Comparing nurture group provision with one-to-one counselling

What characteristics and evidence-based components produce positive change?

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ABSTRACT

Although several non-randomised case studies have shown that nurture groups have a positive impact under trial conditions, the outcomes of nurture group provision have yet to be compared with any other psychosocial interventions. By comparing teacher-completed SDQ (Strengths and Difficulties Questionnaire) scores pre- and post- provision with another in-school psychosocial intervention for children with social, emotional and behavioural difficulties (SEBD), in-school one-to-one counselling facilitated by Place2Be, this paper compares the variables that produce change in each provision. Using a Boolean approach, the study concluded that at least 20 per cent of students' SDQ scores could improve into a low-risk category after three terms if they attended a provision that is (a) underpinned by attachment theory and has the facilitator(s) build affective bonds with the student; (b) has the facilitator(s) see the student every week throughout one academic year in school; and (c) has at least one session per week (although the indications are that a more frequent provision increases the chances of more students changing to a low-risk category). The study also seeks to identify how nurture groups are unique when compared with other psychosocial interventions including: (1) the high frequency of provision; (2) facilitating positive modelling with two practitioners; (3) the use of the nurture group space as a hybrid of home and school environments; and (4) the involvement of all interpersonal systems (parents/teachers/peers) as part of the provision.

Need for study

Although it is clear from several non-randomised controlled trials that nurture groups as a child mental health treatment have an impact under trial conditions (Cooper, Arnold and Boyd 2001; Cooper and Whitebread 2007; Reynolds, MacKay and Kearney 2009; Scott and Lee 2009; Seth-Smith et al 2010), the outcomes of nurture group practice have yet to be compared with any other psychosocial interventions. The primary weakness of past case-oriented studies are that they are open to the charge of particularism ('Are these cases typical? Do they embrace the entire range of practice?') (Ragin 1987), and since nurture groups, which total over 1,500 (Colley 2011) in the United Kingdom alone, differ from school to school, a comparative study with common variables shared in all nurture groups can provide an avenue of escape from this criticism.

However, in comparing the outcomes of psychosocial interventions for children and adolescents with conduct problems, several factors need to be highlighted. First is the nature of childhood psychiatric disorders and ways of measuring change: the severity of a child's difficulties are likely to reduce with or without active intervention despite substantial long-term continuity in most types of difficulties. (Tamsin et al 2009). This is partly due to (a) the regression to the mean and (b) the result of spontaneous improvement (YouthinMind 2009). One way to calculate the impact of specialist interventions for children and young people using the SDQ is the 'Added Value Score Formula' that uses data from longitudinal community surveys of young people whose psychiatric disorders have not been treated in specialist settings (YouthinMind 2009). At present, however, the formula can only be applied to parent-completed SDQs and since nurture group research predominantly uses teacher-completed SDQs the impact of nurture group provision cannot be assessed with this Added Value Score. This problem can be overcome in some way by using and comparing the SDQ scores of children attending nurture group provision to that of children and adolescents with social, emotional and behavioural difficulties who remain in their mainstream classroom for over three terms. Second, this paper relies on the Strengths and Difficulties Questionnaire as a means to show clinically significant change (a statistically reliable return to normal functioning). More specifically it uses the arbitrary cut-off point of a 20 per cent improvement in students' scores to a low-risk category as a means of testing the variables of each intervention. As Tamsin et al (2014) warn: 'Cut-off points denoting clinical significance are inevitably arbitrary, a return to normal function is not expected in many children (autism for instance), and this approach may not be appropriate for individuals with comorbid problems (most of those attending child mental health services).' (p.556). This paper uses SDQ outcomes to compare the different psychosocial interventions, but there are many other positive outcomes that could be used in its place (please see recommendations at the end of this paper).

