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Do Nurture Groups change young children's self concept?

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Overview

Part 1 of this thesis is a literature review that reviews self concept measures designed for young children. It takes account of previous reviews that have, in general, considered measures across the life span. It seeks to critically evaluate the theoretical basis of measures as well as considering such features as developmental appropriateness and psychometric properties. A detailed review is provided of six measures that meet the inclusion criteria. The review is designed to have a pragmatic as well as academic function in assisting researchers in their choice of measure. The review concludes that considerable progress has been made in the development of measures and this has contributed to greater understanding of young children's self concept. However, there are limitations intrinsic to use of self report with young children and the review concludes by recommending use of self report alongside other methodologies. Part 2 is an empirical paper that reports the findings of an outcome study of an infant school intervention (nurture groups), informed by attachment theory. It was predicted that attachment representations of the nurture group condition would indicate greater security and that self concept would become more positive in comparison to a comparison group. In general, despite improvement in teacher rated measures reporting a range of difficulties, the hypotheses were not supported, although there were a few suggestive changes in the nurture group children. The reasons why the predicted changes did not occur are discussed. Part 3 is a critical appraisal. The first section 1) explores the role of adults in the nurture group in the light of the findings 2) considers the use of self-concept and narrative measures in outcome research. A case illustration is presented to illustrate some of the clinical potential of narrative methodology. The second section considers the clinical implications of the research, before concluding.

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Part 1: Literature Review

A review of self concept measures for young children

Abstract

This paper reviews the literature on self esteem / self concept measures for young children (aged 4-7 years). It evaluates previous reviews, as well as relevant measure validation papers. Apart from providing an overview of the field, the paper seeks to carry out a pragmatic function in directing researchers to appropriate instruments. There has been no substantial review looking specifically at measures for children, but previous reviews have highlighted that most measures lack psychometric soundness or a clear theoretical basis. In this review, six measures that met the basic inclusion criteria and possess additional qualities are considered in detail. Apart from expectation that measures should be psychometrically adequate, their efficacy depends upon the aspects of the self evaluation that are relevant to researchers. For this reason, some attention is given to the theoretical underpinnings of the available measures. Alternative and complementary methods of assessing self-concept are briefly considered. The strengths and limitations of currently available measures are outlined and some suggestions with regard to future developments are offered. The paper concludes that considerable progress has occurred since the field was previously reviewed, but that there remain a number of methodological and theoretical issues in measuring young children's self-concept that require further study.

SECTION ONE

Introduction

This paper reviews the literature on self concept / self esteem measures for young children[1]. In so doing, it reflects upon some of the difficulties in capturing a clinically important but elusive construct, in a population that poses challenges for researchers. The self is one of the most studied psychological constructs and yet the field is "beset with confusing terminology" (p. 190, Butler and Gasson, 2005) that hampers progress. Although there is considerable debate about both definitions and the constructs themselves, self esteem or "self worth" (Harter, 1999) are generally defined as global (about oneself as a whole) self evaluations. Self concept is a broader term, concerned with both global and domain specific evaluation and description (Butler and Gasson, 2005).

With children of eight years and older, a number of predicted associations have been found between high self esteem and positive outcomes, such as academic achievement (Liu, Kaplan, & Risser, 1992) and positive peer relations (e.g. Paulhus, 1998; Robins, Hendin, and Trzesniewski, 2001). However, there is debate as to whether young children can make global self evaluations (Harter, 1999, Marsh, Ellis and Craven, 2002) and the extent to which their evaluations are differentiated. This is reflected in the

[1] "Young children" as referred to in this paper (and in the related study) corresponds to the developmental term "early childhood" and is taken to mean children aged between 4 and 7 years, corresponding to Piaget's pre-operational stage (Piaget,1970).

content of different measures (Harter and Pike, 1984, Marsh, Craven and Debus, 1991). Self concept measures can therefore make two essential contributions:

1. clarify the internal structure of self concept/self esteem in young children.
2. confirm the relationship between self-concept/self esteem and related constructs and increase understanding of individual and group differences.

This paper will consider previous literature reviews of self concept and a selection of key papers. Commentators have consistently observed that measures for young children lack sufficient psychometric properties (Wylie, 1989, Byrne, 1996) and others have identified the lack of an explicit theoretical base to most measures (Keith and Bracken, 1996). One function of this paper will be to consider whether these shortcomings have been overcome. This paper is divided into three sections: the first offers an overview of the field by considering previous reviews and the range of measures currently available; the second evaluates six measures that have characteristics that justify their use in future studies; the third evaluates the pragmatic and conceptual challenges of self concept measures, considering in some detail issues of construct validity and methodology. It is hoped that question of *why* self-concept in young children is worthy of study and *how* to best go about this, will emerge through this evaluation.

Methods

Using earlier literature reviews of the field as a source (e.g. Wylie, 1989, Byrne, 1996), the following methods were used to search for relevant papers:

- Literature search using OVID, including the PsycLIT database (from 1985 >). To locate relevant material the following terms were used in the search: *self concept, self esteem, self worth + children + measures, tests, questionnaires, psychometric.*
- Review of recent *Mental Measurement Yearbooks* (2001, 2003, 2005)

Of the literature obtained, particular attention was focused upon previous reviews, meta-analyses, measure validation papers, and the references provided by these.

Results

Initial searches on OVID yielded large numbers of citations (e.g. early childhood + measures + self esteem = 620 citations), but few references to papers specifically concerned with measures. An initial list of twenty two self concept measures was selected on the basis of a recent meta-analysis (Davis-Kean and Sandler, 2001). Due to the lack of citations, most of these measures were not considered in close detail. The remaining measures were augmented by four additional instruments, obtained through this literature search. The literature search yielded five separate self-concept reviews that are listed below (Table 1).

Previous reviews

For the sake of orientation, this paper will briefly outline the key findings of previous reviews. Although they have certainly contributed to developments within the field of self-concept, with one exception (Davis-Kean and Sandler, 2001), none of the reviews described above was specifically concerned with children. Further, the recent meta-

Table 1. *Previous reviews of self concept measures*

Authors & title: Date of publication book or article_	**Focus of the Review and coverage**	**Key Recommendations**	**Limitations of review**
Shavelson, Hubner and Stanton (1976) *Self concept: Validation of Construct Interpretations* (paper)	All ages – construct validation. Establishing models that underlie contemporary measures.	1. Focus upon "within system" factors, such as definition, validation before applying in "across system" research. 2. Need to develop testable model from which to develop measures.	1.Not specific to self concept. 2. Focus upon establishing model did not extend to establishing theoretical basis for measures.
Wylie (1989), *Measures in Self Concept* (book)	All ages. Self-concept measures. Notes trend towards multi-dimensional self concepts. Notes lack of terminological clarity in self concept field and that measures lack psychometric properties.	1. Identifies two psychometrically acceptable measures. 2. Identifies need for further validation studies.	Less focus on theoretical understanding of self concept.
Byrne (1996) *Measuring Self concepts Across the Life Span* (book)	All ages. Comprehensive discussion of conceptual and methodological issues. Self concept measures. Notes trend towards multi-dimensional self concepts.	1. Identifies two psychometrically acceptable measures. 2. Identifies need for further validation studies. 3. Considers (briefly) alternative methodologies.	Although reference to need for theoretical coherence limited; reference to relevant developmental theories.
Keith and Bracken (1996) *Self concept Instrumentation* (chapter)	All ages. Review properties of 20 measures.	1. Identifies two measures. 2.Sets psychometric criteria for sound measures. 3. Highlights the lack of explicit theoretical basis of measures.	Reflecting the lack of sound measures for young children there is limited discussion of the specific issues for this population.
Davis-Kean and Sandler (2001) *A Meta-analysis of Measures of Self Esteem for Young Children* (paper)	Young children. meta-analysis of self esteem measures. Reviews reliability of 22 self concept measures.	1. Use of measures should be based upon characteristics of measure & population. 2. Need for better understanding of self evaluations before developing new measures.	Due to lack of data unable to evaluate validity.

analysis is not concerned with the conceptual issues that influence the content of measures for young children. The current review is distinct in that it is specifically reviewing self concept measures for young children and it seeks to assist future research by distinguishing between the measures in terms of their theoretical basis.

Shavelson, Hubner and Stanton (1976) much cited paper[2] has greatly influenced current understanding and practice. It castigated the self concept field on the basis of poorly defined constructs and measures that lacked psychometric rigor. This has been something of a litany in subsequent reviews and these concerns have not been satisfactorily resolved. Shavelson and colleagues have proposed that until further work had been conducted on definition, measurement and interpretation ("within systems" studies), more substantive self concept studies could not take place ("across systems" research). The multidimensional, hierarchical model proposed was formulated to provide researchers with an empirically testable model.

Subsequent reviews have noted the scarcity of psychometrically sound measures for young children (Wylie, 1989; Byrne, 1996), with the continued use of: "a variety of more or less idiosyncratic measuring instruments that have unspecified or inadequate psychometric characteristics" (p. 118, Wylie, 1989). Wylie notes that despite the inferred importance of self esteem, there is a widespread indication of null or weak associations with other relevant variables. She concludes that this may be due to methodological inadequacies of existing self esteem scales. It is notable that Wylie

[2] Although the Shalveson, Hubner and Stanton paper predates 1985, it is referred to due to its influence upon subsequent reviews.

(1989), Byrne (1996) and Keith and Bracken (1996) all cite the same two measures as psychometrically adequate: the Joseph Pre-school and Primary Self-Concept Screening Test (JPPSST; Joseph, 1979) and the Pictorial Scale of Perceived Competence and Social Acceptance (PSPCSA; Harter and Pike, 1984). Even these measures were evaluated as needing further development in order to be used with confidence.

Byrne (1996) usefully elaborates the differing models underlying self concept measures. This raises some questions about the conceptual basis of the JPPSST since it seeks to measure global self esteem by amalgamating items from a range of domains. Both the notion of global self esteem in young children and the idea that global self esteem is an aggregate of evaluations of competence in specific domains has been questioned (Harter 2003). A more positive review of the JPPSST is provided in Keith and Bracken's (1996) review, principally because of its psychometric strengths. In the field of self concept research, both Wylie and Byrne note that measures are increasingly assuming self concept as multi-dimensional.

Based upon her review of the measures and studies available for young children, Byrne outlined some of the developmental requirements specific to young children, suggesting that instruments need to: maintain interest (assuming limited attention span); provide concrete and specific items; minimise the response required; and offset the tendency towards social desirability/response set bias. Further, influenced by Harter's (1990) developmental work, Byrne considered the appropriate *content* of self-concept measures for young children and recommended that they: tap a minimal number of dimensions; elicit descriptive responses related to concrete behaviours; and avoid items that tap

global self concept. Subsequent research has called into question all these assumptions. There are indications that young children have the capacity to make more differentiated self evaluations than supposed (e.g. Marsh, Ellis and Craven, 2002) and can reliably report on/indicate global self concept (Marsh, Craven and Debus, 1991, Verschueren, Buyck and Marcoen, 2001).

Byrne's review raised the importance of context in determining which domains are likely to be meaningful to a person. This is particularly relevant to younger children who have widely differing forms of childcare. She also recognised the cultural limitations of most measures and the limited attempt to validate with populations outside the original sample. Byrne usefully summed up the weaknesses of the majority of measures:

- They are developed and normed on relatively small and homogenous populations. Replication studies are rare.
- Confirmatory validity is rare, partly due (especially in the case of younger children) the lack of well-established standardised measures.
- Where factor analysis takes place, it is most often exploratory and this rarely involves multi-trait multi-method analysis.

Both Wylie and Byrne provide a valuable service in raising concern about the lack of psychometric validation of self concept measures and the detrimental effect upon understanding of diverse and under-developed measures. However, the preoccupation with validation seems to have prevented a full review of the substantive theoretical and conceptual issues. In their evaluation of self concept measures across the life span, Keith

and Bracken (1996) predict that self concept measurement will improve through clear reference to a theoretical foundation.

A more recent study provides a meta-analysis of current measures of self-esteem for young children (Davis-Kean and Sandler, 2001). In doing so, it provides a useful summary of some of the characteristics of these measures and may help researchers in their choice of instrument. Davis-Kean and Sandler were not able to review the validity of self-concept measures, due to lack of information, so they focused exclusively upon their reliability. They conclude that the reliability is greatly influenced by the particularities of the population being assessed. Reliability is found to be positively correlated with: age (r= .54), number of items (r = .57) and socioeconomic group (r = .47). In other words, self concept measures are more reliable if they include a large number of items and are used with older children from middleclass backgrounds. It remains unclear whether this issue of reliability for younger children is based upon developmental or language limits and they highlighted this as a centrally important focus for future research.

In contrast to Marsh, Debus and Craven (1991), Davis-Kean and Sandler argue that a better understanding of how young children think about themselves is needed before further measures are developed. A related perspective was taken in a recent review of measures for older children. Butler and Gasson (2005) comment that few self concept instruments "explicitly define a theoretical base" (p. 191). There is a rich theoretical literature concerned with the development of self and self evaluations that, if attended to, would guide both the content and approach taken in self-concept measures. Measures

that are derived from a distinct theory, are also more likely to have conceptual coherence enabling their application in studies concerned with related constructs.

Although not strictly a review, another significant contribution to the self concept literature was provided by Marsh, Debus and Bornholt (2005), who consider the methodological issues around developing and validating self concept measures. In this paper, the authors identify four "promising" new self concept measures that possess more psychometric rigour that earlier measures.

A review of current measures & related papers

The basic inclusion criteria for measures in this review (informed by Davis-Kean and Sandler, 2001) are that they:

1. assess self esteem or self evaluative aspects of the self.
2. have been designed for use with children between four and seven years old.
3. are supported by some psychometric findings.
4. have methodological information supplied.

