Attachment Aware Schools: The impact of a targeted and collaborative intervention

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The Attachment Aware Schools (AAS) project was a targeted and collaborative intervention between academics and school-based practitioners. The aim of the project was to promote practitioner awareness of attachment in relation to child behaviours and learning. It focused on using relational-based strategies and interventions to address the needs of children and young people. The AAS framework promoted Emotion Coaching as a universal, relational-based practice approach, with specialised targeted support for children with additional needs. Supportive managerial strategies and setting policies sustained the integration and maintenance of attachment-informed practice and school ethos. This article reports the findings from the project which included over 200 participants (107 teaching and support staff and 94 pupils aged 5 to 16 years), from 40 schools, in two different Local Authorities within the UK. Adopting a mixed methods approach, qualitative and quantitative data provided hard and soft indicators of improved pupil and adult outcomes. Findings demonstrated significant improvements in pupils' academic achievement in reading, writing and maths. There were significant decreases in sanctions, exclusions and overall difficulties. Practitioners reported a positive impact on professional practice, adult self-regulation and emotional self-control, and were more confident when talking with children about emotions. This project contributes to the growing evidence based on the effectiveness of whole school attachment-based strategies and is already demonstrating policy implications at a national level.

Keywords: Attachment Aware Schools, Emotion Coaching, Emotional wellbeing, Mental Health, Behaviour, Relationships

Introduction

For emotional and psychological good health, a child needs to have secure attachments with their main significant adult or adults in their life, and experience environments that provide consistent and warm relationships (Bowlby, 1988). Attachment is fostered through adult attunement – where the emotional and physiological states of a child are the focus of attention and the driver of response (Trevarthen, 2011). Attunement promotes a child's sense of 'felt' security, enabling them to develop positive mental representations of the self and others. This guides their thoughts, feelings and behaviour and, through co-regulation, teaches coping strategies when distressed (Sroufe, 1995). Secure attachments support mental processes that enable the child to regulate emotions, reduce fear, attune to others, have self-understanding and insight, empathy for others and appropriate moral reasoning (Schore, 2001; Sroufe & Siegel, 2011).

Traditional Attachment theory has been challenged and subsequent adaptions have led to a less deficit stance and the promotion of a broader interpretation of attachment figures

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(Slater, 2007; Riley, 2009). It has been critiqued by feminists and sociologists for pathologizing mothers and focusing too much on the 'psychological at the expense of socio-economic factors' (Duschinsky et al., 2015, p. 173). Attachment-based interventions have been criticised for 'catch-all' explanations that over-interpret the impact of attachments, ignore other influences on children's development and avoid addressing societal issues, for example, community engagement, social identity and agency (Parker and Levinson, 2018; Smith et al., 2017). Nonetheless, attachment theory is one of the most well established theoretical frameworks in developmental and clinical psychology, with a wealth of supporting evidence (Sroufe and Siegel, 2011; Holmes, 2014).

There is, however, a dearth of attachment research in relation to education (Bergin & Bergin, 2009; Kennedy, 2008; Riley, 2009). Since pioneering work by Pianta (1992), research has linked attachment theory to teacher-child relationships, and related secure attachment to school-readiness and school success (Commodari, 2013; Geddes, 2006). Attachment issues influence children's relationships with peers, teachers and support staff, with securely attached children more likely to attain higher academic grades, have greater emotional regulation, social competence, willingness to take on challenges and have lower levels of delinquency (Bergin and Bergin, 2009).

Smyth (2007, p.227-8) declared 'what is required to keep young people in schools, switched on, tuned in and learning in meaningful ways, are … trusting and respectful relationships'. Positive relationships with adults in schools enable children to function effectively (Martin and Dowson, 2009). Teacher-pupil relationships become more influential as pupils get older and are particularly important for children deemed academically at risk (Commodari, 2013; Roorda et al., 2011). Indeed, Riley (2009, p. 626) considers that the application of attachment principles to the dyadic teacher-pupil relationship 'offers teachers new ways to inform and improve their practice'. Riley (2009) and Kennedy and Kennedy (2004) cite evidence which shows how children will form 'bonds' with significant adults outside of the family, such as teachers, who can become 'attachment figures' to pupils. Close and supportive relationships with teachers have demonstrated the potential to mitigate the risk of negative outcomes for pupils who may otherwise have difficulty succeeding in school (Driscoll and Pianta, 2010).

The consideration of attachment theory for the relational dyad between teacher and pupil can be extended to the wider school community. Secure attachment to school, referred to as school bonding, encompasses a sense of belonging to the school and the community within it (Bergin and Bergin, 2009). Smith (2006) discusses how attachment to school affects the degree of pupils' commitment to and engagement with schooling. Strong or secure attachments reflect a sense of value and purpose in school, whilst weak or insecure attachments reflect scepticism, indifference and/or hostility towards school. In addition, consideration of the wider family and developing trust with parents has been shown to have a significant effect on children's educational achievement and behaviour (Desforges and Abouchaar, 2003; Strier and Katz, 2016).

Currently in schools in England, teachers have a duty to promote good progress and outcomes for their pupils within an environment of mutual respect (Department for Education, 2011). In addition, new guidance for training teachers notes that trainees must

be taught the importance of emotional development and attachment issues in order to promote students' progress (Department for Education, 2016). Despite this, relationships are still predominantly addressed through non-statutory frameworks, curriculum support and interventions. Schools find it challenging to translate and adapt individual social and emotional learning programmes into whole school approaches (Department for Education, 2010; Humphrey et al., 2013; Jennings and Greenberg, 2009). Progress and integration are hindered by curricular frameworks not having the full support of all staff (Roffey, 2010), insufficient training provided to implement the goals (Murray-Harvey, 2010) and, critically, curricular frameworks not addressing the central role of pupil-teacher relationships (McLaughlin and Clarke, 2010).

Kennedy and Kennedy (2004) also draw attention to the evidence suggesting teachers may misinterpret insecurely attached pupils' behaviour as uncooperative, aggressive, demanding, impulsive, withdrawn, reactive and/or unpredictable. Judgments of the pupil's behavioural manifestations, which may be a reflection of underlying interpersonal inner experiences and intrapersonal relationship-history, detrimentally affect teachers' attitudes and responses to behaviour. It is suggested that teachers need greater understanding of the complexity of meaning in behavioural displays to better recognise pupils' potential needs (Kennedy, 2008). This is a necessity given that it is estimated that at least one third of children have an insecure attachment with at least one caregiver, which can affect school performance and behaviour (Bergin and Bergin, 2009).

Roffey (2010) identified that for successful implementation and integration of intervention programmes, the symbiotic relationship between the two educational systems, the school culture and climate and the social and emotional curriculum for pupils, must be recognised and addressed. Moreover, there is now a sound rationale for interventions that work with the brain, mind and body to support children's emotional and social learning (Cozolino, 2013; Immordino-Yang, 2011, 2016). Therefore, the Attachment Aware Schools model (AAS), and the application of holistic attachment-based strategies/interventions, are modelled on providing a nurturing environment and appropriate attachment-like relationships with pupils.