A final point that must be highlighted about comparative studies is that in some circumstances the point of the exercise is not to test provisions against each other but rather to identify the factors common to effective interventions, and to assess the limits and boundaries of each provision via their outcomes. Using Boolean analysis (an explicit algebraic basis for qualitative comparison), the empirical boundaries of the effects of the causal variables of each intervention can be tested. Here it is important to address why the outcomes of a particular psychosocial intervention were chosen, namely, those of one-to-one counselling facilitated by Place2Be (Place2Be 2014). Comparing the results of how widely-available psychosocial interventions in schools are delivered is important for both conceptual and practical reasons. As Wergeland et al (2014) concluded in their effectiveness study of individual vs. group cognitive behavioural therapy for anxiety disorders in youth, group treatment tends to be more cost-effective and offers more opportunities for normalisation, positive peer modelling, reinforcement, social support, and exposure to social situations, whereas individual counselling is likely to offer more opportunities for tailored treatments to address the specific needs of each child or adolescent. Such a comparative study can address what similar evidence-based components and theories are used in both group and individual provisions and what variables result in different outcomes. Each of the three conditions compared in this study – nurture groups, Place2Be and a mainstream comparison group – are broken down into key causal variables that can be identified regarding the characteristics of the provision (though other possible variables can include the ingredients [mediation] of the provision, and the student [moderation] using the provision). The variables of each condition are then compared to those of the others to provide greater context and to highlight the variables that could be used for future comparative research.

The three conditions that are compared in this paper are therefore the following:

Condition A: Nurture Groups

Nurture groups aim to improve a child or young person's detrimental cognitive, affective or behavioural styles through an in-school, teacher-led psychosocial intervention in a small group of their peers (from six to 12 students). Underpinned by attachment theory, nurture groups are facilitated by two members of teaching staff, run for at least 12.5 hours a week (average of five mornings a week of provision as determined by a 2014 study of 100 nurture groups (Scott Loinaz,2014)) and for an average of three terms. Marjorie Boxall's nurture groups, first established in the Inner London Education Authority (ILEA) in 1969, were developed from the intuitive understanding that some students need extra help for them to progress to the emotional maturity and social competence required for the mainstream classroom (Boxall 2013). Underpinned by John Bowlby's (1968) attachment theory, Boxall believed that it was possible to replace 'missing or distorted' early nurturing experiences by immersing students in accepting and warm environments to develop positive relationships with staff and their peers. There are currently over 1,500 primary and secondary schools with a nurture group in the United Kingdom (Colley 2011).

Condition B: Place2Be

Place2Be aims to improve a child or young person's detrimental cognitive, affective or behavioural styles through in-school one-to-one counselling with weekly 80-minute long sessions for an average of three terms. The counselling sessions are run by volunteer counsellors. Though Place2Be offers other services – such as Place2Talk, a self-referral service, Place2Think, a service for school staff, and short-term group work for students – the outcomes used for this paper are from their one-to-one counselling service only. Place2Be originates from a Family Service Unit (FSU) project in Southwark, London in the early 1990s, and now provides mental health services to over 230 primary and secondary schools in the United Kingdom (Place2Be 2014).

Condition C: Mainstream comparisons

A child or young person's detrimental cognitive, affective or behavioural styles may improve with time by remaining in the mainstream classroom and receiving only the standard interventions offered there.

Literature review

The causal variables of effective evidence-based psychosocial interventions have been extensively researched. For this literature review, searches of peer-reviewed, English language journal articles were conducted in the following electronic databases: Academic Search Premier, PsycInfo, PsycArticles, Medline, CINAHL, ERIC and Education Research Complete. The search terms used were: 'psychosocial intervention' 'psychosocial treatments', 'evidence-based psychosocial treatments', 'treatments for conduct-disordered children and adolescents', 'interventions for conduct-disordered children and adolescents', 'treatments for children and adolescents with disruptive behaviour' and 'interventions for children and adolescents with disruptive behaviour'. There were no restrictions applied in regards to publication date or place of publication and conduct problem was defined as any behaviour that is listed in the ICD-10 (World Health Organisation 1992) or a problem description such as temper tantrums, disruptive classroom behaviour or delinquency.