Although the Davis-Kean and Sandler indicated twenty two self esteem scales available for younger children, few of these have been used sufficiently to generate a workable understanding of their efficacy. One review of measures across the lifespan, showed that 30% of measures were used only for a particular study and most others were used infrequently (Trzesniewski, Donnellan, and Robins, 2003).

Insufficient information is published regarding reliability and validity of test scores derived from the measures used. Even with regard to the less informative criteria of

reliability, there appear to be many weaknesses (Davis-Kean and Sandler, 2001). Perhaps most notable is the small, homogonous sample sizes upon which initial studies were tested: 32% under 100 and 36% under 200 children. In 77% of the studies reviewed, the socio-economic group is termed middle class and relatively culturally homogonous with most studies carried out in the USA.

In this review, all the measures identified by Davis-Kean and Sandler (2001) were considered for inclusion. Further information was obtained about frequency of use (in published studies) and, as with previous reviews, it is evident that most measures are rarely used and, as a consequence, under developed. No references were found in the literature search for twelve out of the twenty three measures listed in the meta-analysis and these are omitted from Table 2 (see below). One measure was dropped from the review (Reading Self Concept Scale, Chapman and Tunmer, 1995) as it was deemed too domain specific for the purposes of this paper. Four additional measures are included on the basis of the literature search conducted. These are: the Puppet Interview (developed by Cassidy, 1988, and adapted further by Verschueren, Schoefs & Marcoen, 1994), the Berkley Puppet Interview (Ablow and Measelle, 1993), the Self Description Questionnaire for Pre-schoolers (Marsh, Ellis and Craven, 2002) and ASK-Kids (Bornholt, 2005). The last three of these measures were also identified as "promising" a recent paper on validating self concept measures for children (Marsh, Debus & Bornholt, 2005). Some attempt has been made in this review to indicate whether the measure has a clear theoretical basis (Butler and Gasson, 2005). Apart from the four additional instruments included, these are taken directly from the Butler and Gasson study.

Table 2. *Eleven self esteem / self concept (seven derived from Davis-Kean and Sandler's (2001) meta-analysis)*
Note for measures used with a wider age group only citations regarding 4-7 year olds are noted

Instrument name * not included in the Davis-Kean and Sandler meta-analysis (2001)	**Author (s), publication year**	**Number of citations involving use of measure (dates of studies)**	**Theoretical position / model (based on Butler & Gasson, 2005)**	**a. Data collection method** **b. Scale type**
Pictorial Self Concept Scale	Bolea, Felker and Barnes, 1971	1 (1985)	No Information available	a. Pictures b. Likert
Pictorial Scale of Perceived Competence and Social Acceptance for Young Children	Harter and Pike, 1984	55 (1985-2005)	Theory = not explicit (appears to be influenced by James, 1980, Cooley, 1902) Model = multidimensional	a. Pictures b. Likert
Piers Preschool Pictorial Self Concept Scale	Jensen, 1985	1 (1985)	No information available	a. pictures b. dichotomous
Joseph Preschool and Primary Self Concept Screening Test	Joseph, 1979	2 (1996-2000)	Theory = not explicit Model = uni-dimensional, global self esteem	a. pictures b. dichotomous
Self Description Questionnaire – IA	Marsh, Craven and Debus, 1991	4 (1991-2001)	Theory = not explicit Model = multidimensional – Shavelson et al. (1976) Including global self esteem scale	a. questionnaires b. likert
Self Description Questionnaire for Preschoolers - IA*	Marsh, Ellis and Craven, 2002	1 (2002)	Theory = not explicit Model = multidimensional – Shavelson et al. (1976)	a. questionnaires b. likert
Martinek-Zaichkowsky Self-Concept Scale	Martinez and Zaichkowsky, 1975, 1977	5 (1985-1995)	Theory = not explicit Model = based on Piers Harris (Piers, 1969)	a. pictures b. dichotomous
McDaniel-Piers Young Children's Self Concept Scale	McDaniel and Liddick, 1978	2 (1985-1997)	Theory = Behavioural Model = amalgam of behavioural & developmental ideas; uni-dimensional, global self esteem	a. questionnaires b. dichotomous
Self Concept and Motivation Inventory	Davis and Johnston, 1987	2 (1986-1988)	No Information available	a. pictures b. dichotomous c.
Berkeley Puppet Interview – Self Perception scales (BPI – SPS)*	Ablow and Measelle, 1999	8 references to BPS but only 1 specifically to SPS (1999- 2005)	Theory = Not explicit Model = multidimensional	a. puppets b. dichotomous
Puppet Interview *	Cassidy, 1988 Adapted by Verschueren, Schoefs and Marcoen,1994	5 (1988-2001)	Theory = Cooley "looking glass self"; Attachment (Bowlby, 1969) Uni-dimensional, global self esteem	a. puppets b. dichotomous – but enabling elaboration.
ASK – Kids *	Bornholt, 2005	3 references (1997-2005)	Theory = not explicit (Knowledge of self in relation to activities) Model = multidimensional	a. questionnaire b. lickert

It can be seen that the majority of measures do not have an explicit theoretical basis.

We will now look at six instruments in more detail. In doing so, it is hoped that this paper will provide assistance to researchers in deciding upon which measure to use. Attention will be directed to the issues of construct validity (linked, as it is, to conceptual and theoretical issues) and methodology for young children (further details about each measure are included in Appendix 1). The measures were chosen because they each have distinctive features and meet at least some the following criteria:

- Frequency of use (as indicated by database searches) / utility – measures that are used across studies enable some comparative work to be undertaken. They may also suggest some degree of research utility.

- Adaptation to the specific needs of younger children – measures need to be understandable to the majority of children and hold their attention. Possible adaptations include: the simplification of items; reducing verbal complexity of instructions; minimising responses required of the child; adapting materials to increase motivation and aid comprehension; and administering the measure individually.

- Psychometric properties – some account sampling, reliability and validity are required if researchers are to be secure in assuming that the information obtained

is accurate and meaningful (Wylie, 1989, Byrne, 1996, Davis-Kean and Sandler, 2001).

- Adaptations to minimise falsification / irrelevant response – self-report instruments should be designed so that the likelihood of response bias and error are minimised (Byrne, 1996).

- Conceptual/theoretical justification – some consideration of the self-concept model and associated theoretical position is also considered.

Most of the measures identified by Davis-Kean and Sandler were not included because they did not sufficiently meet these criteria. Some of the older measures have been rarely used since they were first developed and most either have unclear theoretical underpinnings or do not have established psychometric properties.

SECTION TWO

SIX MEASURES OF SELF CONCEPT

Each measure will be described briefly (with reference to the assumed model/theory of self-concept); before being reviewed in terms of the way in which it has been adapted for use with children, its psychometric properties and research applications, so far. The individual evaluations will be followed by a comparative critical evaluation of all six. To

provide some overview of the characteristics of the measures reviewed, a summary is provided in Table 3. Additional information about the measures is contained in the Appendix.

***Pictorial Scale of Perceived Competence and Social Acceptance for Young Children* (PSPCSA) (Harter and Pike, 1984).**

Harter considers the mature self structure as both hierarchical and multi-dimensional. However, she maintains these are developmentally acquired and young children do not have global self esteem or clearly differentiated domain specific self-evaluations (Harter, 1999). She therefore focuses upon concrete descriptions concerning the child's perceived competence and social acceptance. Both of these domains are relevant to self-esteem and might be said to contribute to later global evaluations.

The PSPCSA is designed for use with children between four and seven years old. It includes four domains: physical and academic competence, maternal and peer acceptance, with each domain consisting of six items. There are two versions of this scale with modified items on the basis of age.

There is an additional scale to be completed by the child's teacher corresponding to three of the PSPCSA subscales: physical competence, cognitive competence; and peer acceptance. This is of particular interest, because it is known that younger children typically over-estimate their competence (Harter, 1999) and significant information can be gained through using the scales in tandem.

Table 3. *Summary of measures in relation to inclusion criteria*

Measure	PSPCSA Harter and Pike, 1984	SDQ – IA Marsh, Craven and Debus, 1991	SDQP – IA Marsh, Ellis and Craven, 2002	BPI Ablow and Measelle, 1999	PI Cassidy 1988, Verschueren, Schoefs and Marcoen,1994	ASK – Kids Bornholt, 2005
Frequency of use / application	Widely used within and across systems research. Correlation studies; group comparisons.	Limited use. replication study. School based studies.	Very limited use.	Very Limit use.	Used chiefly in Across systems research (attachment based).	Increasing use. School based studies – some longitudinal research.
Utility	Easy to administer, brief.	Training required for administration. Quite time consuming.	Training required for administration. Quite time consuming.	Coders require training. Very time consuming.	Coders require training. Very time consuming.	Easy to administer, brief.
Adaptations for y. children	Pictorial format.	Questions rather than statements. Minimal verbal response. Break in the middle for exercise.	Questions rather than statements. Minimal verbal response. Break in the middle for exercise.	Use of Puppet. No verbal response required.	Use of puppet.	Brief question based format.
Psychometric properties	Acceptable internal reliability. Equivocal validity.	Acceptable internal reliability. CFA supporting model.	Acceptable internal reliability. CFA supporting model.	Acceptable internal reliability. Some convergent validity.	Some indication of test-retest reliability. Some convergent validity.	Acceptable internal reliability. Test-retest reliability. CFA supporting model.
Features to minimize falsification	Adapted item format.	Protocol testing understanding at start.	Protocol testing understanding at start.	Puppet presented as peer. Playful approach.	Child not required to refer to self directly. Playful approach.	Specificity of questions.
Conceptual /theoretical justification	Not explicit. Cooley's "looking glass self" implicit in construct of "social acceptance". Assumes limited domain specificity.	No explicit theory. Based on Shavelson multi-dimensional model.	No explicit theory. Based on Shavelson multi-dimensional model.	No over arching theory although several referred to as sources for otems. Multi-dimensional.	Attachment theory. Cooley's "looking glass self". Global self worth	No explicit theory. Multi-dimensional model of generalised self evaluation.

Psychometric properties

The PSPCSA is the most studied measure and there are mixed findings as to its psychometric properties. This is presumably why it was omitted from a recent account of promising self-concept measures (Marsh, Debus and Bornholt, 2005).

Reliability The standardisation group was relatively small and homogeneous. There is no data available as to the test-retest reliability of this measure, nor the relationship between the two age-related scales. Internal consistency as reported (Harter and Pike, 1984) is quite moderate for the preschool/kindergarten sample, although it increased when scales were combined (from six to twelve items) a coefficient α of .74 for combined competence scales and .87 for combined acceptance scales. The coefficient α for the combined first and second grade scores was .76 for the perceived cognitive competence subscale; .53 for the perceived physical competence subscale (.77 when combined); and .79 for the perceived peer acceptance subscale; and .74 for the perceived maternal acceptance subscale (with an α of .86 for the combined social acceptance scale).

Validity Factor analysis did not support the proposed four factors (Harter and Pike, 1984) and the scales were amalgamated into two factors: general competence (physical and academic) and social acceptance (maternal and peer). Harter and Pike nonetheless

retained the original four scales as they felt it would provide important information in children's individual profiles[3].

The evidence for convergent, discriminant and predictive validity of the PSPCSA is not particularly strong. Byrne (1996) concludes that there is perhaps most justification for Harter and Pike's claims for convergent validity. This involved the authors asking the sample children why they evaluated themselves in the way that they did, following the completion of the measure.

Applications of measure / related psychometric research

The PSPCSA (Harter and Pike, 1984) is by far the most frequently used and cited measure, perhaps reflecting that it was one of only two scales adjudged to be reasonably sound in past reviews (Wylie, 1989 and Byrne, 1996). It has been used as a "secondary" outcome measure where self-concept is viewed as a relevant variable, for example in studies of maltreated children (Stoddard, 1993). It has been used in several studies looking into the self-concept of children with learning difficulties (e.g. Vermeer, Lijnse & Lindhout, 2004).

Internal consistency of both the children's and the teacher rating sub-scales were found to be satisfactory in one follow up study (Verschueren, Marcoen and Schoefs, 1996). In a study of a Head Start population (Fanttuzzo, McDermott, Manz, Hampton, Burdick

[3] It has been suggested that this may have been due to Harter and Pike employing exploratory rather than confirmatory factor analysis (Marsh, Craven and Debus, 1991) and evidence supporting this was provided elsewhere (Marsh, Craven and Debus, 1998).

1996), the proposed two factor structure of the PSPCSA was not replicated and the items were deemed too complex to be understood by preschool children. However, a more recent study (Mantzicopoulos, French and Maller, 2004) found that the two factor structure was evident both in disadvantaged (Head Start children) and a middle class sample. Despite this, the authors stress that this factor fit is only in comparison to the originally proposed four factor model and that it may provide "an inadequate representation of children's competence beliefs" (p. 1225, Mantzicopoulos et al, 2004). Although of potential value for researchers, there is also some indication that the teacher's scale does not correspond in a predictable way with the children's scale in a sample of preschoolers (Madigan, Winsler, Maradiaga and Grubba, 2002). In this study, children's ratings are not inflated relative to the teacher's ratings, as might be predicted by theory. The study concludes that: "while the PSPCSA may be an appropriate measure of child competence for teachers and older children, it does not appear to be a reliable or valid measure for use with preschoolers" (p. 367, Madigan et al, 2002). The variety of studies using the PSPCSA have provided some indication of construct validity (for example, Verschueren, Buyck and Marcoen, 2001)

Self Description Questionnaire – Individually Administered (SDQ-IA) (Marsh, Craven and Debus, 1991)

All the SDQ instruments are based upon the multi-dimensional Shalveson model (1976), although this model has been refined through studies that use these measures. Whilst maintaining multi-dimensionality, Marsh has discounted the hierarchical structure of the Shavelson model (Marsh, Ellis and Craven, 2002). Although a global domain is included, it is not clear from the adapted model what role global evaluations play within

the self concept system and Marsh has questioned the usefulness of global measures (Marsh, Ellis and Craven, 2002). Despite the benefits of drawing from a specified model, the SDQ does not appear to be derived from an explicit psychological theory of self.