Attachment Aware Schools Rationale

The AAS framework operates on principles of joined-up thinking and interagency collaboration firmly endorsing the concept of 'the team around the child' and community-wide collaboration (Trodd & Chivers, 2011). It draws upon preliminary findings (Parker et al., 2016) and the contributions of the participating schools, as well as relevant literature in the field regarding educational change (Fullan, 2006).

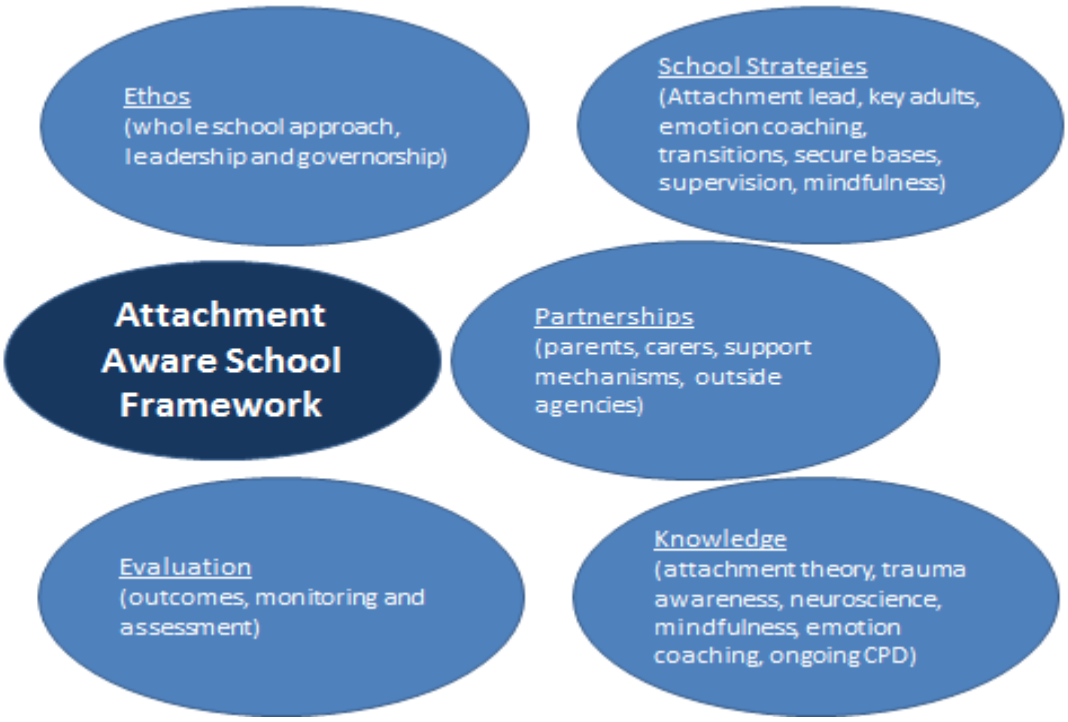
The AAS project aimed to:

1. Develop a sustainable and replicable training programme promoting the importance of attachment, attunement and trauma-informed practice, along with accompanying strategies and interventions that support pupils, particularly more vulnerable groups.
2. Explore the effectiveness of attachment-based interventions which address the particular needs of pupils, including more vulnerable groups, to enable them to develop their potential.

3. Improve the behaviour and well-being of pupils, particularly vulnerable groups, to reduce the attainment gap, improve attendance and reduce exclusions.
4. Create an evidence-base of hard and soft indicators of improved outcomes from the AAS model via a mixed method research evaluation.

The AAS framework (see model below) comprised of key elements to support effective implementation, such as school ethos, specific training packages promoting identifiable strategies, collaborative partnerships with the wider community and building an evidence base of practice. Preliminary pilot research findings have shown positive results (Rose et al., 2015; Rose et al., 2017).

Figure 1: The Attachment Aware Schools (AAS) Framework



Materials and Methods

The research is drawn from two pilot studies carried out over a period of two years in two different Local Authorities within the UK. Ethical considerations and funding limitations precluded detailed consideration of contextual difference and the adoption of Randomised Control Trials (RCTs). However, a mixed methods design generated both quantitative and qualitative data (using NVivo and thematic analysis) as indices of effectiveness (Johnson & Christensen, 2012; Mertens, 2010). Over 200 participants were recruited from 40 schools in two different Local Authorities within the UK. This involved practitioners (teachers and school support staff) (n = 107 for full data sets) and case study children ranging from 5 to 16 years (n = 94 for full data sets).

The model comprised a training phase and an action research phase. The training phase incorporated a series of workshops outlining the AAS model, providing knowledge and understanding of maturational neuroscientific and physiological processes, and attachment theory, strategies and interventions. AAS strategies and interventions included whole school use of Emotion Coaching, which was adopted by all participating schools (Gottman et al., 1997; Rose et al., 2015), and targeted interventions such as Nurture Group provision (Boxall, 1976) and Theraplay (Booth and Jernberg, 2010). Suitable caution was given to the fact that neuro-education is a new multi-disciplinary field which is still developing a recognisable and transferable shared language. Therefore, the training took into consideration potential pedagogical confusion from naïve translation of scientific research and highlighted so-called 'neuromyths' about the brain (Howard-Jones, 2014; Rose and Abi-Rached, 2013).

Over a one-year period, participants adopted an action research approach, implementing and adapting AAS strategies and interventions into everyday practice contexts. At setting-based network/ booster meetings additional research team input was given. This covered: support to report progress, clarifying application of the strategies/interventions, exploring the complexities and challenges of adopting attachment-based strategies. The action research incorporated the tracking of selected case study pupils deemed to be 'at risk' e.g. Social Emotional and Mental Health (SEMH) difficulties, Looked After and Pupil Premium pupils, to ascertain impact.

Both pupil outcomes and practitioner outcomes were assessed using a variety of tools.

Part 1 of the assessment focused on pupil outcomes and included both academic and behavioural indices. Academic progress was monitored through achievements in reading, writing and maths. Practitioners assessed behaviour using the Strength and Difficulties Questionnaire (SDQ). This focused on pupils' emotional symptoms, conduct problems, inattention, peer relationship problems and pro-social behaviour (Goodman, 1997). The numbers of pupil exclusions and sanctions were also recorded. Psychometric properties of the SDQ were explored by revealing generally satisfactory reliability with respect to internal consistency (mean Cronbach a = .73), cross-informant correlation (mean = 0.34), and retest stability after 4 to 6 months (mean: 0.62) (Goodman, 2001). Progress data on student academic achievement (reading, writing, maths) and improvements behaviour indices (exclusions, sanctions and difficulties) were explored before the intervention at the end of terms 1-2 (Time 1) and after the intervention at the end of terms 3-5 (Time 2) with the aim to explore pre- and post-intervention differences. For categorical data (expected academic achievement levels) chi square was used to explore pre- and post-differences according to observed and expected frequencies (Ferguson and Takane, 1989) using Excel. For interval data (exclusions, sanctions, SDQ scores) t-tests were used to explore mean differences (Coolican, 2009), using Excel. All summary statistics and data visualisations were produced by Excel.