The literature review generated five outcome reviews of treatment for conduct problem children: Kendall (1993), Breston and Eyberg (1998), Murphy (2005), Cohen and Manarinno (2006) and Garland et al (2008) which yielded a total of 116 studies investigating treatment outcomes with conduct-disordered children or adolescents. The characteristics of effective psychosocial interventions were discussed in Brestan and Eyberg's (1998) review which combined a total of 82 studies (5,272 students in total) to find that the most common psychosocial treatments for conduct-disordered child and adolescents was an intervention held in-school (43%), for a group of eight to 12 students (51%), facilitated by teaching/support staff (40.5%) and using cognitive behavioural therapy components (75.7%). A similar summary was possible in terms of the components and strategies that were used in 34 evidence-based psychosocial interventions from four reviews – Kendall (1993) for children and young adults exhibiting aggressive behaviour, anxiety, depression or ADHD symptoms; Murphy (2005) for teenagers with ADHD; Cohen and Manarinno (2006) for children and adolescents exposed to maltreatment and violence; and

Garland et al (2008) for children aged four to 13 with disruptive behaviour problems. A summary of the effective evidence-based components in psychosocial interventions are summarised in **Table 1**.

The literature highlighted three groups of children and adolescents that are likely to improve in social and emotional functioning in psychosocial interventions: students with externalising behaviour, students with internalising behaviour and disadvantaged students.

Students exhibiting externalising behaviour (aggression, conduct disorders, oppositional defiant disorder, attention deficit/hyperactivity disorder)

Interventions are needed for students with aggressive behaviour due to its substantial stability into adulthood, and its tendency to put students at a significant risk of subsequent substance abuse, delinquency and school failure (Kendall 1993). Externalising behaviour and conduct disorders are likely to evince 'deficits and distortions in cognitive problem-solving skills, attributions of hostile intent to others, and resentment and suspiciousness.' (Kazdin 1997, p.162). These cognitive features result in diminished social skills, higher levels of social rejection and academic deficiencies (low grades, dropping out of school and expulsion). School-based anger coping programmes have been shown to work in the short and long-term, with aggressive boys in a three-year follow-up study maintaining 'significant improvements in self-esteem and social problem-solving skills and a markedly lower substance use rate than did untreated aggressive boys.' (Kendall 1993, p.238).

Behavioural/self-management skills have been effective in teaching students with ADHD to manage their symptoms and cope with the challenges that the disorder presents across their lifespan, including having explicitly stated goals and time frames, along with other cognitive strategies to prepare for setbacks (Murphy 2005).

Students exhibiting internalising behaviour (withdrawn, anxiety disorders, depression, social phobia)

Internalising behaviour and anxiety disorders are a prevalent psychopathology that significantly interferes with interpersonal and academic functioning, and just like externalising behaviour, has an unremitting course if not treated (Lansford et al 2002). Psychosocial interventions have been effective in producing clinically and statistically significant reductions in childhood social phobia (Spence et al 2000), anxiety (Lansford et al 2002) and depression (Clarke et al 2001). Cognitive behavioural approaches in particular have proved an effective treatment for childhood and adolescent anxiety disorders in comparison to a waiting list, (Cartwright-Hatton et al 2004; James, Soler, Weatherall 2005), and in treating and preventing depression (Van Zoonen et al 2014).

Disadvantaged students (those whose family, social, or economic circumstances hinder their ability to learn at school)