Marsh and colleagues adapted the SDQ-1 (Marsh, 1988) for use with younger children (aged five - eight years) and is individually administered. There are eight scales: physical ability, physical appearance, peer relationships, parent relationships, reading, mathematics, general school and general esteem. The domains also yield higher order aggregations of academic, non-academic and total self concept.

In response to an earlier finding (Marsh, 1986), that young children respond inconsistently to negatively worded items the SDQ-IA dispenses of ten negatively worded items from the original. This leaves a total of 64 positively worded items. There are no structural safeguards in the SDQ–IA against irrelevant response, including the tendency of younger children towards social desirability (Wylie, 1989). The measure makes use of a question rather than declarative format, as this has been found to be easier for young children to understand (Chapman and Tumner, 1995).

Psychometric properties

In comparison to the other studies, Marsh, Craven and Debus (1991, 1998) employ highly sophisticated factor analysis. The SDQ-IA is perhaps the most psychometrically sound measure currently available and was listed as one of the most promising current measures (Marsh, Debus & Bornholt, 2005).

Reliability The SDQ-IA study used a larger sample than the other measures, although the numbers are less substantial when broken down into year groups. Internal consistency was established for the individually administered measure, averaging .72 - .82 for each age group with the exception of parent relationship (.692) and physical activity (.505) in the kindergarten respondents. Internal consistencies of the "general self" scale are described as moderate and show smaller age effects than the averages of all scales. Although no indicators of test-retest reliability are given, a subsequent study (Marsh, Craven & Debus, 1998) indicated some reliability across time (two testing points, one year apart).

Validity Confirmatory factor analysis supports the proposed eight factor model over one (global) or two (academic and non-academic) factor models. The factors correlate to a modest extent but decreasingly so with age, fitting the differentiation with age hypothesis. Construct (convergent) validity is indicated by a study that found an association between teacher ratings of inferred self-concept and the child's ratings that also increased as the child got older (Marsh, Craven and Debus 1998). This appears to confirm that children's self evaluations (with regard to competence) become less positive and more accurate with age.

Applications of measure / related psychometric research

A cross-cultural replication study was carried out with Korean children aged between 3.4 and 6.4 years old (Lee, 2002). Factor loadings were high (0.44 to 0.89; mean 0.71) and there was reasonable support for the proposed factor structure. One additional study

making use of the SDQ-IA alongside other measures concluded that it was prohibitively long and suggested that it needed further adaptation (Davis, 1993).

Self Description Questionnaire for Preschoolers – Individually Administered (SDQP - IA) (Marsh, Ellis and Craven, 2002)

On the basis of the developmental literature (e.g. Stipek, Gralinski, and Kopp, 1990, Eder and Mangelsdorf, 1997), Marsh predicted that young children have a more muli-dimensional self concept than previously thought. Like the other SDQ instruments it is based upon the Shavelson model. Marsh appears to be interested in children's self knowledge rather than the affective aspects of self evaluation. The general self concept scale was dropped on the basis of a pilot study.

The SDQP-IA is a downward extension of the SDQ-IA, developed for younger children (aged four to five years). There are six scales: physical ability, physical appearance, peer relationships, parent relationships, reading and mathematics. The general self concept scale was removed because preschool children reportedly could not understand the items (the general school scale was also omitted). The scale, then, consists of 32 items: a mixture of original, modified and new items (69%). There is a particularly high proportion of new items in the parent relations, verbal (previously reading) and maths scales. Apart from the changes (and reduction) in items, adaptations are the same as listed in the review of the SDQ-IA, including questions rather than declarative statements. There are no marked attempts to avoid irrelevant response.

Psychometric properties

Although requiring independent validation, the SDQP-IA has relatively good psychometric properties and was included in a recent review of promising measures (Marsh, Debus & Bornholt, 2005).

Reliability The SDQP-IA was developed with a relatively small, ethnically diverse population. The sub-scales were evaluated as reliable (0.75-0.89; Md – 0.83). First and higher-order confirmatory factor models fitted the data well with moderate correlations among the scales were mostly moderate (-0.03-0.73; Md = 0.29).

Validity Validation for the six factor structure of the measure was reported. Correlations among the scales were mostly moderate, suggesting distinct factors, although there were high correlations between the verbal and maths self-concepts (0.73). There was also a higher than expected correlation between physical and academic self-concept scales. There was no evidence of criterion or construct validity provided.

Application of measure/related psychometric research No replication studies have yet taken place. The authors acknowledge the relatively small sample size and non-normal response distribution of their initial study. In particular there is a reported need to explore the "appropriateness of including multiple dimensions of academic self concept" (p. 153, Marsh, Debus and Bornholt, 2005).

Berkeley Puppet Interview - Self Perception Scales (BPI –SPS) (Ablow and Measelle, 1993)

In constructing this measure, the authors drew from a number of distinct theoretical perspectives. Items were generated by the researchers and based upon the self concept literature and refined through piloting. No global scale was included although it is not clear whether this has been discounted on developmental grounds. The authors indicate that they assume a muli-dimensional self-structure. The symptom related scales might be said to constitute, unique to this measure, an emotional self concept scale.

Items in the BPI have been adapted for use in a number of different studies so from this point of view, it might be seen as an assessment method rather than a measure. Nonetheless, six scales are included that seek to measure four and a half to seven and a half year-olds' perceptions of : academic (competence and achievement motivation); social (competence and acceptance by peers); and symptom related self-concepts (depression-anxiety, and aggression-hostility) (Measelle, Ablow, Cowan and Cowan, 1998). In terms of procedure, children are required to choose between two identical hand puppets that alternate opposing positive and negative self evaluative statements. The interview is video-recorded and coded. The most distinctive adaptation for children is the use of puppets, which the authors suggest give the interview a more peer-like quality.

Psychometric properties

The initial evaluative study involved a prospective longitudinal design and the children were tested at three time points (mean ages 4.6, 5.9 and 6.9 years respectively). Its

relatively good psychometric properties no doubt influenced Marsh, Debus and Bornholt (2005) in evaluating the BPI as a promising measure.

Reliability The study involved a small homogonous group. Responses were internally consistent across three time points (0.59 to 0.75, except for social competence) that typically exceeded .70 alpha in each domain. A factor analytic check of the data further confirmed that: "the a priori dimensions were reliably measured," (p. 1570, Measelle et al, 1999).

Validity The proposed factors were shown through exploratory factor analysis to be reasonably distinct with no more that 25% of cross-loading over 0.35. The correlation between scales varied as predicted according to age, becoming more distinct and stable as children become older. Support for the method's validity is also indicated by "meaningful patterns of convergence" (p. 1556) with ratings by adult informants. BPI scores were associated with teacher ratings at all time points and with mother ratings at T2 and T3.

Application of measure / related psychometric research There are no published replication studies. The results were based upon 41 out of the original 60 items, which suggests further consideration of the items and domains included may be needed.

The Puppet Interview (Cassidy, 1988, adapted version Verschueren, Schoefs and Marcoen, 1994)

The Puppet Interview is clearly positioned within a theoretical framework. Social interactionist and attachment theory places the formation of self in a social context. Using a puppet, the child is required to indicate what an "unspecified other" would say about him or her and this is assumed to reflect the child's own self esteem. The use of an "unspecified other" is informed by Cooley's (1922) "looking-glass self" metaphor. Cassidy uses attachment theory to inform her methodology by coding for realistic appraisals of self (something associated with secure attachment). It has been suggested that what is being measured here is an *internal model of self* since the child is answering directly questions about his or herself (Verschueren, Marcoen and Schoefs, 1996). In this respect the construct being measured might be considered implicit rather than explicit self-esteem (as befits the theory).

The puppet interview seeks to measure children's overall (global) representation of self. Although initially used with six year olds, it has subsequently been used with a wider age range of four to eight year olds (Verschueren, Buyck and Marcoen, 2001).

The child operates a hand puppet, and is asked questions by another puppet which is operated by the researcher. The interview consists of 20 questions, 15 of which are designed to elicit whether the child views himself in positive terms. The interview is videotaped and the interview coded on the basis of how positive the child's statements are, and their openness to admit imperfections. There are four possible models of self-categories in which children may be placed namely: positive and open, positive and

perfect, negative and open, negative and perfect. The measure has been adapted by Verschueren and colleagues (see below).

Psychometric properties

There is limited psychometric information published concerning the Puppet Interview, which is perhaps the main reason why it has not been included in a recent account of promising measures (Marsh, Debus and Bornholt 2005).

Reliability In the original study, the children (a small homogonous group) were re-interviewed, after a one month time interval with 71% placed in the same classifications across sessions. Cassidy and subsequent researchers have been able to show good inter-rater reliability, agreement of categorisation was 90% (Kappa = .87) (Verschueren, Marcoen and Schoefs, 1996).

Validity No information regarding validity is included in the initial reports of the study (Cassidy, 1989). Subsequent studies, using a modified approach, have been able to demonstrate some promising evidence of its convergent validity by showing conceptually meaningful associations with other constructs.

Applications / related psychometric research

The puppet interview does not appear to have been widely used until Verschueren and colleagues modified the procedure and used it in a number of important "between systems" studies. Predicted links have been confirmed between self worth and security of the child-mother attachment representation (Verschueren, Marcoen and Schoefs,

1996) as well as high self worth in children aged five years and positive self-perceptions and socioeconomic functioning three years later (Verschueren, Buyck and Marcoen, 2001). Such studies might be said to provide some evidence of convergent validity. Positiveness of the self (as measured through the Puppet Interview) correlated with perceived cognitive competence from Harter and Pike's PSPCSA (Verschueren, Marcoen and Schoefs, 1996). Given the uncertain psychometric properties of the PSPCSA however, these findings should be treated with some caution.

The ASK-KIDS self-concept inventory for children (Bornholt, 1997, 2005)

Bornholt (2005) describes this measure as focusing upon an integrated model of self knowledge where self concepts are defined as cognitive evaluations integrating knowledge about oneself and corresponding activities. "Thinking about oneself as a person is moderated by particular activities, and thinking about engaging in activities is moderated by consideration of diverse aspects of oneself," (p. 156, Bornholt, 2005). Bornholt distinguishes the self-concept model in ASK-KIDS from other measures in that it is general not global, as with classic self esteem models; and general not specific, as in classic self efficacy models (Bornholt, personal correspondence, 9th April 2006). As such, it does not have a global scale although some of the domains appear upon relevant to the self-esteem e.g. individuality and belonging.

This measure is designed for use with children between five to twelve years old and focuses upon self knowledge in relation to ten activities: reading, number, drawing, friendship, self expression, individuality, belonging, movement, body and appearance.

For each activity, children are asked five direct questions about current and future performance, natural talent, effort and difficulty.

Psychometric properties

ASK-KIDS has been shown to have promising psychometric properties with its underlying measurement and structural models having been confirmed by confirmatory factor analysis (Marsh, Debus and Bornholt, 2005).

Reliability The initial study involved a relatively small number of children. The ASK-KIDS domains are internally consistent (alpha coefficients > .70) (Bornholt, 1997). Comparisons of younger (under eight years) and older children indicate internally consistent self concepts based on conventional coefficients (alpha 0.6 to 0.8) (Bornholt, 1997, Bornholt and Nelson, 2002).

Validity Confirmatory factor analysis has suggested that there is a good fit of the ASK-KIDS self-concept model to children's responses (Adj GFI > .95; ChiSq/df ratio < 2.0; RMSEA < .05) (Bornholt, 1997, 2005; Bornholt and Ingram, 2001). For younger children (under eight years old) self concepts measured were found for the most part (80%) to be uncorrelated. Exceptions for younger children included friends-expression (r=0.53). (Bornholt, 1997, Bornholt and Nelson, 2002).

Applications / related psychometric research

ASK-KIDS has been used in several studies, for example an investigation of self concepts in children with low intellectual functioning (Russell, Bornholt & Ouvrier,

2002). A number of the applications so far have been with children outside the range of this study. Although not the principle purpose of the study, the test-retest reliability of ASK-KIDS was shown to be reasonably stable over time (Spence & Bornholt, 2005). Children were randomly assigned to groups to retest intervals of two, four or twelve weeks (T2) and then in all cases at four weeks following the T2 retest (T3). In particular, there was little evidence of a "test effect". Of interest those children with higher self concepts tended to obtain lower reliability results than those children with lower self concepts.

SECTION THREE - DISCUSSION

Evaluation and consideration of measures in relation to inclusion criteria

The fact that this review has highlighted six self concept measures for young children that possess distinctive and promising features is indicative of some progress within the field since the last substantial review (Byrne, 1996). It is certainly the case that four of the measures have been established as having reasonable psychometric properties (Marsh, Debus & Bornholt, 2005). There is something of a divide between measures that have principally focused upon the structure of self concept and measures that have been used more in *across systems* studies attempting to trace the link of self concept and other phenomena. The former (e.g. SDQ-IA) tend to place more emphasis upon their own factorial structure and psychometric properties, the latter (e.g. the puppet interview) have a more explicit theoretical basis. The measures under discussion have all gone some way in meeting the challenges of assessing the self concept of young children. The following section will consider the measures with respect to the proposed criteria.