Part 2 of the assessment focused on practitioner outcomes based on a post-intervention staff exit questionnaire - to assess additional feedback from participants regarding impact on professional practice, adult self-regulation and behavioural impact including challenges of implementation. The items compiled in the Exit Questionnaire were derived from claims made by the participants about the use of strategies and interventions during the group discussions (Johnson and Christensen, 2012). Data also included an online record of

incidents where strategies/interventions were utilized with practitioner commentary on outcome and effectiveness.

Ethical protocols, including informed consent, were upheld in accordance with the authors' institutional research ethics regulations, British Educational Research Association (2011) and British Psychological Society (2014) ethics guidance.

Results

Pupils demonstrated significant improvements in academic achievement in reading, writing and maths. Practitioners reported a positive impact on pupil behaviour with a significant decrease in sanctions and exclusions and in overall difficulties as measured by the SDQ (Goodman, 1997).

The practitioner exit questionnaire data demonstrated a positive impact on their own professional practice, adult self-regulation and self-control of emotions, and thus their own wellbeing, and increased confidence when discussing pupils' emotional wellbeing.

Detailed findings in the form of figures, statements and illustrative quotes are reported below. Part 1 presents findings largely related to pupil outcomes and Part 2 relates to the impact on practitioners.

Part 1 Pupil outcomes

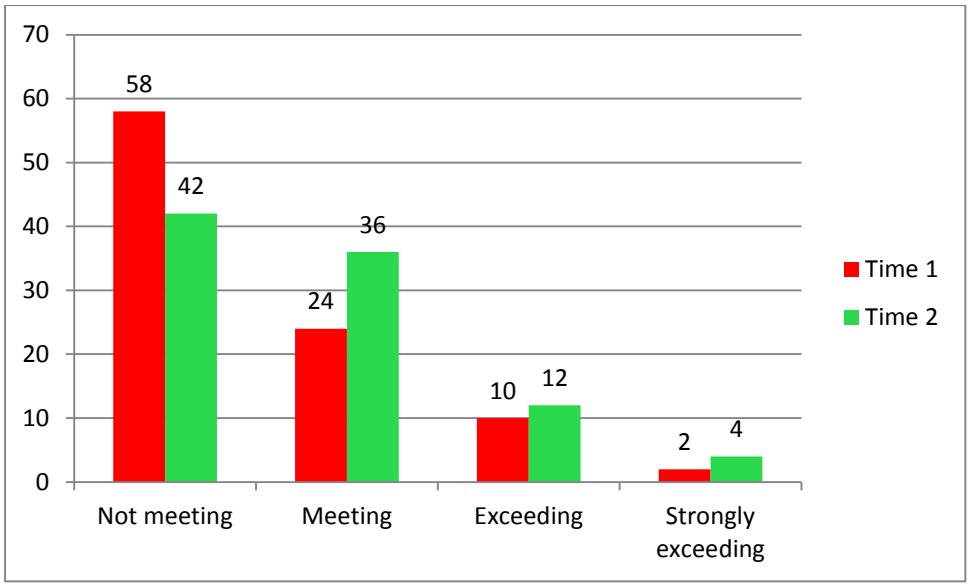
1.1. Academic outcomes

Academic achievements including reading, writing, and maths were tracked at both Time 1 (end of terms 1-2) and Time 2 (end of terms 3-5) to explore for differences. To assess for changes in pupil academic outcomes, goodness of fit chi square was used to assess for differences in the number of students not meeting and attaining (meeting, exceeding and strongly exceeding) expected achievements in reading, writing and maths using Excel. There was a significant difference in academic attainment scores in reading, writing and maths beyond expected levels in reading, writing and maths, thereby helping to close the attainment gap.

1.1.1 Reading achievement

Goodness of fit chi square was used to assess for differences in expected and observed reading achievements (not achieving and achieving of which meeting, exceeding and strongly exceeding were categorised). At Time 1 there were 58 pupils not meeting expected achievement in reading and 36 students meeting (24), exceeding (10) or strongly exceeding (2) expectations. At Time 2 there were 42 pupils not meeting expected achievement in reading and 52 students meeting (36), exceeding (12) or strongly exceeding (4) expectations. This difference was statistically significant where $\chi^2 = 6.12$ ($df = 1$), $p < 0.05$ (n = 94), as illustrated in Figure 2. [Insert Figure 2 here]

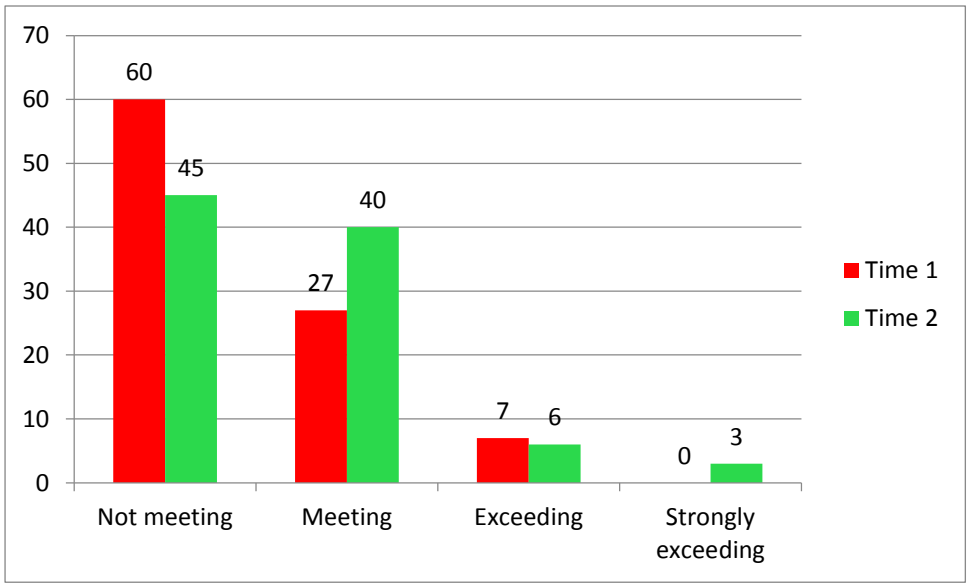
Figure 2: Improvements in reading



1.1.2 Writing achievement

Goodness of fit chi square was used to assess for differences in expected and observed writing achievements (not achieving and achieving of which meeting, exceeding and strongly exceeding were categorised). At Time 1 there were 60 pupils not meeting expected achievement in writing and 34 students meeting (27), exceeding (7) or strongly exceeding (0) expectations. At Time 2 there were 45 pupils not meeting expected achievement in writing and 49 students meeting (40), exceeding (6) or strongly exceeding (3) expectations. This difference was statistically significant where $\chi 2 = 7.36$ (df = 1), $p < 0.05$ (n = 94), as illustrated in Figure 3. [Insert Figure 3 here]