There is a very urgent need for psychosocial interventions for children and young adults from disadvantaged backgrounds. A longitudinal study conducted by McGloin and Widom (2001) found that only one fifth of abused and neglected youth experienced successful employment, only 50 per cent graduated from secondary school and over half had a psychiatric disorder. Lansford et al (2002) found that students who have experienced maltreatment have lower grades, are absent from school twice as much as their other peers, and are twice as likely to be expelled from school. It is to be noted that children and young adults who grow up in families with parental problems are a large proportion of the global population, 'International estimates indicate that 39 per cent of all children have parents with mental health problems; 40 per cent are affected by domestic violence; and 30 per cent grow up with at least one problem drinking parent' (Skerfving et al 2014, p.2). These figures were evident in a pilot study of 100 nurture groups that found three in five students had suffered significant trauma in their lives (Scott Loinaz 2014). This was also evident in Place2Be's annual report which found that a high number of children seen were coping with difficult circumstances in their home lives: 2.6 per cent of children were looked after by the local authority, 11 per cent were the subject of a child protection plan, just under a quarter (24%) had been involved with social care, nine per cent had been involved with CAMHS, and a further nine per cent with the police and criminal justice system (Place2Be 2013). Psychosocial interventions have been

Table 1 – **Evidence-based components in effective psychosocial treatments for children and adolescents with disruptive behaviour/conduct disorders**

Component/ Strategies	Kendall 1993	Murphy 2005	Cohen and Marino 2006	Garland et al. 2008
Building affective bonds				x
Consensual goal setting		x		x
Modelling	x			x
Coping template/ Positive self-instruction/Cognitive restructuring	x	x	x	x
Rewards	x			x
Role-play exercises/Social skills training	x		x	x
Affective education	x			
In-session curriculum/ Structured tasks	x			x
Homework	x			x
Relaxation techniques			x	x
Parental involvement			x	x
Limit setting				x

effective in reducing the psychosocial dysfunction of disadvantaged students also; in one study caregivers reported reduced levels of psychosocial problems in maltreated students than did students who were randomly assigned to a delayed intervention comparison group three-months post-intervention (Cohen and Mannarino 2006).

Method of study

For a Boolean analysis to be completed a five-step process must be followed:

(**1**) An outcome needs to be identified;
(**2**) The variables need to be identified;
(**3**) Hypothetical Truth Table with the variables and outcome needs to be completed;
(**4**) A Boolean equation must be formulated;
(**5**) An explicit statement of multiple conjunctural causation can be formed.

1 Outcome

The SDQ has 25 questions covering five domains of children's well-being: emotional distress, behavioural difficulties, hyperactivity and attention difficulties, peer problems, and kind and helpful ('prosocial') behaviour. The sum of the first four domains (also called subscales) is the child's 'total difficulties' score. The measure has additional questions – the 'impact supplement' – to assess whether children's level of social impairment and distress may be indicative of a psychiatric disorder. Scores from the impact questions are added together to make a total impact score. The information provided by teaching staff is used to predict how likely a child is to have an emotional, behavioural or concentration problem severe enough to warrant a diagnosis according to classifications in the International Classification of Diseases 10 (ICD-10) or Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). The scores from each SDQ domain, the total difficulties and the total impact can be classified into three diagnostic groupings/clinical categories – 'low risk – normal', 'medium risk – borderline' and 'high risk – abnormal'. The thresholds for each grouping are based on relative level of wellbeing in the child population – about 80 per cent of children are in the normal clinical range, 10 per cent are in the borderline range and 10 per cent are in the abnormal range (Goodman 1997). Overall, there is reasonable agreement between the risk category and what an expert would say after a detailed assessment of a child. Between 25-60 per cent of children who are rated as high risk and 10-15 per cent of medium risk children turn out to have a relevant diagnosis according to experts. Only about 1–4 per cent of low risk children would be given a diagnosis (Goodman and Goodman 2009).

All non-randomised studies on nurture groups that had used teacher-completed SDQ scores were considered for the outcome data of this paper. From these, only the studies that had split the students' scores into normal, borderline and abnormal categories pre- and post- provision were used resulting in a total of two studies with 885 students in total (Cooper, Arnold and Boyd 2001; Cooper and Whitebread 2007). An average of the two studies' SDQ scores were taken for both nurture group students (n=701) and mainstream students (n=159). The students in the mainstream class were matched on age, gender, educational attainment and level of SEBD. Place2Be's SDQ scores were taken from their annual children's outcome report 2011/2012 with a total of 1,764 students. The results pre- and post-provision (3+ terms) for the three groups are shown in Figure One – Table Two highlights the students' scores in the normal range after three terms of provision, and Table Three highlights students' scores in the abnormal range after three terms of provision.