Frequency of use/utility

The PSPCSA is by far the most cited measure. Despite its psychometric limitations, this means that it has enabled comparative research and contributed to the field of self concept literature. Further use of the other measures can help to clarify their utility and begin to clarify matters of convergent validity. The popularity of the PSPCSA may in part be due to the fact that, along with ASK-KIDS it is one of the briefest and easiest to administer. The issue of utility is an important one. The administration of the SDQ-IA has been described as prohibitively long (Davis, 1993) and both Puppet Interviews are particularly time consuming as they involve video recordings and coding. Measelle et al (1998) acknowledge the labour-intensive nature of their instrument and justify it on the basis that the findings derived from it are more consistent and valid than traditional self-concept methodology. Whilst the relative under-use of most of the measures under review in part relates to their utility; it may also indicate that they do not tap into aspects of self concept that are of particular interest to researchers (see discussion below).

Adaptations to meet the developmental needs of children

Most of the papers that accompany the measures under discussion acknowledge the particular challenges in using self report methodology with young children. These can be summarised as issues relating to: attention span, understanding, response bias (Byrne, 1996) and defensiveness (Cassidy, 1990). The following section will review the ways in which the measures under discussion seek to meet these challenges.

It has generally been assumed that because of young children's variable attention span, brief measures are most likely to succeed and this is reflected in measures such as ASK-

KIDS and the PSPSCA. Of course brevity, in the form of reduced items, has an adverse affect upon reliability (see below). Despite the relatively large number of items in the SDQ-IA, children's responses became more reliable as the measure administration went on (Marsh, Craven and Debus, 1991). Although the authors view this in a positive light, increasing reliability does not necessarily indicate greater accuracy or openness. Nonetheless, their study shows that young children are capable of responding to longer measures which are likely to provide more reliable responses. Another way of addressing children's inattentiveness, is to adapt the methodology in an age appropriate way as has been attempted in the PSPSCA with it pictorial format and the puppet interviews.

As self report depends upon the linguistic ability of the respondent, all the measures make some allowance for the limits of young children. They are all individually administered, unlike equivalent measures for older children. Two of the measures can be conducted with children who are unable or unwilling to give verbal responses (the PSPSCA and BPI) and most require minimal responses. Some attempts have been to avoid making too high demands upon concentration. The use of pictures in the PSPSCA was chosen as an age appropriate aid to comprehension and concentration, where the pictures reflect the concrete specific way that young children think about themselves (Harter and Pike, 1984). Despite this, the SDQ-IA and SDQP-IA do not use pictures as their pilot studies found that some children found the multiple processing of pictures and verbal instructions confusing (Marsh, Debus and Craven, 1991). It is, however, premature to discount the use of pictures until some comparative studies are conducted. Generally, the measures have made use of simplified language, although some of the

items in the PSPSCA involve relatively complex sentence structures (Jambunathan and Norris, 2000). The SDQ-IA and SDQP-IA make use of questions, rather than declarative statements, as there is evidence that these are easier to understand (Marsh, Debus and Craven, 1991). For similar reasons they took out negatively worded statements.

One characteristic of the age group under consideration is the rapid developmental change. For this reason, some of the measures have developed distinct items according to the age of the child (Harter and Pike, 1984; Marsh, Ellis and Craven, 2002). Whilst this leads to greater age specificity, it also hampers longitudinal studies as there is insufficient evidence that the items are equivalent.

Adaptations to overcome defensive responses

Questions have been raised as to willingness of young children's to speak to adults openly about themselves (Cassidy, 1990). Many children will not want to admit to negative qualities and take a consciously or unconsciously defensive position. Puppets have been shown to helpful in getting young children talk about themselves and, of most relevance, to admit to negative behaviour and qualities (Eder, 1990). This may be due to the play-like quality of the interview or that the puppet takes on the guise of a peer rather than an adult (as is the premise of the Berkley Puppet Interview). As such, the puppet methodology may be a means to ensure validity, for children who otherwise may answer in a consistent but defensive way. Although this appears plausible, it has yet to be confirmed, as comparative studies of differing methodologies are very rare.

Psychometric properties

The psychometric properties are summarised in Table 4 (see below). All of the instruments were developed on relatively small and homogonous samples and would

Table 4. *A summary of psychometric qualities of six measures under review*

Measure	PSPCSA Harter and Pike, 1984	SDQ – IA Marsh, Craven and Debus, 1991	SDQP – IA Marsh, Ellis and Craven, 2002	BPI Ablow & Measelle, 1999	PI Cassidy 1988, Verschueren, Schoefs and Marcoen,1994	ASK – Kids Bornholt, 2005
Sample	255 (4-7 years) white middle-class, USA 143 for normative study of teacher scale.	501 (5-7 years) middle-class, Australia.	100 (4-5.6 years) working & middle-class, Australia ethnically diverse.	97 at 3 time points (means – T1 4.6, T2, 5.9, T3 6.9 years) middle-class, USA, 29% non-white.	52 (6 years) white, middle-class, USA.	283 (5-8 years) Australian.
Test-retest reliability	None reported.	None reported, although internal consistency in longitudinal study.	None reported.	None reported, although internal consistency in longitudinal study.	1 month retest 70% children placed in same classification. Some longitudinal consistency.	Test retest reliability across 3 time points.
Internal reliability	Combined acceptance scale alpha=.82, Competence Scale alpha = .74	Individual scales alpha =.72 - .82 excepting in 5 year olds .69 parent relationship .50 physical activity.	Individual scales alpha =.75 - .89; md .83).	Individual scales alpha = 0.59-0.75 Except for social competence typically exceeded .7 alpha.	Not reported (may be due to uni-dimensional form).	For children <8years (8-5) individual domains alpha = 0.6—0.8.
Inter-rater reliability	NA	NA	NA	Good.	Good.	NA
Factor analytic data (exploratory or confirmatory factor analysis)	EFA identified 2 rather than 4 factors.	CFA supported proposed 8 factor model.	CFA supported 6 factor model (high correlation between verbal & maths).	CFA supported 6 factor model – no more than 25% crossloading over .35	None reported.	CFA supported 10 factors / 3 aspects of self evaluation 80% factors uncorrelated.
Convergent & divergent validity	Unreliable correlation between teacher / child scale.	None reported.	None reported.	Meaningful patterns of finding with adult informants.	Predicted association with social acceptance, parental attachment etc.	None reported.
Related psychometric research	Equivocal evidence re: replicability (with diff. populations).	Korean study (some replication).	None reported.	None reported.	See above.	Test-retest reliability confirmed.

benefit from application with larger, more culturally diverse populations. It will be seen that confirmatory factor analysis has been applied successfully to the two SDQ measures, as well as to the BPI and ASK-KIDS. This is a more appropriate validation for multi-dimensional measures. Although such procedures are necessary to confirm the proposed model used in the measures, they do not in themselves indicate that the domains are the most relevant for researchers interested in children's self evaluations. For the Puppet Interview and PSPCSA, there is more evidence for construct validity through across systems research. Typically internal reliability is reported more than test-retest reliability, which would be a necessary procedure if these measures are to be used in outcome studies. The BPI shows some promise in this respect, having been validated in a longitudinal study. In general, there remain some questions as to the reliability of specific sub-scales as they typically rely upon six items (e.g. SDQ-IA, PSPCSA) and are likely to be distorted by irrelevant responses.

Adaptations to minimise response bias

Some concern has been raised as to the likelihood of response bias in young children (Byrne, 1996). The structured response format of the PSPCSA and SDQ-IA /SDQP-IA is one approach designed to minimize this. Detailed protocols have been outlined for introducing SDQ measures to children, and this might usefully be applied to all measures in order to reduce the likelihood of error responses. The PSPCSA includes an equal number of items starting with a negative and positive description. Whilst this may

prevent a habitual form of responding it is unlikely to affect children who know the "right" answer[4]. The SDQ measures remove negatively worded items on the basis that children have difficult responding appropriately to negatively worded items (Marsh, 1988). Whilst this may be the case, it makes it unclear whether the children's responses are due to normative positive bias, acquiescence or social desirability.

It has been noted that young children's self-appraisals are unrealistically positive and that it is only as they get older and engage in social and self comparisons that these appraisals become more realistic (Harter, 1998). This positive bias is reflected in the reported range of responses in the measures under consideration. If the norm is towards positive self appraisal, then it is difficult to interpret the results. For example, positive responses may be due to: developmentally normal overestimation, defensive distortion linked to an implicit sense of low self worth, a desire to impress the examiner or some response set (e.g. always say "yes"). Given the positive bias of younger children, negative appraisals are also subject to interpretation including the possibility that they are due to misunderstanding (Byrne, 1996). It is unlikely, that without using other forms of assessment alongside, that any measures for young children can disentangle the origin of this positive bias. The only measure that actively seeks to do this is the Puppet Interview (Cassidy, 1988), which includes a scale for openness. Although it has been able to identify that "perfect" responses are more indicative of insecure/avoidant children, a substantial number of secure children were also placed in this category (Cassidy, 1990).

[4] Of relevance here is the suggestion that young children to not distinguish between evaluative and "factual" statements (Stipek, Gralinski, and Kopp, 1990)

Theoretical / conceptual basis of measures under review

It has been noted that: "with many scales there is a noticeable absence of information about theoretical stance" (p. 196, Butler and Gasson, 2005). These authors cite with approval Keith and Bracken's (1996) prediction that self concept measurement will improve when theoretical models are incorporated as a term of reference. The Puppet Interview benefits in a number of respects in its grounding in attachment theory. Firstly, the theoretical understanding has influenced the content of the measure. It is assumed that children at a young age have some global sense of felt worth based upon their attachment relationships with caregivers. Secondly, this understanding has influenced the methodology. It is assumed that internal models of self are affect-laden (rather than as assumed by most other measures, cognitions) and implicit. As a consequence, a direct line of questioning about the child's global self appraisal is likely to be difficult for children to answer accurately and honestly. Perhaps as a consequence of this grounding, the puppet interview has been used in some of the most interesting across systems research that has confirmed hypothesised relationships between self-worth and attachment representations (Verschueren & Marcoen, 1999) and social acceptance (Verschueren, Marcoen and Schoefs, 1996).

However, the process by which items are determined for self-esteem measures remains unclear. Most measures seem to have chosen items on the basis of face validity and there are several theories implicit within single measures. Whilst, this does not negate their value, it does limit the contribution they can make in developing a comprehensive,

theoretically-based, understanding of the development and role of self worth in children. Linked to the theoretical basis of studies are empirical studies that can help in the choice of developmentally appropriate items. It has recently been recommended that: "more research needs to be done concerning children's understanding of the self before any further instruments are developed. Understanding how young children think about themselves will help us create better measures that are more appropriate for them, thus increasing our knowledge about social cognition." (p. 901, Davis-Kean & Sandler, 2001).

The multi-dimensionality of the models underpinning particular measures have been partially borne out by confirmatory factor analysis and (and the related measures) are of great potential value in helping developmental researchers gain an understanding of how children's evaluations change over time. Measures such as the SDQ-IA (Marsh, Craven and Debus, 1991) and ASK-KIDS (Bornholt, 2005) are well equipped to clarify how domain specific evaluations are both influenced by and influence actual achievement and behaviour. ASK-KIDS is distinctive, in that it enables researchers to unpack further the different evaluative levels associated with particular domains. For example, are beliefs about future performance influenced more by beliefs about natural talent or effort and how do these relate to *actual* performance? In this respect, ASK-KIDS can provide a dynamic indication of the ways in which children evaluate themselves.

However, in themselves, the specific domains do not tell us much about how the child's self appraisals influence their self worth or behaviour. In order to understand how a domain specific appraisal affects such things, some have argued that we need to consider

the salience of the domain to the child (Harter, 1990). It seems likely that a domain such as maternal acceptance will be of central relevance to a child and have an affect upon self worth and, in turn, upon the way in which a child deals with other people and challenges. The link is less clear with academic self-evaluations. Marsh's own studies have tended to focus upon the academic domain and he has not retained "emotional self concept" in his measures. It is perhaps surprising that only one of the measures contains items that seek to tap this domain (The BPI – SPS, Measelle et al, 1998).

To some extent, the measures reviewed here reflect a divide between the domain specific orientation of educationally orientated research (for example the SDQ questionnaires) and the global self-esteem associated with social and clinically orientated psychology (Cassidy's Puppet interview). The former tend to be more interested in the cognitive aspects of the self system, whilst the latter more with the affective and relational aspects.

Certain critics have questioned the clinical relevance of domain specific evaluations (Buss, 2001) and maintained the centrality of "self worth", arguing that this construct most meaningfully explains the negative or positive impact self evaluations have upon an individual's life. For those researchers interested in the effect of self-esteem upon young children's functioning measures the most relevant measures either contain a global scale (like the SDQ-IA and the Puppet Interview) or contain what might be viewed as antecedents to self-worth such as parental acceptance (as contained in the SDQ measures and the PSPCSA). The strength of the SDQ – IA is that it enables studies looking into the relationship between global and domain specific self concept. However,

there may be theoretical and methodological grounds for favouring the Puppet Interview as the measure most likely to obtain a meaningful indication of children's self worth.

To some extent the range of measures for young children discussed might be said to reflect the complexity of children's self concept. In choosing a measure, researchers need to be clear about the aspect of self appraisal they are interested in and the theoretical basis of their research.