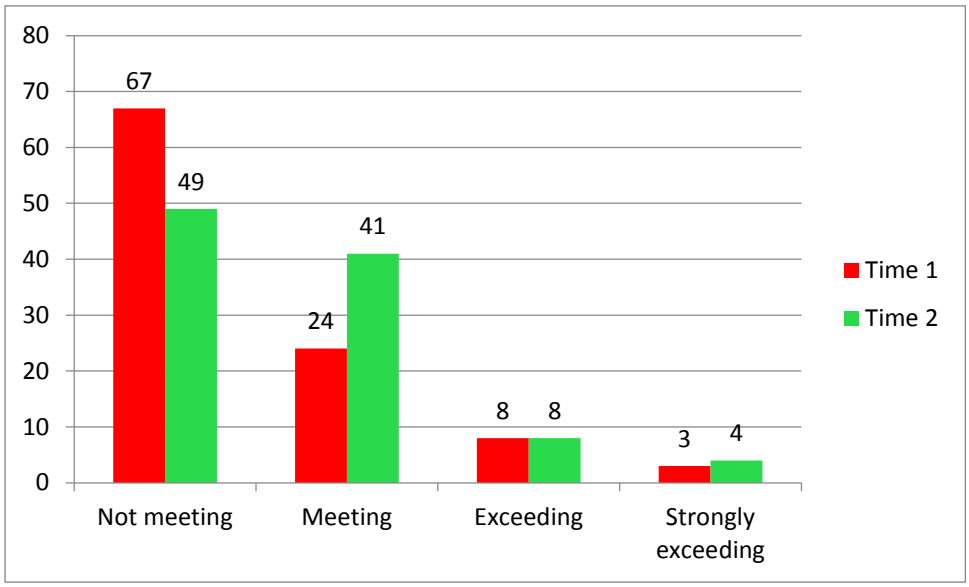
Figure 3: Improvements in writing



1.1.3 Maths achievement

Goodness of fit chi square was used to assess for differences in expected and observed maths achievements (not achieving and achieving of which meeting, exceeding and strongly exceeding were categorised). At Time 1 there were 67 pupils not meeting expected achievement in maths and 35 students meeting (24), exceeding (8) or strongly exceeding (3) expectations. At Time 2 there were 49 pupils not meeting expected achievement in maths and 53 students meeting (41), exceeding (8) or strongly exceeding (4) expectations. This difference was statistically significant where $\chi 2 = 10.19$ ($df = 1$), $p < 0.05$ ($n = 102$), as illustrated in Figure 4. [Insert Figure 4 here]

Figure 4: Improvements in maths



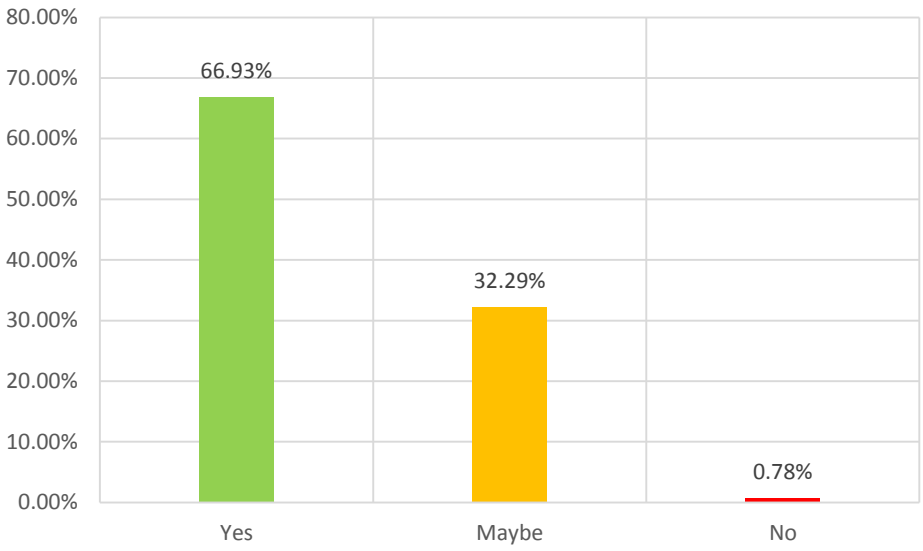
1.2 Behavioural outcomes

In addition to practitioner views on the impact of training on pupil behaviour, repeated measures t-tests were used to explore for differences in behaviour indices (exclusions, sanctions, and overall difficulties assessed by the Strengths and Difficulties Questionnaire) before the intervention at the end of terms 1-2 (Time 1) and after the intervention at the end of terms 3-5 (Time 2), using Excel. All summary statistics and data visualisations were also produced by Excel.

To gain an overall view of practitioner perceptions of the impact of the training on child behaviour, 107 practitioners were asked to indicate whether the training that they received had an impact on child behaviour. In total, 66.93% indicated agreement ('yes'), 32.29% agreed, somewhat ('maybe') and 0.78% disagreed ('no') with statements regarding the impact on child behaviour, as illustrated by figure 5. [Insert Figure 5 here]

1.2.1 Positive impact on behaviour

Figure 5: Percentage reporting a positive impact on pupil behaviour

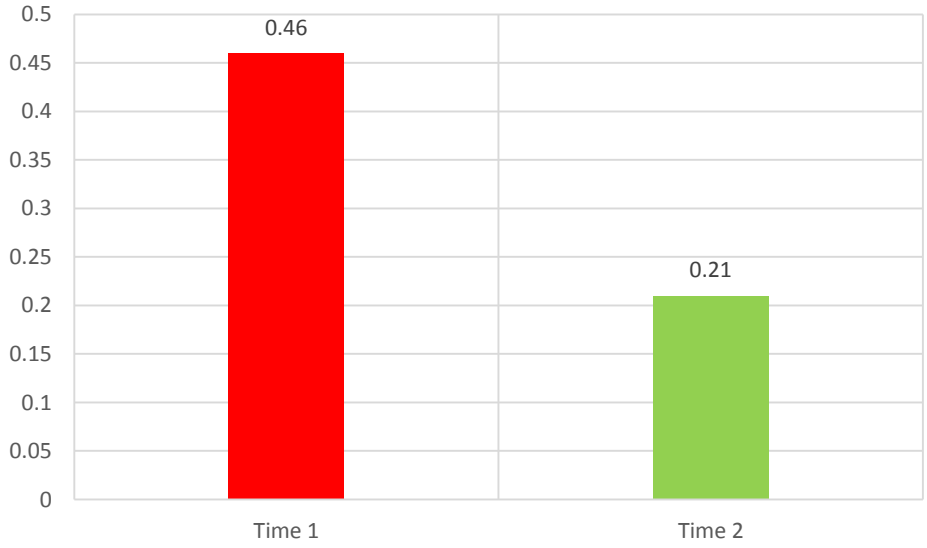


Free text response comments supported these statistical findings and included: *"Pupils learn how to self-regulate and they are able to problem solve more independently in the future"; "It really helps them to calm and improve their behaviour "; "We've noticed it really reduces behavioural incidents; "* and *"Allows pupils to understand their emotions, manage them, self-regulate and learn".*