Figure One – **SDQ scores pre- and post-provision for students attending nurture groups, Place2Be one-to-one counselling and mainstream classes after 3 terms of provision**

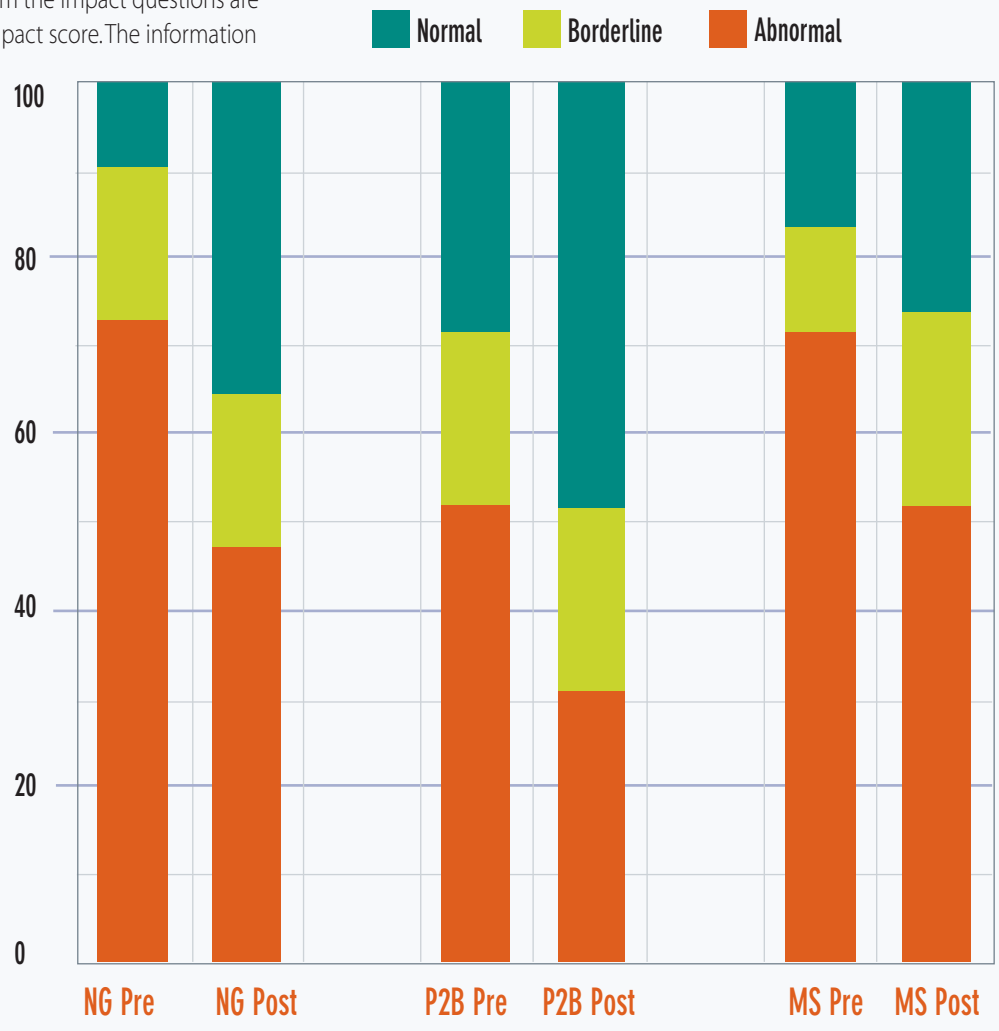

Table Two – **Students' scores in the normal range after 3+ terms of provision**

	Before	After	Improvement
Nurture Groups	**10%**	**35.2%**	**25.2%**
Place2Be	**28%**	**48%**	**20%**
Mainstream	**15.8%**	**25.6%**	**9.8%**

Table Three – **Table 4. Students' scores in the abnormal range after 3+ terms of provision**

	Before	After	Improvement
Nurture Groups	**73.1%**	**47.9%**	**25.2%**
Place2Be	**52%**	**32%**	**20%**
Mainstream	**72%**	**51.3%**	**20.7%**

2. Variables

Setting

Both nurture groups and Place2Be counselling are held in schools.