Discussion

One central requirement in evaluating the success of these measures, is to consider how they have contributed to the field. Self concept measures have contributed to an improved understanding of the self-evaluative systems of young children. The development of multi-dimensional measures helping to confirm that children's domain specific become more differentiated and accurate over time (Marsh, Craven and Debus, 1998). The consistent and reliable responses to items concerned with *global* self evaluations suggest that children do indeed possess an, albeit rudimentary, sense of global self worth (Verschuren, Buyck and Marcoen, 2001). The measures under consideration each have something distinct to offer the field, in that they come from differing perspectives, whether explicitly stated or not. There seems some potential for them to be used in complimentary ways; for example, comparing implicit self-concept in the form of the Puppet Interview with a more explicit measure such as the SDQ-IA. In addition, there may be some scope for revising measures on the basis of findings such as the ones considered above. For example, the PSPCSA might be developed to incorporate

more domains and, arguably, a global scale. Given its methodological promise, the Berkeley Puppet Interview might also benefit from a global, together with a parental acceptance scale. An issue for all the measures, is the difficulty in obtaining accurate and meaningful information from the younger age range (under five years old) and this is where use of methodology and item content become particularly salient (Davis-Kean and Sandler, 2001). This leads us to the consideration of complementary methodology.

In the majority of self esteem literature it is assumed that self report measures are the best means by which the relevant information about self esteem (Butler and Gasson, 2005). On one level, this appears self-evident as no-one apart from the person can provide self-evaluations. However, we have seen that there are significant limitations in self-report methodology as applied to children. Apart from the difficulties associated with conscious response bias, psychodynamic and attachment orientated research shows that not all information relating to the self is introspectively accessible. Researchers of social cognition distinguish information about the self that is processed explicitly and implicitly. Less favourable information about oneself or self knowledge acquired at a very young age may be difficult to access in explicit mode (Bowlby, 1969). The implication of this is that it seems likely that a child's sense of self-worth is not derived entirely or perhaps principally through conscious appraisals. Explicit self-ratings of self concept are presumably processed in the explicit mode and are subject to this limitation. In order to understand a young child's sense of self worth, therefore, it might be necessary to make use of implicit measures. One such measure developed by Greenwald, McGhee and Schwartz (1998), from an information processing perspective, is the Implicit Association Test (IAT) that seeks to tap into implicitly held attitudes.

This method has been used to measure self esteem and self concept in adults (Greenwald and Farnham, 2000) and might effectively be adapted for children. Another implicit measure, from the field of attachment research, is the story stem procedure (Emde, Wolf and Oppenheim 2003). It is argued that such methods afford greater insight into the child's self representations than direct questioning, because the likelihood that the child will feel undue conflict and anxiety is reduced (leading to less defensiveness). Further advantages are provided, as the child can display procedural knowledge (by showing what the dolls do) without recourse to language (Steele, Hodges, Kaniuk, Hillman and Henderson, 2003). The representations of child and adult figures are held to provide information about the real child's sense of self and self worth. They provide more contextual / relational information about the environment in which this worth is forged. Techniques that tap implicit understanding, if used alongside explicit measures, may more effectively be able to evaluate the *function* of stated self evaluations, for example whether they are indicative of a defensive position.

Apart from approaches that tap implicit self evaluations, there are additional methods, that might be used in conjunction with self report measures (for further discussion see Byrne, 1996). These may be particularly relevant in obtaining some indication of global self worth. It has been proposed that whilst children may be unable to articulate self worth, they exude it in their behaviour (Harter, 1999) and so ratings of inferred self-worth from an adult who knows the child (Haltiwanger and Harter, 1988) can be helpful. Although some have argued that it is impossible for another person to tap an individual's self perceptions, because they are necessarily subjective (L'Ecuyer, 1992), we have already surmised that *felt* self worth may not be explicit or directly expressed but may

be manifest in the child's behaviour. Interview techniques that can demonstrate more naturalistic accounts of self concept and how they change over time (Brinthaupt and Erwin, 1992) can also contribute to understanding and perhaps influence the content of future self report measures. Together with observational ratings and inferred rating by familiar adults, explicit self concept measures may be said to constitute a battery of instruments that are capable of affording more insight into self concept than any single approach.

RECOMMENDATIONS

In order for self concept measures to continue to contribute to our understanding of both the children's self concept and to the relationship between their self concept and other phenomena the following recommendations are offered:

- Continued development of the psychometric properties of tests. In particular further studies are needed into: test-retest reliability, the validity of measures for different populations and construct validity.

- Constructing or revising measures on the basis of developmental findings and substantive theoretical accounts of the self concept system in children.

- Longitudinal studies to investigate parent-child interaction patterns and parental correlates (e.g. expressed positive evaluations) to emergent self worth in children and to investigate the impact of early self worth upon later functioning.

- Continued investigation into the relationship between domain specific and global evaluations and the ways in which they influence one another.

- Investigation into the impact that different methodological approaches have upon self concept measures. Since none of the measures are the same in terms of items it may be necessary to adapt individual measures so that they are presented in differing ways (for examples with and without pictures or puppets).

- In light of the finding that young children appear able to cope with larger numbers of items than generally thought (Marsh, Craven and Debus, 1991), development of scales (including global self worth) with more items, that may enable greater reliability.

- Use of self concept reports in conjunction with other techniques, such as measures that tap implicit self-processes and representations (e.g. Cassidy, 1988, 1990). Such combined methodologies may help to distinguish between superficially similar responses to single measures.

Conclusion

In summary, there is some evidence that the state of self concept measures for young children has improved in the ten years since the last substantial review (Byrne, 1996). There are a greater number of measures that reflect a more sophisticated understanding of the multi-facetted ways in which young children are able to make self-evaluations. Nonetheless there are certain limitations to self report measures, however well designed, and in order to capture something of the complexity of self evaluations it will be necessary to use these explicit self report measures, in conjunction with other approaches. This review has highlighted how psychometrically sound and theoretically based measures are not mutually exclusive and the field is likely to be enriched if these two requirements are combined and used to inform one another. The more this is borne in mind, the greater the likelihood that self concept measures will continue to contribute to our understanding of children's self concept and the role this plays in their development.

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Appendix – Literature Review

ADDITIONAL INFORMATION ON MEASURES NOT INCLUDED IN MAIN PAPER

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children - PSPCSA (Harter and Pike, 1984)

Additional information on adaptations for age group

The pictures used in the PSPCSA are clear and age appropriate. The response required by the child is minimal and could consist of pointing.

Items showing the more / less favoured depiction of the child are counter-balanced in an attempt to avoid positive bias.

Additional information on procedures

The procedure involves two sets of dichotomous questions. The first question asks the child to state which depicted child is "most like me". Once the child has pointed to a picture, he or she is asked to indicate whether he is quite or very like the depicted child, by pointing either to a large or small circle (the size of the circle indicating the strength of association). There are different scales (with a proportion of the items modified) for children aged four to five years and six to seven years and the booklets are adapted according to the gender of the child.

Additional information on sample used in initial study

The study involved 90 preschool children (mean age 4.45), 56 at kindergarten (mean age 5.54), 65 first grade (mean age 6.32) and 44 second grade (mean age 7.41) with approximately equal numbers of boys and girls. The teacher rating scale was normed

upon a smaller sample. The children were described as coming from middle class neighbourhoods in the USA and were 96% white.

Self Description Questionnaire – Individually Administered SDQ – IA (Marsh, Craven and Debus, 1991)

Additional information on procedures

Simple questions are read to the child (example: "are you good at reading?"), who is required to answer "yes" or "no". The tester then asks the child whether he or she means yes (or no) : "always" or "sometimes".

In order to minimize potential inattention or fatigue, children are encouraged to engage in a short burst of physical activity at the midpoint of administration. The protocol also stresses a protracted trial period to ensure that children understand what is expected of them.

Additional information on sample used in initial study

The sample of 501 children consisted of 163 from kindergarten, 169 from Grade 1 and 169 from Grade 2 (aged five, six and seven years respectively). The children are described as coming from predominantly middleclass families and attending schools in the suburbs of Sydney, Australia.

Self Description Questionnaire for Preschoolers – Individually Administered - SDQP-IA (Marsh, Ellis and Craven, 2002)

Additional information on procedures

Simple questions are read to the child (example: "are you good at reading?") who is required to answer "yes" or "no". The tester then asks the child whether he or she means yes (or no) : always" or "sometimes".

In order to minimize potential inattention or fatigue, children are encouraged to engage in a short burst of physical activity at the midpoint of administration. The protocol also stresses a protracted trial period to ensure that children understand what is expected of them.

Additional Information on sample used in initial study

The study used the measure with a 100 children aged between four to five and a half years, drawn from nine preschools in suburban metropolitan Sydney, Australia. The children are described as being from largely working and middleclass neighbourhoods that are ethnically diverse (the ethnicity is not further broken down).

Berkeley Puppet Interview - BPS (Ablow and Measelle,1993)

Additional information about procedure

The child is asked "how about you" and is required to indicate which puppet he or she is most like. The interviews were videotaped and rated on a 7 point likert scale by trained coders. Highest or lowest scores are coded if the child amplifies upon the statement

given by the chosen puppet (i.e. 1 = "I'm *really* dumb"; 7 "I'm *super* smart"). This suggests that whilst the approach does not require verbal responses, maximum or minimum scores could only be awarded if the child did respond verbally.

Additional information on sample used in initial study

The study was carried out with 97 children in two parent, largely middleclass families in the USA. As with most of the validation studies considered here, the sample used was relatively small and cannot be said to be representative of a wider, culturally diverse population. Nonetheless, the authors, have taken particular care in the design of the measure to take account of developmental diversity.

The Puppet Interview (Cassidy, 1988, Verschueren, Schoefs and Marcoen, 1994)

Additional information about procedure

A sample question to the child-operated puppet is: "do you like (child)?" If the child's puppet answers "yes" or "no" it is asked "why?". The interview is coded for positiveness and openness. Verschueren, Schoefs and Marcoen (1994) modified the procedure by finding that positiveness and openness of self representations were not confounded enabling them to be used separately. In Verschueren et al's coding system, responses are coded as negative, mildly negative or not negative. An interview is coded negative if the child provides a minimum of one strong or two mild negative statements in the 15 questions tapping the positive view of self. This is augmented by a score based upon the overall levels of self-negativity observed in the interview.

Additional information on sample used in initial study

The initial study involved fifty two white, middleclass six year olds (Charlottesville, USA). Verschueren and colleagues have used the measure with larger, more ethnically populations the in Netherlands (e.g. Verschueren, Buyck and Marcoen, 2001).

ASK-KIDS self concept inventory for children (Bornholt, 1997)

Additional information about procedure

Children respond by using a one to five dot – point scale (low to high). It is administered by a trained interviewer who reads direct questions and can use scripted prompts to clarify, if necessary.

Additional information on sample used in initial study

Psychometric information of the measure relates to a sample of 283 Australian children under eight years old (Bornholt, 1997, Bornholt & Nelson, 2002).

Part 2: Empirical Paper

Do nurture groups increase children's security and self worth?

Abstract

Nurture groups are an infant school intervention informed by attachment theory designed to help children who are unable to manage in the mainstream class. This paper reports the findings of a comparative outcome study investigating change in children's attachment security and self concept following time in nurture groups. It was predicted that, in comparison to the comparison group, nurture group children would become more secure and, because of this, that there would also be indications of enhanced self concept. Baseline testing took place at the beginning of the intervention with a follow up 5 months later. To evaluate change, a narrative measure was used that elicits information about children's attachment representations, including information relevant to their implicit self worth. Additionally, children were assessed in terms of perceived competence and social acceptance, as well as teacher-rated social, behavioural and emotional functioning. In general, despite improvement in teacher-rated measures, the hypotheses were not supported, although a few suggestive changes were observed in the nurture group children. The reasons why the predicted changes did not occur are discussed and the clinical and research implications considered.

Introduction

This paper reports on the findings of a pilot outcome study that tested whether children's attachment security and related sense of self worth were positively affected following time in a primary school provision, known as nurture groups. Nurture groups aim to help children develop the emotional and social skills that underlie successful progress through school (Bennathan and Boxall, 2000). In the following section, we will introduce nurture groups, consider their grounding in attachment theory and consider how increased self worth might be seen as an outcome of secure attachment. Given the conceptual link between the intervention and constructs, it is proposed that children's experiences in the nurture group will result in increased security of attachment and higher self worth.

Nurture groups were first developed in the United Kingdom in the early 1970s (Bennathan and Boxall, 2000) and are special classes of optimally ten to twelve children run by a teacher with support from teaching assistant. They are most often attended by children of infant school age (between four and seven years old). Typically children attend the group for between two and four terms for up to four and a half days per week (Cooper & Tiknaz, 2005), whilst maintaining links with their class. The children for whom these groups were designed were deemed unable to learn "because of extreme withdrawal or disruptiveness" (p. 8 Bennathan and Boxall, 2000). Nurture groups aim to help children with internalising and externalising problems by drawing from an understanding of early developmental processes. One of the central influences of nurture groups is attachment theory, with its emphasis upon the importance of secure

relationships with adults and the need for children to have a secure base (Bowlby, 1969). The intervention has been described as seeking to recreate the experience of a normally developing child from infancy (Bennathan and Boxall, 2000). Emphasis is placed upon creating a reliable, consistent environment from which children could learn to trust adults, learn and explore. Time is spent developing the social procedures that form the necessary basis of learning in school.

