were the main barriers to your school implementing PR4L?

(FOLLOW UP: The literature on SWPBS indicates some barriers and facilitators that we haven't discussed yet. Could you tell me your thoughts on whether any of these factors positively or negatively effected PR4L in your school? Leadership team support, Staff buy in/staff consensus, Competing initiatives, time/workload, reward systems, philosophical differences/school culture.

Do you intend to keep using PR4L in September? (In whole? In part?)

Appendix 3

Teacher Social Validity Questionnaire

1. I believe specific praise helps the pupils in my class

Strongly Agree Agree Disagree Strongly Disagree

2. I would recommend to other teachers to use specific praise to assist them with pupil behaviours in their class

Strongly Agree Agree Disagree Strongly Disagree

3. I will continue to use specific praise in the future

Strongly Agree Agree Disagree Strongly Disagree

4. The feedback session was useful

Strongly Agree Agree Disagree Strongly Disagree

5. The feedback session took too much of my time

Strongly Agree Agree Disagree Strongly Disagree

3 Warnings per activity

Appendix 4

Blue House First Floor
Daily Recording Sheet

Name:	*Day/Date:*	*Week no.:*

Time	Activity	1	2	3	4	Total	Staff
1	Together Time						
2	PATHS Time						
3	Job Time 1 – Literacy						
4	Choice Time						
5	Outdoor Play						
6	Snack						
7	Job Time 2 - Numeracy						
8	**Choice Time**						
9	Outdoor Play						
10	Lunch						
11	L4L						
12	Group Time						
13	Job Time 3 – Topic						
14	Outdoor Play						
15	**Choice Time**						
Total Ticks: **Total Percentage:**						**/60**	

Set Goals:
1: Completes activity (achieve your best)
2: Uses respectful language & gestures (no threats & no aggression)
3: Follows instructions (compliance & completing work: staff discretion allowed)
4: Stay in the area (right place, right time)