Repeated measures t-test was used to assess for average changes in exclusions (inside and outside of lessons) from Time 1 to Time 2. There was a significant decrease in the average number of exclusions (inside and outside of lessons) between Time 1 (end of terms 1-2) and Time 2 (end of terms 3-5), where $t = 2.13$ ($df = 82$), $p < 0.05$. At Time 1, the average number of exclusions was 0.46 (SD = 0.11) and Time 2, it was 0.21 (SD = 0.06), as illustrated in figure 6 (n = 83). [Insert figure 6 here]

1.2.2 Impact on exclusions

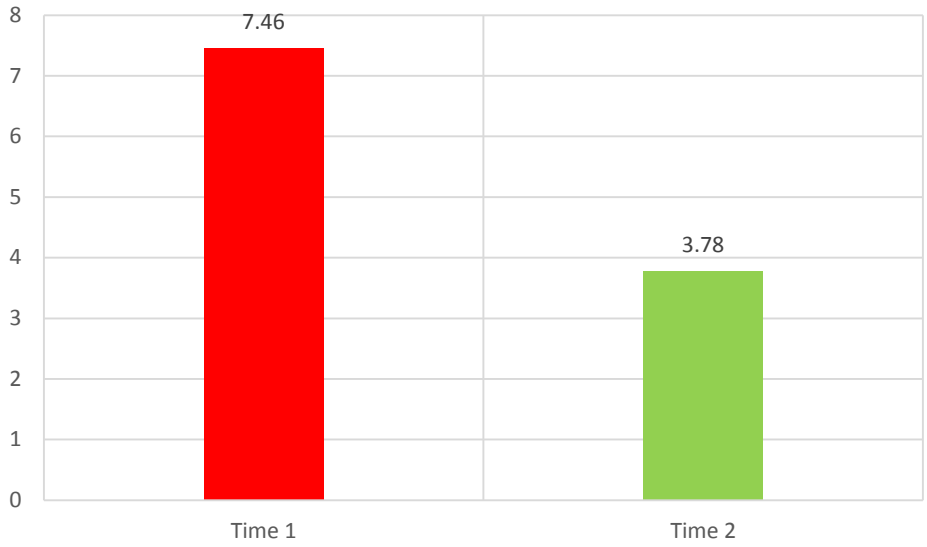
Figure 6: Average difference in exclusions



Repeated measures t-test was used to assess for average changes in sanctions (lessons and incidents) from Time 1 to Time 2. Significant decrease between Time 1 (end of terms 1-2) and Time 2 (end of terms 3-5) in the average number of sanctions, where t = 7.46 (df = 64), p < 0.001. At Time 1, the average number of sanctions at was 7.46 (SD = 1.33) and at Time 2, it was 3.78 (SD = 0.8), as illustrated in Figure 7 (n = 65). [Insert figure 7 here]

1.2.3 Impact on sanctions

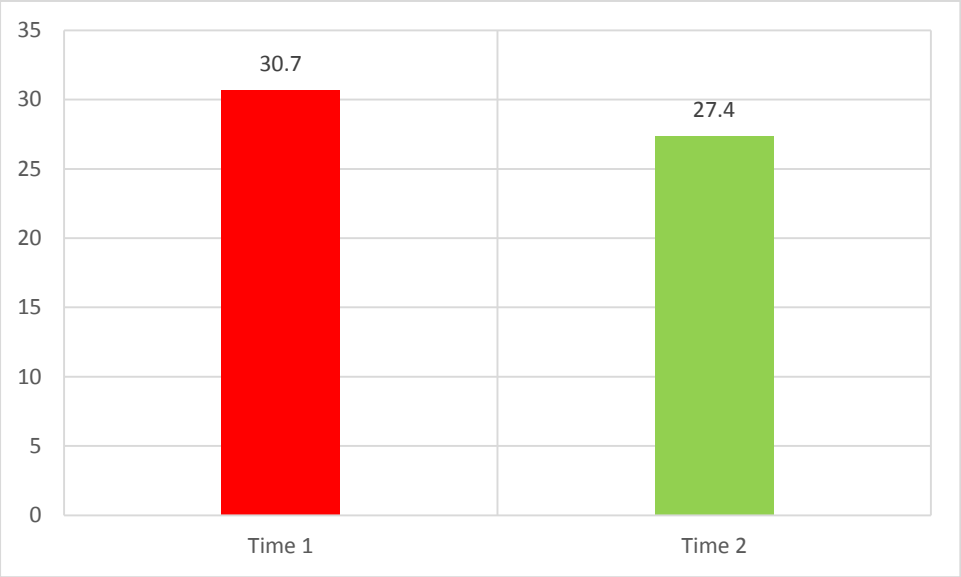
Figure 7: Average difference in sanctions



1.2.4 Impact on Strengths and Difficulties

Repeated measures t-test was used to assess for average differences in difficulties as indicated by the Strengths and Difficulties Questionnaire (Goodman, 1997) from Time 1 to Time 2. Significant decrease in overall difficulties between Time 1 (end of terms 1-2) and Time 2 (end of terms 3-5) as assessed by the SDQ, where $t = 4.53$ ($df = 87$), $p < 0.001$. At Time 1, the mean overall difficulty score at Time 1 was 26.70 (SD = 1.14) and at Time 2, it was 23.59 (SD = 1.37), as illustrated in Figure 9 (n = 88). [Insert Figure 8 here]

Figure 8: Average difference in difficulties as measured by the SDQ



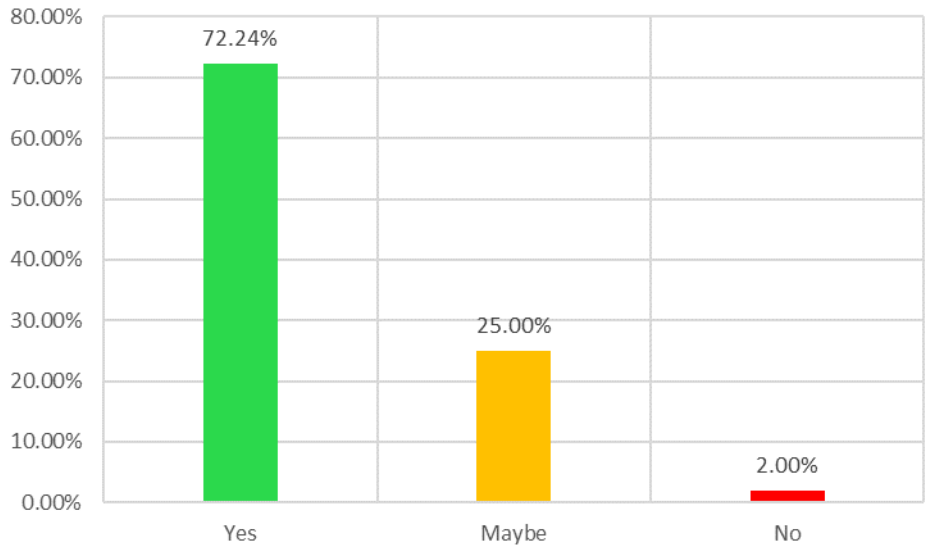
Part 2 Practitioner outcomes

A post-intervention staff exit questionnaire was administered to assess additional feedback from participants regarding impact on professional practice, adult self-regulation and behavioural impact including challenges of implementation. Overall, the vast majority of practitioners were positive regarding the impact of adopting the AAS framework and attachment-based strategies such as Emotion Coaching. Free text responses were taken from the individual staff exit questionnaires and the online incident reporting to support the quantitative indicators. Illustrative quotes were drawn from a range of participants to reflect multiple perspectives.