The relationships formed with primary caregivers are evidently the main influence upon an individual's later attachment security and it is well documented that there is an intergenerational transfer of attachment security (e.g. Main, Kaplan and Cassidy 1985). As children get older, however, they form relationships with secondary attachment figures and these can be discordant from those established with parents (Howes, 1999). Although not formally assessed in terms of attachment, it seems likely that given the difficulties experienced by children placed in nurture groups, there will be a higher proportion (relative to the general population) of insecure avoidant and disorganised attachment. The nurture group teacher and support worker may be viewed as providing the children with "alternative attachment relationships" (Howes, 1999). Bowlby (1969) adopted the term "internal working model" to describe the internal representations of attachment figures and self. These representations are said to guide the child's expectations and behaviour in a way that tends to replicate these early relational patterns. Over time contact with a sensitive caregiver may result in changing (modifying or augmenting) the child's attachment representations of self and adults. Additionally, the staff may be able to mediate the relationships the children form with one another in the group and some emphasis is placed upon helping the children to increase their

capacity to empathise (Cooper & Lovey, 1999): itself something associated with secure attachment (Kestenbaum, Farber and Stroufe, 1989).

Related to attachment security, is the expectation that nurture groups will help children develop more positive views about themselves (Cooper & Lovey, 1999). Despite the ubiquity of the term "self esteem"[5], there is some debate as to whether young children are able to make global evaluations of themselves (see Marsh, Craven & Debus, 1991). From a neo-Piagetian developmental perspective, Susan Harter (e.g. 1999) argues that global self evaluations are based upon the capacity of children to abstract and combine information about the self and is therefore not established in children younger than eight years old and she considers the young child's self concept more in terms of concrete and domain specific evaluations. Despite this, she acknowledges that younger children: "exude a sense of self esteem" (p. 624, Harter, 2003) that may be observed by caregivers. One explanation for this apparent contradiction is to posit the existence of two related but distinct forms of self-concept: one explicit and the other implicit. In Harter's account global self worth is viewed as an explicit, largely cognitive (consciously known) aspect of self concept. Attachment theory provides an alternative account that is concerned with a more affective, implicit sense of self worth. It is proposed that relationships with attachment figures, children develop internal working models of both adult caregivers and the self. As such, working models of self and attachment figures are complimentary and: "...in the working model of the self that anyone builds, a key feature is the notion of how acceptable or unacceptable he himself

[5] Self-esteem or "self worth" (Harter, 1990) is generally defined as a global self evaluation (about oneself as a whole person), whereas self concept is a broader term, concerned with both global and domain specific evaluation and description (Butler and Gasson, 2005).

is in the eyes of his attachment figures" (p. 203, Bowlby, 1973). In order for a working model (or representation) of self to emerge as accepted and competent, there needs to be complementary working models of the attachment figures as both emotionally available and supportive of exploratory activity (Bretherton & Munholland, 1999). In time, this self-representation may function independently from the specific relationships through which it was formed. These representations are not necessarily explicitly known or expressed by the child, who may have reasons to defend against feelings of unworthiness in everyday encounters. For this reason, it is unlikely that self report measures will tap the child's underlying self representation. The few studies that have employed implicit measures in the form of puppet interviews (Cassidy, 1988) have obtained meaningful results that do indeed suggest that young children have a "rudimentary sense" of self worth (p. 126, Verschueren, Buyck & Marcoen, 2001).

Narrative or story-stem approaches are another way by which researchers can obtain useful information about attachment representations, including representations of self (Emde, Wolf and Oppenheim, 2003). Perhaps more than any other methodology, narrative approaches are equipped to investigate the social-relational basis of self-concept and enable the researcher to consider self-with-other representations that are, from a theoretical point of view, at the basis of felt self worth. Stories that represent the child doll as appropriately help seeking and competent and the adult doll as help providing and accepting are, it is argued, indicative of the self as worthy and loveable and associated with secure attachment. Previous story stem research has detected associations between self representations and reports of internalising and externalising symptoms. For example, child doll representations as non-competent have been

associated with parental reports of externalising symptoms; and grandiose child representations correlate with paternal reports of internalising and parental reports of externalising symptoms (Warren, 2003). Story stems have also been used in outcome research. A study of adopted children, found that themes of the child doll as injured or dead and of child aggression were more common in children whose adoptive mother was classified as insecure (Steele, Hodges, Kaniuk, Hillman & Henderson, 2003).

Apart from the content of stories, some coding systems evaluate the story-telling process to make inferences about the child's attachment security. For example, insecurely attached children tend to avoid the story's central dilemma and more often display violent or unusual endings (Bretherton, Prentiss and Ridgeway, 1990). Reference to the emotions of figures is associated with more secure attachment (Warren, Oppenheim, and Emde, 1996). The story stem method, then, has proved a fruitful way of obtaining information about children's attachment representations and has offered researchers with a viable way of studying a key aspect of implicit self concept in younger children.

From a variety of theoretical perspectives (James, 1890/1950, Cooley, 1902, Bowlby, 1969), self worth is largely determined by the extent to which the child is valued and loved by his or her parents. This sense of acceptance is likely to influence the child's interactions with other people and how they interpret responses in social situations. It is for this reason that some researchers have inferred young children's self worth through asking them about what others think of them (Cassidy, 1988). From Harter's developmentally-based perspective, perceived parental and peer acceptance, may be viewed as antecedents of later global self worth. The Self Perception Profile developed

by Harter (e.g. the SPPC, Harter, 1985) reflects the assumption that as children get older, peer acceptance becomes increasingly influential upon self evaluation. From the perspective of attachment theory, social acceptance is considered to be an outcome of secure attachment (Cassidy, 1988). However, since self worth may not be explicitly expressed or even "known" by children, it would not be assumed that a self report measure would necessarily capture the child's sense of social acceptance. Nonetheless, it is plausible that a child, particularly one with secure attachment representations, would be able to report without undue distortion upon how others view them, taking into account the normative tendency towards positive evaluations (Harter, 1999).

It has been proposed that perceptions of the self as competent are critical to individual functioning through life (Bandura, 1986). In older children, a clear link has been established between perceived competence and self esteem (see Novick, Cauce & Grove, 1996). Young children, under favourable circumstances, seek to master their environments (Piaget, 1954) and seem to derive satisfaction from such mastery. What Harter and Pike (1984) have termed perceived cognitive competence becomes particularly salient as the child starts school and is required to focus upon specific shared tasks. The emerging sense of oneself as competent is influenced both on a developing sense of personal agency and, as the child gets older, actual achievement. If the child develops a sense of competence in the early years of schooling, it is likely to impact upon later achievement and self worth. There is some indication that physical self concept, that includes perceptions of appearance and physical prowess, is particularly linked in older children and adults with self esteem (Stein, 1995). Thus encouraging children to develop physical mastery and aiding perceptions of physical confidence in

young children may be one way to promote self worth in later years. Perceived competence then, can be understood from a number of theoretical positions. From the perspective of attachment theory, perceived competence may be seen as an outcome of attachment security as, alongside dispositional factors, the child's sense of acceptance and safety are likely to encourage in the child exploratory play and enable them to respond positively to intellectual challenges (Schildbach, Loher, & Riedinger, 1995) Although relatively under investigated, associations have been found between attachment security and *actual* competence (Meins, 1997).

Despite the theoretical strength of attachment security paradigms of self worth, there have been relatively few empirical studies investigating the relationship. Using the puppet interview approach, Cassidy (1988) demonstrated that there are, as predicted, links between the observed quality of attachment with mother and self worth in six year olds. Verschueren and Marcoen (1999) found the quality of the representations of attachment, as measured by narrative procedures, was associated with "positiveness", as detected through a puppet interview. Of particular relevance to this study, the predicted relationships were found between self worth (as measured by the puppet interview) and self reported competence and social acceptance (Verschueren, Marcoen and Schoefs, 1996). These studies have investigated the relationship between secure attachment and self worth but have not, due to their design, established causality. There *is* longitudinal evidence however, that positive self representations in children aged five years are predictive of positive self perceptions and socio-emotional functioning three years later (Verschueren, Buyck & Marcoen, 2001).

There have been some encouraging studies reporting positive outcomes for nurture group participants in terms of social and behavioural measures (Cooper, Arnold and Boyd, 2001). There is also evidence that there is a very high rate (over 80%) of successful reintegration into the mainstream classroom a year after leaving the group (Iszatt and Wasileska, 1997) and a similarly high incidence of children who do not require intensive special needs support. However, so far, there have been no studies that have investigated changes in security attachment, despite attachment theory being one of the most influential developmental theories behind nurture groups. Perhaps one of the factors that enables children to manage in mainstream classes following time in nurture group is that they are more secure and have, because of this, a more positive sense of self. The results of outcome studies reviewing programmes that seek to enhance self concept have often been disappointing, possibly due to the unclear links made between the theoretical basis of the intervention and the measures used to evaluate them (Bracken, 1992). Nurture groups are a rare example of a school-based intervention with clear theoretical underpinnings and this study seeks to take account of this by investigating those aspects of self concept that might be expected to change.

In order to investigate the impact of the nurture group upon children's attachment representations and self concept, this study will test the following hypotheses:

a) That there will be an increase in the security of attachment in children participating in nurture groups relative to similar children in other schools have not attended nurture groups over the same period. Specifically, we predict that the security

codes on the attachment related narrative responses will increase more for children in the nurture groups relative to those not attending such groups.

b) That there will be enhanced self concept in children attending nurture groups (relative to the comparison group) as indicated by perceived competence and social acceptance. Further, we predict there will be an association between increased attachment security and increased levels of perceived competence and social acceptance.

In order to investigate the role of attachment and self concept as a mechanism of behavioural change in the nurture group two further hypotheses are tested:

c) We predict that children attending nurture groups will show improvements in terms of social, emotional and behavioural functioning relative to children attending comparison schools.

d) We propose that changes in self-concept and attachment representation in the direction of increased security may be part of the mechanism underlying behavioural and other representational changes in the child. Therefore we predict that controlling for changes in attachment and self-esteem will reduce group differences observed at time two associated with attendance at the nurture groups, and that the size of change in self-perception and attachment will predict change in the domain of behaviour.

Method

Design

This paper reports on a non-randomised posttest, pretest design investigating predicted change in aspects of attachment and self-concept in an index group (children who are attending nurture groups) and a comparison group selected from schools without nurture groups. Children were assessed at two time points, five months apart. The initial assessment took place as the index group children were starting in their nurture groups. This paper is part of a larger study and is derived from the same data base as two other doctoral papers (Levi, 2006; Seth-Smith, 2006). Data collection was equally shared between three UCL Trainee Clinical Psychologists, all investigating separate areas of interest and analysing different aspects of the data.

Participants

All participants attended mainstream infant and primary schools in a large educational authority north of London. Participants were in schools serving socially diverse populations in semi-rural and outer-city geographical areas with high levels of social and economic deprivation. Criteria for funding of nurture groups state that schools must be situated in an area of deprivation, as defined in the Department of the Environment Index of Conditions and the Child Poverty Index and that they also meet a number of other indicators of need (for more detailed criteria see appendix 1a). Control group schools also met these criteria for the establishment of nurture groups, but lacked space, funding or staff. The nurture and comparison groups are similar in terms their pupil

needs ranking averaging a rank of 17.5 and 16.2 respectively (out of a total of 123 eligible schools). See appendix 1b for further information.

The index group consisted of 41 children (mean age 5 years 6 months, s.d. 8.2 months) attending nurture groups in ten infant or primary schools. The comparison group of 37 children (mean age 6 years, s.d. 12.2 months) was selected from five comparable schools. The initial sample was slightly larger, but three index group children and two comparison children moved schools during the study and were not available for re-assessment. Random assignment was not possible as children were selected for the nurture groups according to severity of need by the schools independently of this study. As a consequence, it would not have been appropriate to select children attending the same schools, as their levels of need were unlikely to have been comparable. Children in the comparison schools were selected by the Head Teacher and / or Special Needs Co-ordinator (SENCO) on the grounds that they would be included in a nurture group had one been running at the school, fulfilling the listed criteria (see appendix 1a).

Each nurture group consisted of a full-time teacher with support from a full time learning support assistant. The majority of nurture group teachers had been in position for two years (in some cases longer). During the study, two nurture group teachers and one teaching assistant left and were replaced in different schools. Numbers of children in the nurture groups ranged between seven and twelve (the optimal number of children in a nurture group is ten to twelve). The children in the comparison schools were educated in mainstream classes (averaging 30 pupils) and were provided with services "as usual"

being placed either on school action or school action plus[6]. Levels of support from teachers or teaching assistants ranged from 0 to 3 hours / week. The children (N=5) on school action plus had been assessed either by and Educational Psychologist or Behavioural Support Teacher. The comparison group children did not receive equivalent levels of planning or support to the nurture group children, nor did they experience the small group environment. The emphasis of the support they received was educational rather than social and emotional.

As this is not a matched randomized study the groups were compared and where appropriate co-variance techniques were used to control for differences (see below). There were no significant differences between groups in terms of gender or ethnicity. Both groups contained a greater number of boys (64% in the nurture group, 67% in the comparison group). Participants were predominantly of white English ethnicity (11% non-white). In terms of socio-economic status, 52% of the nurture group and 44% the comparison group qualified for free school meals. When the children were retested, information was obtained concerning life events for all participants. There were no significant differences between groups (the list of life events and frequencies within each group are included as appendix 2).

Independent t tests (equal variance not assumed) were carried out to compare groups in terms of age and academic ability. The nurture group participants were significantly

[6] School Action takes effect when a pupil is identified within the school as having educational, social or emotional needs. School Action Plus occurs when the child is referred by the school to an external agent from the LEA (such as an Educational Psychologist). In all cases an Individual Education Plan (IEP) is drawn up for the child although this does not necessarily imply additional support.

younger than the comparisons (t (64.1) = -2.501, p = 0.015) and were significantly less able in terms of academic ability (t (58.9) = -5.268, p = <.000). Children at Reception age (four years old) are assessed using the "Foundation Profile", a different system of recording academic progress than the National Curriculum, which only applies once children are five years old. In order to create a continuous scale the two rating systems were amalgamated.