Format

Nurture groups are run in groups of six to 12 children/young adults – this helps the pupil practice social skills which are fundamental to their reintegration into mainstream classes, and it also prevents any inappropriate attachment between themselves and Nurture Group Staff; the goal of NG is not to usurp the parent-child relationship, but to create a positive attachment to the school (Boxall 2013).

Place2Be's counselling is run on a one-to-one basis – this allows for the counsellor to tailor the session to the student's needs, incorporating an array of therapeutic approaches that encourage children to express themselves.

Length

Both nurture groups and Place2Be are tailored to individual students' needs so there is no set amount of time that children attend each provision. Average times that students attend each provision, however, are two to three terms in Nurture Groups (Scott Loinaz 2014), while half of students attend counselling for seven to 12 months (a mean 24 sessions, SD 5) in Place2Be (Place2Be, 2013). This is different to other psychosocial interventions, which Garland et al (2008) reported as having an average length of at least 12 sessions (three months).

Frequency

The frequency of nurture group intervention varies significantly from to school to school. Though the 2014 pilot study found five mornings a week (12.5 hours) to be the most popular provision (resulting in 195 sessions after three terms of provision, or 487.5 hours), full-time nurture groups can run for 312 sessions after three terms of provision.

Place2Be counselling service averages at 51 hours a year (36 sessions at 1.4 hours a session) (Place2Be, 2010).

Theory

The theoretical models that underpin nurture group practice are John Bowlby's (1965) attachment theory that argues that children acquire age-appropriate behaviour through interactions with significant others. These relationships allow the child to locate themselves as distinct individuals in relation to other people – a fundamental psychological base required for learning. If a child's early experiences were characterised by missing or distorted nurturing, it can lead to stunted social, emotional and cognitive development. By providing another opportunity to internalise models of effective relationships and form attachments to supportive and caring adults, nurture groups develop vulnerable children's social and emotional functioning in order to reintegrate them into mainstream schooling in the long term. Another theoretical model that underpins nurture group practice is Lev Vygotsky's social-cultural theory of learning that argues that effective learning strategies are dependent on the internalisation of functions experienced through social interaction. Individual learning thus takes place when a competent helper guides the pupil via

Table Four – **Variables for different conditions**

Characteristic	Condition A:	Condition B:	Condition C:
	Nurture groups	Place2Be	Mainstream comparisons
Setting	**School**	**School**	**School**
Format	**Group**	**Individual Treatment** (Child Only)	**Group**
Length	**3 terms**	**3 terms**	**3 terms**
Frequency (weekly)	**12.5+ hours**	**1.4 hours**	**27.4+ hours**
Theory	**Attachment Theory**	**Attachment Theory**	**Not Explicit**
Participants	**Child/Adolescent, Parents, Teachers, Peers**	**Child/Adolescent, Parents**	**Child/Adolescent, Parents, Teachers, Peers**
Facilitators	**School Staff**	**Volunteer Counsellors**	**School Staff**
Additional cost (per child, per annum)	**£1,883** (£2.61 an hour)	**£954** (£18.71 an hour)	**None**

direct cues, allowing them to use their existing knowledge to acquire new knowledge.

Place2Be's underlying theory for its provision is also attachment theory. It is also influenced by person-centred and psychoanalytic approaches, with some counsellors using other related forms of therapy (e.g. transactional and Gestalt) (Place2Be 2014).

True to Breston and Eyberg's (1998) review that concluded 75.7% of psychosocial provisions use cognitive behavioural therapy components, both nurture groups and Place2Be apply cognitive behavioural approaches where appropriate.