2.1 Impact on professional practice

In total, 72.24% indicated agreement ('yes'), 25% agreed somewhat ('maybe') and 2% disagreed ('no') that the training had a positive impact on their professional practice (n = 107), as illustrated in Figure 9. [Insert Figure 9 here]

Figure 9: Percentage reporting a positive impact on their professional practice

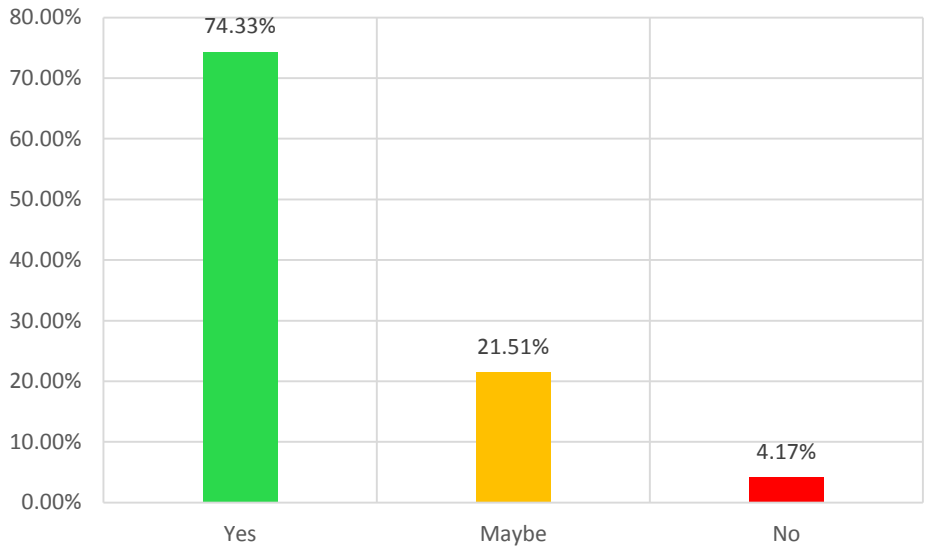


Free text comments by practitioners illustrated how adopting the AAS framework changed their practice: *"It enables a whole school, consistent approach which meets all children's needs"; "It gives staff a consistent approach to behaviour management, allowing interchangeable adults to a situation. Helps de-escalate situations before a crisis occurs"; "Staff are able to help with pupils needs and support emotional well-being and learning"; "It helps to build trusting and strong relationships between pupils and adults"* and *"We are able to manage (behaviour) better without physical interventions*". Indeed, one special school reduced physical interventions by 50 %.

2.2 Impact on adult self-regulation

In total, 74.33% indicated agreement ('yes'), 21.51% agreed somewhat ('maybe') and 4.17% disagreed ('no') that the training had a positive impact on adult self-regulation, as illustrated in figure 10 (n = 107). This referred to adults' ability to regulate their own responses to pupils' behaviour and their general wellbeing. [Insert Figure 10 here]

Figure 10: Percentage reporting a positive impact on adult self-regulation

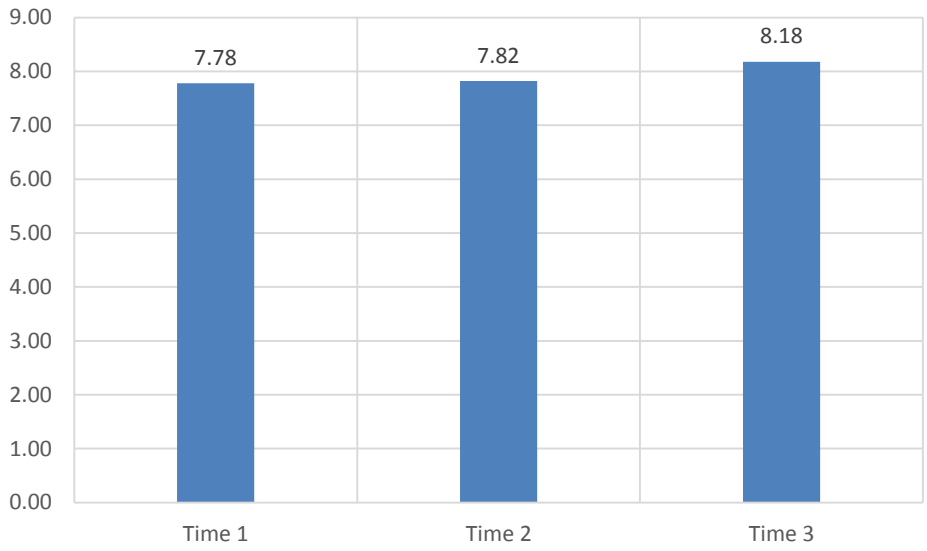


Free text comments by staff indicated how it had affected their sense of managing challenging encounters with pupils and how it changed their ability to self-regulate. Comments included: "*Better able to cope with challenging behaviours"; "Increased empathy and understanding"; "More confident in tackling difficult behaviours"* and *"Calmer and less stressed."*

2.3 Impact on practitioners' self-control

This data set arose from the online reporting of incidents which asked practitioners how they felt in response to the incident which correlate with the data reported in Figure 10 which related to practitioner self-regulation. Practitioners were asked to indicate on a scale from 1-10 how much self-control they felt in respect of their own emotions when dealing with challenging behaviour across three time points (before the intervention, after the intervention and 6 months later). There was evidence of an increase in self-control over time, where the mean at Time 1 was 7.78, the mean at Time 2 was 7.82 and the mean at Time 3 was 8.18 (n = 75), as illustrated in Figure 11. [Insert Figure 11 here]