Instruments

The Story Stem Assessment Profile (SSAP, Hodges, Hillman and Steele, 2004; Appendix 3a)

The SSAP is a continuous narrative measure designed to assess the mental representations of attachment relationships of children aged between four and eight years. It consists of thirteen stories eight of which were originally developed as part of the widely used MacArthur Story Stem Battery (Bretherton, Oppenheim, Buchsbaum, Emde and the MacArthur Narrative Group, 1990). Whilst the SSAP was specifically designed for assessment of children where there are concerns about abuse or neglect, the MacArthur story stems have been primarily used with non-clinical populations. The stems involve every day scenarios, each containing a dilemma for the child doll figure. In this present study, three new school-based story stems replaced three of the SSAP stems. These stories were developed by the research team, in consultation with one of the authors of the SSAP and tried out with a small pilot group. A description of each story together with their source is given in Appendix 3b.

A coding system was developed and tested by the SSAP authors, based upon forty-five distinct themes, each of which is coded using a three point scale (Hodges, Hillman & Steele, 2004). In developing the original SSAP coding system, raters achieved good

levels of reliability on the three point rating system, having an overall percentage agreement of 87%. From these ratings, four a priori composites representing global attachment constructs were developed: secure, insecure, disorganised and defensive avoidant defensive. The internal consistency of the attachment composites is described as high (Hodges, Steele, Hillman, Henderson and Kaniuk, 2005) and there is evidence for the measure's validity (Hodges, 2006.) In terms of concurrent validity, associations have been found between story stem findings as a measure of attachment representations and other measures of attachment. Additionally, predicted associations have been found between story stem findings and measures of child behaviour and difficulties (convergent construct validity), as reported by the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) (Hodges, 2006). In this study, thirty-eight of the original codes are retained enabling the attachment composites to be calculated. An additional code ("teacher fair") was added for use with the relevant stories (see appendix 3c for information about codes and coding system).

From the perspective of self concept research, the measure is promising in that it is designed to tap implicit representations of self which, according to the perspective of attachment theory, are more likely to indicate self worth than explicit cognitive measures (Cassidy, 1990). The SSAP codes that are most relevant to the self and referred to in this study are three that concern the representation of the child figures: "child seeks help, comfort, protection from adult", "siblings/peers help, comfort and protect one another" and "realistic active mastery". Additionally there is a code – "acknowledgment of child distress or anxiety" – that is rated when the child who is telling the story refers to the negative emotions of the child doll figure in the story. Adult codes that concern the adult's receptivity to (and acceptance of) the child are also included in this study, as they

are taken as indicative of the worth and value placed upon the child figure. These codes are: "adult provides comfort", "adult provides help or protection", "adult shows affection/appreciation" and "limit setting". Taken together with additional codes these positive child and adult representations make up the secure attachment composite. In this study, the positive adult codes were amalgamated and the child codes kept separate (see Appendix 3d for information regarding correlations and internal consistency / reliability). Further information about transcription and coding is included in the section below of procedure.

The *Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA, Harter and Pike, 1984; Appendix 4).* This is a widely used, age appropriate measure designed to measure two domains salient to the emerging self worth of children aged between four and seven years old. It consists of four domains: physical and academic competence, maternal and peer acceptance, with each domain consisting of six items. The questionnaire is administered individually and uses a pictorial format that is modified according to the gender of the child. Each item is rated on a four-point scale. The child is shown two pictures representing positive and negative representations of a child and asked to indicated "which is most like you". Having done so, the child is required to indicate whether the picture is: "a lot or just a little like you?" There are two versions of this scale with modified items on the basis of age. Additionally, there is a teacher scale with items that correspond to two competence scales and the peer acceptance scale respectively. Due to the normative over-estimation typical in young children, this is not used as a means of establishing external validity. However, there is evidence indicating that comparative scales (e.g. child perceived peer acceptance and

teacher rated peer acceptance) are more highly correlated than ratings *across* two domains (Harter and Pike, 1984). The measure has reasonable internal reliability; the four Cronbach alphas for child perceived competence range from .66 to .80 and the four alphas for child perceived acceptance range from .84 to .89 (Wylie, 1989). No evidence of test-retest reliability is reported, although it has been used in outcome studies. Some evidence of criterion validity has been established through use alongside other conceptually related measures (Verschueren, Buyck and Marcoen, 2001) and has been used to distinguish between groups (Harter and Pike, 1984). The four subscales were not supported by factor analysis (Harter and Pike, 1984) and were amalgamated into two factors: general competence (physical and academic) and social acceptance (maternal and peer). Harter and Pike nonetheless retained the original four scales as they felt it would provide important information in children's individual profiles. Additionally, it has subsequently been established that equivalent scales *are* distinct and it may be that the lack of discrimination between the PSPCSA scales is due to the original factor analysis being exploratory rather than confirmatory (Marsh, Craven and Debus, 1998). For this reason, and for the sake of their conceptual relevance, the four subscales are retained in this study.

The Strengths and Difficulties Questionnaire – teacher version (SDQ, Goodman, 1997; Appendix 5). This is a brief, widely used, questionnaire for assessing the psychological adjustment of children with equivalent parent and teacher versions. The SDQ consists of five scales: emotional symptoms, conduct problems, hyperactivity-inattention, peer problems and pro-social behaviour. There are a total of twenty-five items with each scale consisting of five items. Items are rated on a three point likert scale from 0=not

true, 1=somewhat true, to 2=certainly true. All scales, apart from pro-social behaviour (which unlike the others is a positive scale), are summed to generate a total difficulties score, which ranges from 0-40. Although not generally used for diagnostic purposes, each subscale has thresholds (based upon normative samples) categorising children as normal, borderline or abnormal. The measure has been found to have sound factor structure and reliability (Goodman and Scott, 1999). Convergent validity was established through finding high correlations between the teacher (and parent) completed questionnaires and other established measures. There is evidence that it is able to better discriminate the different constructs than the Child Behavioural Checklist (CBCL, Achenbach, 1991). The factorial structure has been confirmed and reliability reported on the basis of internal consistency (mean Cronbach α .73) and retest stability after four to six months (mean .62) (Goodman and Scott, 1999). High SDQ scores, above the 90th centile are predictive of independently diagnosed psychiatric disorders (Goodman 2002).

The Boxall Profile (Bennathan and Boxall, 1988; Appendix 6a). This is a teacher rated measure specifically designed for assessing and evaluating children attending or being considered for entry into nurture groups. The measure consists of a total of 68 items each of which is rated on a five point scale. It is divided into two domains: Developmental Strands reporting on aspects of personal and social development needed for the child to progress in school; The Diagnostic Profile describing behaviours that: "inhibit or interfere with the learning process" (p. 37 Bennathan and Boxall, 2000). The Developmental Strand is subdivided into two clusters: organisation of experience and

internalisation of comparisons and the Diagnostic Profile that subdivides into three clusters: self limiting features, undeveloped behaviour and unsupported development. All of the sub-scales contain features relevant to the study of self concept. For example, one of the strands in "Internalisation of comparisons" cluster, is that the child is emotionally secure. In terms of negative features of the self, the "unsupported development" cluster includes the following strands: avoids/rejects attachment; has undeveloped/insecure sense of self; shows negativism towards self (see Appendix 6a for a fuller description of the clusters, rating and recording system). The psychometric properties of this measure have not been reported. For this study, internal consistency reliabilities (based on Cronbach's alpha) were computed for each of the subscales based upon the participant's baseline scores. Three out of the five subscales were identified as having a good factorial basis (see Appendix 6b for information on internal reliabilities).

Procedure

Children were first tested before or as soon as possible after they starting in the nurture group (mean length of time for those tested after commencing was one week). All of the testing took place in school, generally in a quiet room away from other children. Following the completion of the story stems, which were videoed, the PSPCSA was administered. On average, the procedure took about one hour to complete. The nurture group teacher or class teacher (in the case of the comparison group) completed the SDQ and Boxall Profiles at the time that testing took place. The procedure was repeated following a period of approximately one and a half terms (mean time between testing was 5.3 months). The majority of children had not yet completed their time in the

nurture group (66%) when retested. The researchers were aware of the condition (group and time) of participants when they were assessed.

The SSAP transcripts were coded by the three doctoral students carrying out the present study together with two MSc students from the Anna Freud Centre. Transcripts were blind coded to minimize the likelihood of rater bias. All raters were trained by one of the originators of the SSAP. The statistics for the reliability were percentage agreements calculating the level of agreement between the researchers in this study and a standard rater. For accreditation, the researchers and MSc students were trained to a minimum of 85% inter-rater reliability on the manualised rating system, which gives a three-point rating to each story for the presence or absence of the 45 codes. Additionally, eleven of the transcripts (in this study) were coded by all five raters and an inter-rater reliability of 85-95% was achieved against the standard rater.

Ethical considerations

The study was approved by the University College London Committee for the Ethics of Non-NHS Human Research (see Appendix 7). At the request of the schools, the letter to parents was made shorter and this amendment was accepted by the ethics committee (Appendix 8). The original outline was retained by the schools to use with parents if further information was sought (Appendix 9a) and the brief letter was sent to parents (Appendix 9b). A protocol was followed by researchers at the beginning of each meeting, where the child was told about the activity and informed that they could stop participating at any time (Appendix 10).

Statistical features of the study

The main hypotheses (a and b) – predicting greater attachment security and enhanced self concept as a consequence of time in the nurture group - were tested through a series of two way (group by time) ANOVAs. As these analyses were testing predictions relating to the main hypotheses we did not correct for false positive findings. However, we did choose to set p=.05 as significance level for these directional hypotheses in order to guard against false positives. Age and academic ability are included as co-variants in the ANCOVAs, as we found significant differences between the groups in age and academic performance. In all cases significance is tested by the Wilks' Lamda statistic.

In order to investigate the significant interactions further, tests of within group, simple-effects were performed contrasting T1 (baseline) and T2 (five months) means for each group separately. Since these are post-hoc analyses, an alpha of .025, rather than .05 was used to offer some protection against false positives.

Analysis of correlation was proposed to investigate the prediction that enhanced self concept would correlate with positive changes in attachment security (hypothesis b). Had such correlation been established further analysis, in the form of regression, would have been conducted. However, as no significant group differences in attachment security or self concept were found this analysis was not implemented.

To explore the relationship of attachment and self-concept variables with socio-emotional and behavioural outcomes (hypothesis c) Pearsons r's were computed between change scores on all variables. Pearson r's were used to predict socio-emotional and behavioural change from baseline scores on self-concept and attachment variables. Alphas for these analyses were also corrected for false positives (based on the number of

analyses that took place). To assist interpretation of score-change correlations, positive scale score change variables were calculated by subtracting baseline scores from time 2 scores (T2-T1). Variables related to problem scales were calculated by subtracting time 2 from baseline (T1 – T2). Thus in both cases, larger numbers imply greater improvement[7]. In order to consider the relationships between the different variables (hypothesis 3) it was proposed that, following correlational analysis, hierachical multiple regression should be carried out. However, as there were no main effects this was not implemented.

Lastly, reference is made the power analysis and tests for normality carried out for this study. A total mean score of 6.7 was obtained with a standard deviation of 5.9 from a representative sample of five to ten year old children in a validation study (Meltzer, Gatward, Goodman & Ford, 2000) of one of the key outcome variables, the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997). By contrast, a total mean score of 16.3 was obtained from clinical groups (Becker, Woerner, Hasselhorn, Banachewski & Rothenberger, 2003) indicating a difference of 9.6 with an approximate standard deviation of 6.5. Based on the assumption that nurture group children will not achieve the level of functioning of a non-clinical population, a change of 4 points is taken as a

[7] It is generally accepted that residualising time 2 scores for baseline scores is in most instances to be preferred to using change scores because change scores are so susceptible to a wide range of potential confounds such as regression to the mean, highly skewed distributions and uncertainty of interpretation. Using residualised scores we are able to look at the discrepancy between what may be expected on the basis of time 1 scores and observed time 2 scores. However, there are problems of interpretation with residualised scores as well as has been recently pointed out by Lynam et al. (2006). In particular as the product of any covariance procedure, residualised scores have not been observed and cannot be easily described to those not already statistically sophisticated. As this is a pilot investigation and as our primary concern is to understand the size and nature of the impact of nurture groups, we
decided to accept the methodological problems associated with change scores because of their greater value in communicating the findings to teachers, funders and the young people participating.

clinically significant improvement. Adopting a well-established formula to calculate effect sizes with independent means (Cohen, 1992), a sample size of 35 would be needed for an improvement of 4 points (assuming a population standard deviation of 5.9) on the SDQ to be detected 80% of the time ($p<.05$) (Dupont & Plummer, 1990). Normality was reviewed by looking at the residuals of the main variables and the diagnostic plots gave no grounds to suspect that the non-normal distributions impacted upon the assumptions of the analyses. In order to examine the characteristics of the index and comparison group at baseline, a series of t tests, a frequency comparison (yielding a χ^2 statistic) and a correlation were run.

Results

This section will begin by providing some descriptive statistics before presenting the main findings, concerning attachment representations and self concept. Following this, the outcomes with regard to social, emotional and behavioural functioning will be reported. Finally, findings concerning the relationship between attachment security, self concept and the social, behavioural and emotional variables will be reported.