Participants

Nurture groups focus not only on the student, but on improving the relationships between the student and his or her teachers and peers. Parents are involved in nurture group provision by the staff providing ideas/equipment for home activities, as well as supporting parents to develop appropriate interaction strategies and management for home.

Place2Be has its own programme for parents in some parts of the country called A Place for Parents, 'specifically designed to help parents in a school who have been referred for particular problems which they face in bringing up their children.' (Place2Be 2014). Each parent using the service is seen for around 25 hours per annum at an extra cost of £556 per case.

Facilitators

Because both interventions are underpinned by attachment theory, the adults serve to build affective bonds in both nurture group provision and Place2Be counselling. This means the adults are responsive to individual needs, are affectionate, attentive, provide reassurance and early basic experiences.

Nurture groups always have two practitioners present in the room, and at least one of the NG practitioners is qualified in the theory and practice of nurture groups. Because there are always two adults in the room they can serve as role models for positive interactions, co-operation and coping-skills.

Place2Be counsellors possess at least a Level 2 Award in Counselling Skills for Working with Children. In 2013 more than 270 individuals undertook one of Place2Be's professional qualifications.

Cost

Evaluations from the Enfield Local Authority of individual schools estimated nurture group cost at £1,883 per child in an established, classic nurture group that has up to 30 children throughout the year (Boxall 2013), bringing the price of provision to £2.61 an hour.

Cost per child per annum of one-to-one counselling in Place2Be was £954, with each child receiving on average 51 hours of service over a year (Place2Be 2010), or £18.71 an hour.

3. Hypothetical Truth Table

Only the intervention variables that were different were taken into account in the Truth Table, thus the length of the provision and the setting were not used. Table Five shows the remaining relevant variables that affect the specific outcome of an improvement of at least 20 per cent of students' scores after 3+ terms of provision into a low-risk category:

Table Five

	Condition				Outcome
	A	B	C	D	
Nurture Groups	1	1	1	1	1
Place2Be	0	0	0	1	1
Mainstream	1	1	1	0	0

1 = Variable Present / 0 = Variable not present
A= Facilitated by school staff [includes teachers in provision]
B= >1 hour a week
C= Group based [includes peers in provision]
D= Underpinned by attachment theory

4. Boolean equation

A Boolean equation was formulated on the basis of the above variables (upper case means the variable is present, lower case means the variable is not present) as follows:

Y= ABCD + abcD

ABCD combines with **abcD** to become **abc**

Y = ABCD + abc

5. Statement of causation

Improvement of at least 20 per cent of students' scores after 3+ terms of provision into a low-risk category can take place both in a school provision run by teaching staff, for more than an hour a week for three terms, with a group provision underpinned by attachment theory; and in a school provision not run by teaching staff (volunteer counsellors), for at least an hour a week, with one-to-one support underpinned by attachment theory.

Thus for an improvement of at least 20 per cent of students' scores into a low-risk category after three terms, a psychosocial provision will most likely:

- Be underpinned by attachment theory and have the facilitator(s) build affective bonds with the student;
- Have the facilitator see the student every week throughout one academic year in school;
- Run for two to three terms for at least an hour (although the indications are that a more frequent provision – in the case of nurture groups of at least 12.5 hours a week – increases the chances of more students changing to a low-risk category).

Discussion

Other nurture group variables

By highlighting the similarities and differences between nurture group provision and Place2Be one-to-one counselling (and other psychosocial interventions as identified in the literature review), it is possible to propose the specific variables that could account for the successful outcomes of nurture groups in general and for the indications of better scores for nurture groups in this study.

Frequency of provision: Nurture group provision is made available nearly every school day (be it full-time or part-time) while allowing students to still be a part of their mainstream class. The average provision in other psychosocial interventions, in comparison, is one session a week. Because nurture groups are integrated into the school, the provision can be a reliable and permanent fixture of a whole-school nurturing ethos.