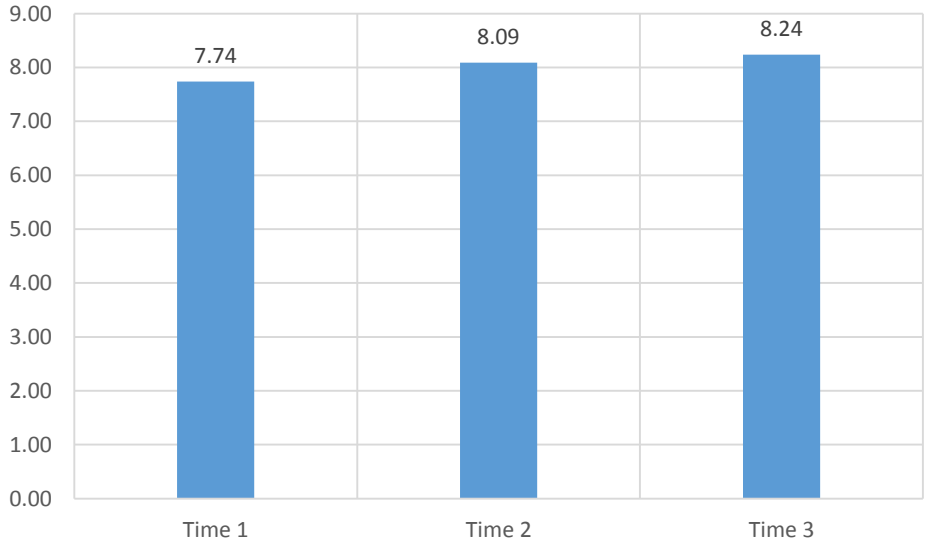
Figure 11: Improved practitioner self-control during incidents



2.4 Impact on practitioners' confidence discussing emotional wellbeing

Practitioners were asked to indicate their level of confidence in discussing pupils' emotional wellbeing with them across three time points (before the intervention, after the intervention and 6 months later). This data set also arose from the online incident reporting and also correlates with the data regarding practitioners' ability to self-regulate and enhance their professional practice in terms of how they engage emotionally with pupils. There was evidence of an increase in confidence on a scale from 1-10 across the three time points, where the mean at Time 1 was 7.74, the mean at Time 2 was 8.09 and the mean at Time 3 was 8.24 (n = 75), as illustrated in Figure 12. [Insert Figure 12 here]

Figure 12: Increased confidence in discussing pupils' emotional wellbeing



Free text responses that illustrate these changes echo those in section 2.2. and included: *"My practice has changed by being more patient and calm in certain situations"; "I feel more confident in dealing with challenging behaviour"; "I feel like I now look at behaviour differently and can respond in a different and better way"; "I am more empathic towards children rather than dismissive of their behaviour"* and *"Adults have better skills to support young people and children".*

Discussion

We summarise and discuss our findings through the framework of the four aims of the AAS project.

Aim 1: Develop a sustainable and replicable training programme promoting the importance of attachment, attunement and trauma-informed practice, along with accompanying strategies and interventions that support children and young people, particularly more vulnerable groups.

The replicability and sustainability of the AAS programme is indicated as over 200 participants from 40 schools in two different Local Authorities initially participated and remained with the AAS programme. Unlike previous curricular frameworks in this area (Murray-Harvey, 2010; McLaughlin and Clarke, 2010; Roffey, 2010), this project was implemented school-wide and received the support of staff. It involved whole-school training and addressed the nature of pupil-teacher relationships. One Head spoke, for example, of *"a shift in whole school practice and policy. We now have a more pupil-centric approach to behaviour management*" and another teacher said: *"We now have a standard approach which is both respectful and emotionally intelligent. This gives all people in the community a sense of being in a nurturing space"*

The AAS training programme has promoted the importance of attachment (Bowlby, 1988), attunement (Trevarthen, 2011) and trauma-informed practice (Sroufe & Siegel, 2011), with practitioners acknowledging that it impacted on their professional practice. The use of strategies and interventions, such as Emotion Coaching (Gottman et al., 1997), has enabled staff to address challenging behaviour. For example, our findings suggest that practitioners felt better-skilled to manage their interactions with pupils during behavioural incidents. As one teacher put it: "*It gave me a light-bulb moment about children I knew in school, the way they behaved and how I responded. From then on, my mind-set started to change."*

Systemic change which operates at multiple levels within the ecosystem of school and wider society are clearly necessary and findings from the project are beginning to influence national policy and professional practice. For example, the AAS programme was officially endorsed by the Government via Statutory guidance documents (e.g. Department for Education, 2018; Sebba et al., 2015) and the National Institute for Clinical Excellence accepted the research recommendations as part of their national Guidelines on Attachment for Education (NICE, 2015). Moreover, an independent evaluation of the AAS study testified to the commitment by senior leaders to effecting whole school engagement in the process (Dingwall and Sebba, 2018a).

It should be noted, however, that practitioners and educational establishments can be overwhelmed by the range of social and emotional learning (SEL) policies, strategies and initiatives, leading to 'uncoordinated, piecemeal and incomplete' implementation (Banerjee

et al., 2014, p.718; Department for Education, 2011). A lack of shared understanding and expectations within educational settings, and poorly co-ordinated leadership from setting level to government, can diminish impact and act as a barrier to sustainability (Pearson et al., 2015). In addition, the UK Government has moved from universal to targeted support with accompanying reduction in funding (Hutchings, 2015; Thorley, 2016). These cutbacks have occurred at a time when mental health issues appear to have risen significantly and schools are increasingly having to deal with such issues (Thorley, 2016).

Despite these pressures, the AAS project appears to offer a relatively low cost and implementable vehicle for supporting both pupil and practitioner progress, behaviour and wellbeing. Whilst resources may be scarce, adoption of attachment-based strategies may well be cost-effective in the longer term. As one participating Headteacher put it: *"Even if we were to express it in terms of crude economics, (and it is about far more than that), there is no way a school can afford not to be doing this work. These children place demands on the school system which, if not properly addressed, far outweigh the demands of learning to manage and work with them properly".*

Aim 2: Explore the effectiveness of attachment-based interventions which address the particular needs of children and young people, including more vulnerable groups, to enable them to develop their potential

Children more securely attached are more likely to attain higher grades in school (Kennedy, 2008). However, access to secure attachment-based relationships with significant others can also mitigate insecure attachments and negative outcomes. Implementation of AAS strategies and interventions coincided with statistically significant improvements in pupils' reading, writing and maths. More pupils met, exceeded or strongly exceeded their expected achievement, thus helping to close the attainment gap (see also Gus et al., 2017). The instrument used to assess strengths and difficulties experienced by case study pupils revealed a significant reduction in symptoms of, in particular, hyperactivity and overall difficulties. 'Hyperactivity/inattention' and 'overall difficulties' are subscales of Goodman's (1997) Strengths and Difficulties Questionnaire.

The utilisation of Emotion Coaching as an attachment based strategy was the main, universal strategy adopted by all participating schools and appears to have been particularly effective, correlating with similar research elsewhere (Gottman, 1997; Rose et al., 2015; Gus et al., 2017). Adoption of emotion coaching practice also appears to have contributed to staff well-being. Emotion Coaching helped adults to maintain calm in the face of challenging situations, reduced adult stress and helped adults to accept pupils' emotional experiences with increased empathy (see also Gilbert, 2018).