Modelling with two practitioners: Nurture groups always have two teachers present in the room to model co-operation and positive social skills. At least one of the teachers has also attended a three-day course on The Theory and Practice of Nurture Groups.

While other interventions identify key people in the student's life they can use as role-models, (e.g. 'Facilitate a discussion that identifies people who the children see as good coping models, and helps them to specify the coping skills that they employ.' (Barrett 2005)), nurture group practitioners serve as role models for positive interactions, co-operation and coping-skills themselves.

Hybrid of home and school environments: A typical nurture group has soft furnishings, kitchen and dining facilities, along with other school items such as a whiteboard, desks and computers. Some nurture groups also start their day with breakfast providing a valuable link between home and school. It is 'a group occasion and helps the students relate to each other…having food together may at first be the only thing they are able to participate in and enjoy as a group. Breakfast early in the day is essential if the group includes children who actively resist forming an attachment and have severe behaviour problems.' (Boxall 2013). Breakfast is also widely promoted to improve cognitive function and academic performance (Hoyland et al 2009).

Involvement of all interpersonal systems: Part of the efficacy of any psychosocial intervention is the ability to involve all the student's interpersonal systems – teachers, parents and peers ideally. As Kendall (1993) concluded: 'When significant others (peers, teachers, and parents) provide positive feedback for a child's efforts and change their perceptions and attributions about the child, the child's behavioural change is likely to be maintained. However, if these interpersonal systems are not accepting of the child's recent behaviour changes, then the child's behaviour and cognitions can easily revert to earlier maladaptive levels.' (Kendall 1993, p.243).

Limitations

There were multiple limitations to the findings of this study. The retrospective data available did not allow as close matching of the three conditions as would have been wanted – be it sample size or pre-test scores. Even labelling two different conditions (nurture groups and mainstream) as 'group' rather than 'individual' provisions could not take into account that the actual size of the group may be a significant causal factor. There is a fairly full discussion of this issue in MacKay et al (2010). The outcome measures were also limited due to (a) the use of the teacher-rated SDQ as the sole outcome measured (this is the only outcome that is made public by Place2Be and also used in nurture group research for the time being), and (b) the emphasis in the Boolean Truth Table of an outcome from high-risk to low-risk, rather than high-risk to medium-risk (where, for example, the mainstream condition saw a vast improvement in as can be seen in Figure One). The study was also unable to answer cost-benefit questions. On the one hand, Place2Be is very much more costly per hour of intervention. On the other hand, it costs only half as much per child per annum as nurture groups. The indications are that the nurture group outcomes are better overall – especially since more children moved out of high risk in mainstream (20.7%) than in Place2Be (20%) – but the study cannot say how much better nurture group provision was or test significance.

Recommendations for future comparative studies

Prospective rather than retrospective studies are required that could take into account other variables of mediation and moderation as highlighted in the literature review, including what components are used within the provision (out of the 10 identified from the five reviews), or which subgroups of children and adolescents show optimal response to current intervention strategies. Different outcomes can also be used including various student outcomes (greater academic achievement; increased attendance; reduced exclusions) or school-wide outcomes (decreased use of support programmes/external sources for students with SEBD; reduced staff turnover). All these outcomes would need their own metrics to test the pre-post change.

CONCLUSION

Using a Boolean approach, this study concluded that at least 20 per cent of students' SDQ scores could improve into a low-risk category after three terms if they attended a provision that is (a) underpinned by attachment theory and has the facilitator(s) build affective bonds with the student; (b) has the facilitator(s) see the student every week throughout an average of three terms in school; and (c) has at least one session per week (though a more frequent provision of at least five sessions a week may increase the chances of more students changing to a low-risk category). The study also proposed the value of unique features of nurture groups compared with other psychosocial interventions which could explain its better outcomes including: (1) the high frequency of provision; (2) facilitating positive modelling with two practitioners; (3) the use of the nurture group space as a hybrid of home and school environments; and (4) the involvement of all interpersonal systems (parents/teachers/peers) as part of the provision.

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