However, some caution is needed here. There are concerns about the proliferation of 'psycho-emotional interventions' (Bialostok and Aronson, 2016; Ecclestone, 2017). It has been muted that promoting a therapeutic-style education focuses too much on the detrimental and is disempowering rather than nurturing and enabling (Ecclestone and Brunila, 2015; Furedi, 2014). For some children, particularly those whose lives may be fraught with social and economic challenges, the forced attention can lead to introspection, excessive rumination and a sense of helplessness (Dweck, 2007, Furedi, 2014). Attachment-based interventions, particularly if inappropriately applied, may thus be counter-productive.

Nonetheless, a quote from a Deputy Head from a primary school illustrates the perceived effectiveness of an AAS approach: *"We had a number of children with needs that we just found hard to identify until we started to apply attachment theory thinking. And it just unlocked these children and made us able to understand what was going on with far greater clarity. As a result we got to make much more progress with them."*

Aim 3: Improve the behaviour and well-being of children and young people, particularly vulnerable groups, to reduce the attainment gap, improve attendance and reduce exclusions

Bergin and Bergin (2009) assert that securely attached children have greater emotional wellbeing and lower levels of delinquency. The results from this study noted a significant decrease in exclusions, sanctions and overall difficulties as measured by the SDQ (Goodman, 1997). The AAS framework has fostered more positive pupil-practitioner relationships resulting in improved behaviour and wellbeing, with two thirds of practitioners reporting that the project had a positive impact on pupil behaviour. Indeed, in terms of the impact on the pupils regarding the behavioural indices, there was a significant decrease in exclusions (inside and outside of classroom), with an accompanying significant reduction in the need to apply sanctions. As one Head noted: *"There's a more unified approach to how we respond to children's behaviour. It's changed people's mind-set about understanding the emotions behind behaviour and how they see children".*

The changes seen in pupils' academic achievement and improved behavioural outcomes concur with Martin and Dowson (2009) and Smyth (2007), who reported that good pupil-teacher relationships enable children to better engage in school and function more effectively. Kennedy and Kennedy (2004) state that insecurely attached children's behaviour can be misinterpreted resulting in teachers' responses exacerbating rather than improving outcomes. Whether this was occurring prior to implementation of the project is unknown. However, practitioners report that the programme enabled them to change their behaviour in relation to pupils' misbehaviour. This resulted in an increased confidence when discussing pupils' emotions, and pupils and staff reported improved reciprocal relationships. This impact was described by one participant as follows; "*It's had an influence on the whole school, making us more sensitive to particular needs. We have much more empathy now.*" Over 90 % of participants considered their own well-being and self-control of their own emotions to have improved. Staff also reported improved relationships with parents thus strengthening personal and community 'school bonding' (Bergin and Bergin, 2009). The way in which the project fostered parental engagement and improved relationships between home and school is documented elsewhere (Rose et al., 2017).

Aim 4: Create an evidence-base of hard and soft indicators of improved outcomes from the Attachment Aware Schools model via a robust, mixed method research evaluation.

The data presented here offer the beginning of a credible evidence base for the Attachment Aware Schools programme. A variety of indicators including the standardised SDQ (Goodman, 1997) have been successfully employed and a mixed methods approach adopted, using hard and soft indicators. Data has been collected on pupils, including those deemed vulnerable, and has included both teachers and support staff.

Independent evaluations were undertaken by Oxford University of the Attachment Aware Schools programme. These independent evaluations appear to verify the findings reported here. For example, one report notes 'there is some compelling evidence from schools that the Attachment Aware Schools Programme … had an impact on whole staff understanding of attachment, the meaning behind behaviour and emotional well-being' (Dingwall and Sebba, 2018a, p. 4). Another finding testified to the impact on pupils' wellbeing: 'Impact on pupils' well-being was also evidenced by staff in both the survey and by staff and pupils in the interviews. One factor contributing to this seemed to be providing spaces in which children can calm down and self-regulate, another was having a significant adult in school that the pupil trusted.' (Dingwall and Sebba, 2018a, p. 5). Reference was also made to the commitment by senior leaders to effecting whole school engagement in the process. Yet another independent evaluation report noted 'School staff and pupils described the school environment as having become calmer and more nurturing' (Dingwall and Sebba, 2018b, p. 4). These findings echo those of the pilot study that attachment awareness and attachment-based strategies might have a place in supporting staff and pupils' universal mental health and wellbeing, as well as supporting specialised social, emotional and mental health issues**.**

Limitations of study

A balance is needed between disseminating identifiable positive outcomes, to encourage uptake, with promoting unrealistic expectations of programmes offering a panacea to transform emotional health and wellbeing (Humphrey et al., 2013; Pearson et al., 2015). Therefore, although the AAS findings support the promotion of relational-based practices and contribute to the larger debate on social and emotional learning interventions within educational settings, limitations need to be acknowledged (Banerjee et al., 2014).

Funding restricted the recruitment of control groups or provision to include multiple contexts. Although the study drew from two different Local Authorities, being small in numbers, it lacked cross-cultural and socio-economic representation and was unable to control extraneous variables or clearly identify directional variable influence. No independent observations were made of practitioner practices, and some of the data sets relied on subjective self-reporting (Ogden, 2012), and so are open to social desirability bias (Coolican, 2009).

The qualitative data came largely in the form of statements from participants completing the exit questionnaire and case study material and is relatively limited. Illustrative quotes are presented in this paper as a means to triangulate the quantitative data and provide a more distinct indicator of the participants' voice. However, some reporting of the qualitative data has been published elsewhere (Rose et al., 2017; Gus et al., 2017) which report on parental engagement with the project and their views regarding the impact of the project on their families. A further limitation is the dearth of representation from the perspective of the pupils themselves, again due to funding restrictions. Nonetheless, two preliminary projects that followed a similar model as the AAS pilot study did manage to ascertain some aspects of the pupil experience and are reported in Parker et al. (2016) and Rose et al. (2015).

Conclusion

There is still relatively little empirical research on the effectiveness of attachment-based school strategies for meeting children's attachment needs, and the implications of whole school strategies (Bergin and Bergin, 2009; Kennedy and Kennedy, 2004; Kennedy, 2008; Riley, 2009). However, our research is helping to close this gap and these findings correlate with earlier pilot studies (Parker et al., 2016) and with some independent evaluations (Dingwall and Sebba, 2018a and 2018b; Fancourt and Sebba, 2018). The Attachment Aware Programme addresses many of the gaps identified in current provision; it is a whole school approach as advocated by Roffey (2010) involving the training of all staff in appropriate interventions and strategies to support social, emotional and behavioural development (Murray-Harvey, 2010); it involves current knowledge and understanding related to neuroscience and children's social and emotional development and learning (Cozolino, 2013; Immordino-Yang, 2011); and it places the pupil-teacher relationship at the heart of the programme (McLaughlin and Clarke, 2010). Although this project has already been extended into Phase 2, further research is needed to resolve the limitations of these pilot studies.

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