Descriptive characteristics of groups at baseline: strengths and difficulties, attachment security and self concept

The groups were reasonably well matched in terms of social, emotional and behavioural difficulties (Teacher rated SDQ) and t tests comparing means of groups in the different SDQ domains at baseline yielded no significant effects (see Table 8 which includes means at T1). Few differences were found as indicated by the frequencies with which

the different groups can be assigned to the "normal" and "borderline" categories (see Table 1). There were no significant differences in category frequency between the groups in terms of general (total score), emotional, conduct difficulties or hyperactivity. There was, however, a significant association between group (nurture vs comparison) and peer difficulties at baseline (normal vs borderline/abnormal) ($\chi^2(1) = 5.8$, $p = .016$) with more children from the nurture group classified as abnormal/borderline. Similarly, there was a significant association between group and prosocial behaviour at baseline ($\chi^2(1) = 4.7$, $p = .031$) again with more children from the nurture group being classified as abnormal/ borderline. Whilst there was a difference between the nurture group and the comparison group at baseline, in terms of the number of children scoring above the cutpoint on two of the SDQ scales, there were no differences between the two groups in terms of the baseline level of these variables when measured on a continuous scale.

Table 1. *Frequencies of normal and borderline/abnormal T-SDQ Scores at baseline*
Note that for all domains, apart from prosocial difficulties, a high score indicates a high level of difficulties. *Significant association between group and domain ($p < 0.05$).

T-SDQ sub-scale (maximum possible score & range to be rated "normal")	Nurture group *N* 44		Comparison group *N* 39	
	Normal	Borderline / abnormal	Normal	Borderline / abnormal
Total score (40) *normal category (< 12)*	10 (23.3%)	33 (76.7%)	14 (35.9%)	25 (64.1%)
Emotional problems (10) *Normal category (< 5)*	20 (46.5%)	23 (53.5%)	21 (53.8%)	18 (46.2%)
Conduct problems (10) *normal category (< 3)*	20 (46.5%)	23 (43.5%)	21 (53.8%)	18 (46.2%)
Hyperactivity (10) *normal category (< 6)*	14 (32.6%)	29 (67.4%)	9 (23.1%)	30 (76.9%)
Peer problems (10)* *normal category (< 4)*	10 (23.3%)	33 (76.7%)	19 (48.7%)	20 (51.3%)
Prosocial behaviour (10)* *normal category (> 5)*	12 (27.9%)	31 (72.1%)	20 (51.3%)	19 (48.7%)

Using categorical tests of significance with repeated measures is quite complex and hierarchical log linear models with repeated measures are not provided in SPSS. Given that the groups did not differ significantly at baseline on the mean score on these variables, it was felt legitimate to compare time 2 scores without statistically adjusting for the time 1 differences (the implications of this assumption are considered in the discussion).

Comparing mean attachment security scores of the two groups at baseline (see Table 2), there was a close to significant difference in terms of secure attachment composites with the nurture group having fewer high secure attachment representations (t (81) = -.0547, p = .063). There were no differences between the index and comparison group in terms of the ratings of: representations for insecurity (t (81) = -.469, p =.640) disorganisation (t (81) = .802, p = .423) or avoidance (t (81) = 1.197 p = .235).

Table 2. *Comparison of attachment composite baseline means in index and comparison groups.* * Significant time by group effect ($p < 0.05$).

Group	Attachment composites			
	Secure	Insecure	Disorganised	Avoidant
Nurture	.214 (sd .120)	.184 (sd .107)	.172 (sd .151)	.167 (sd .097)
Comparison	.268 (sd .144)	.197 (sd .132)	.145 (sd .153)	.144 (sd .078)

It was assumed that the children included in this study experienced lower perceived competence and acceptance than the general population. To some extent this prediction can be tested by comparing the means of both groups at baseline with comparable

normal (non-clinical) sample included in Harter and Pike's (1984) standardisation of the measure. In the original study the children's mean scores varied according to their age (see Table 3). It can be seen that the means of the index and comparison group at both ages are similar to the normative sample. One clear difference is the greater range of scores within the nurture group, as indicated by the larger standard deviation, particularly in the domain of perceived peer acceptance. There was also a near significant difference (t (77) = -1.889, p= .058) between the nurture and comparison groups in terms of perceived peer acceptance, with the former showing lower scores.

Table 3. *Comparison of means between normative sample (Harter and Pike, 1984), index and comparison groups.* * Significant time by group effect ($p < 0.05$).

	Perceived cognitive competence	Perceived physical competence	Perceived peer Acceptance	Perceived maternal Acceptance
Norms (4-5 yrs)	3.5 (sd .43)	3.3 (sd .46)	2.9 (sd .56)	3.0 (sd .59)
Nurture group (4-5 yrs)	3.50 (sd .57)	3.04 (sd .83)	2.77 (sd 1.08)	3.29 (sd .70)
Comparison group (4-5 yrs)	3.46 (sd .41)	3.20 (sd .31)	3.17 (sd .55)	3.26 (sd .54)
Norms (6-7 yrs)	3.4 (sd .35)	3.4 (sd .55)	3.1 (sd .39)	2.8 (sd .58)
Nurture group (6-7 yrs)	3.1 (sd .57)	3.42 (sd .41)	2.89 (sd .65)	3.00 (sd .70)
Comparison group (6-7 yrs)	3.40 (sd .39)	3.36 (sd .54)	3.16 (sd .74)	3.15 (sd .49)

In summary, although there were no mean differences on a continuous scale, there were differences between the groups in that the nurture group had a higher frequency of borderline/abnormal scores in terms of peer difficulty and prosocial behaviour. By contrast, there were few differences between the groups in terms of attachment representations and perceived competence and acceptance at baseline; with the exception that the nurture group children appear to have had lower levels of security in their representations of attachment relationships. Means on the different scales of the self concept measure were similar to a normative sample. This suggests that the children, although considered by teachers as deserving special attention, were reporting themselves as not having particularly low competence or social acceptance.

Findings - attachment security and attachment representations

Contrary to prediction (hypothesis a), there was no significant time by group effects in terms of secure, insecure, disorganised or avoidant representations (for all composites F (1,71) <1, N.S.). The means of the four attachment security composites at baseline and end of treatment are reported in Table 4. The means were compared using an ANCOVA model with age and academic status as covariates. Exploring within group changes between baseline and T2, revealed a marginally significant decrease in avoidant representation frequency in the nurture group (F (1, 71) = 3.126, p = .081, d = .388). The mean at T2 was also lower in the comparison group on this composite and there was no meaningful difference between effect sizes (F (1, 71) = 2.285), p = .135, d = .354).

As part of the main hypothesis regarding attachment security, specific codes associated with self representation were investigated. The means and standard deviations of the

relevant individual codes at T1 and T2 are shown in Table 5. The ANCOVAs performed yielded a significant time by group interaction with the index group. This showed an increase in the frequency of acknowledgement of child distress relative to the comparison group (F (1,71) = 4.044, p = .048, d = .465). Looking at the groups separately, neither index (F (1,71) = 3.328, p = .072, d=.401) nor comparison group (F (1,71) = 1.640, p = .204, d=.300) changed significantly over time, although the index group was approaching significance. Additionally, there was a marginally significant time by group interaction with the siblings / peers help code (F (1,71) = 3.589, p = .062, d=.438). Reference to the means in Table 5 suggests that there was an increase in the frequency in representations of peers helping in the index group relative to the comparison group. The T1 vs T2 contrast in the index group suggests an increase that is again close to significance (F (1,71) = 3.521, p = .065, d=.412); whereas the comparison group score decreases, albeit not significantly (F (1,71) = 1.143, p = .250). With regard to the other child related codes, and contrary to prediction, there was no significant time by group interaction in the frequency with which child dolls were reported as seeking help or displaying realistic active mastery (both F (1,71) <1, N.S). Finally, contrary to prediction, there was no significant time by group interaction with the positive adult composite (F (1,71) <1, N.S.).

Table 4. *Mean positive attachment security clusters and standard deviations (baseline > time 2)*
Note. Means in parentheses have been adjusted for age and academic attainment. * Significant time by group effect ($p < 0.05$).

Attachment Security Clusters (SSAP)	Nurture group		Comparison group	
	Baseline	Time 2	Baseline	Time 2
Secure attachment	.214 (sd .120) [.234]	.233 (sd .127) [.257]	.268 (sd .144) [.289]	.292 (sd .151) [.315]
Insecure attachment	.184 (sd .107) [.179]	.194 (sd. 130) [.179]	.1965 (sd .132) [.192]	.1901 (sd .125) [.189]
Disorganised attachment	.172 (sd .107) [.166]	.145 (sd .131) [.127]	.145 (sd .154) [.145]	.146 (sd .147) [.143]
Avoidant attachment	.167 (sd .097) [.163]	.130 (sd .099) [.129]	.144 (sd .078) [.137]	.102 (sd .090) [.103]

Table 5. *Mean positive child/adult scores and standard deviations (baseline > time 2)*
Note. Means in parentheses have been adjusted for age and academic attainment.
* Significant time by group effect ($p < 0.05$).

Child / Adult Codes (SSAP)	Nurture group		Comparison group	
	Baseline	Time 2	Baseline	Time 2
Child seeks help	.280 (sd .228) [.319]	.240 (sd .207) [.240]	.335 (sd .220) [.313]	.312(sd .217) [.342]
Siblings/peers help & comfort	.074 (sd .104) [.072]	.113 (sd .140) [.132]	.140 (sd .139) [.156]	.122 (sd .134) [.133]
Realistic active mastery	.106 (sd .108) [.120]	.172 (sd .199) [.174]	.115 (sd .144) [.131]	.199 (sd .178) [.205]
acknowledgement of child distress / Anxiety *	.222 (sd .203) [.202]	.258 (sd .228) [.298]	.258 (sd .254) [.311]	.243 (sd .201) [.234]
Positive adult cluster	1.165 (sd .720) [.326]	1.287 (sd .795) [.352]	1.401 (sd .888) [.369]	1.519 (sd .830) [.413]

Findings - Self concept

Next, the prediction (hypothesis b) that time in the nurture group increased children's perceived acceptance and competence was tested (see Table 6 for group means at baseline and T2; Table 7 for group means of Teacher ratings). Again, contrary to prediction, there were no significant group by time interactions in terms of perceived cognitive competence, physical competence, peer acceptance and maternal acceptance (all F (1,69) < 1 N.S). Teacher evaluations of the same areas (N.B. there is no maternal acceptance teacher scale) also yielded no significant group interactions over time in terms of peer acceptance and cognitive competence (both F (1,70) < 1 N.S.). There was, however, a significant time by group effect associated with physical competence (F (1, 70) = 6.01, p= .017, d = .574) with teachers reporting improved physical competence in nurture group children relative to the comparison group. These findings are considered in more detail below.

Although there were no significant group by time effects with regard to self rating of physical competence, there was also a marginally significant increase of mean competence that was restricted to the nurture group (F (1,69) = 4.568, p= .036 d= .501). This proposition is given some support by teacher reported physical competence indicating actual improvement in the nurture group children. With regard to teacher ratings of peer acceptance, a significant group effect (F (1, 70) = 7.34, p = .008) was found and the T1 vs T2 contrast remains significant for the nurture group following Bonferroni corrections for chance findings (F (1,70) = 8.272, p = .005 d= .644).

Table 6. *Mean child perceived competence and acceptance and standard deviations (baseline > time 2)*
Note. Means in parentheses have been adjusted for age and academic attainment. * Significant time by group effect ($p < 0.05$).

PSPCSA Domains	Nurture group		Comparison group	
	Baseline	Time 2	Baseline	Time 2
Cognitive competence	3.31 (sd .59) [3.30]	3.25 (sd .68) [3.25]	3.43 (sd .39) [3.45]	3.39 (sd .49) [3.39]
Physical competence	3.23 (sd .68) [3.20]	3.44 (sd .51) [3.44]	3.30 (sd .47) [3.32]	3.45 (sd .50) [3.47]
Peer acceptance	2.83 (sd .88) [2.80]	3.05 (sd .65) [3.05]	3.16 (sd .66) [3.16]	3.28 (sd .65) [3.28]
Maternal acceptance	3.14 (sd .71) [3.17]	2.87 (sd .66) [2.84]	3.19 (sd .50) [3.19]	2.98 (sd .62) [2.98]

Table 7. *Mean teacher rated competence and acceptance and standard deviations (baseline > time two)*
Note. Means in parentheses have been adjusted for age and academic attainment.
* Significant time x group effect ($p < 0.05$).

PSPCSA Teacher rated domains	Nurture group		Comparison group	
	Baseline	Time 2	Baseline	Time 2
Cognitive competence	2.48 (sd .96) [2.42]	1.91 (sd .84) [1.91]	2.5 (sd .87) [2.53]	2.12 (sd .87) [2.12]
Physical competence*	2.22 (sd .87) [2.18]	2.62 (sd .81) [2.43]	2.58 (sd .70) [2.55]	2.62 (sd .74) [2.62]
Peer acceptance	2.11 (sd .75) [2.15]	2.51 (sd .86) [2.51]	2.17 (sd .91) [2.17]	2.48 (sd .90) [2.47]

In contrast, within group change in the comparison condition was not significant (F (1,70) =.097, p = .756). Perceived peer acceptance showed a non-significant trend for change in the predicted direction within the nurture group (F (1,69) = 1.741, p= .191 d= .295). There was less indication of change in the comparison group (F (1,69) = .019, p = .892). There was an unexpected finding with regard to teacher rated cognitive

competence. Table 7 shows that, for both groups, the mean rating of cognitive competence declined between the two times of testing. There was a near significant main effect of time in teacher rated cognitive competence (F (1, 70) = 3.66, p = .060). The less conservative T1 vs T2 contrast was significant both for the nurture (F (1,70) = 9.598, p = .003, d= .685) and comparison group (F (1,70) = 8.046, p = .006, d = .665). Contrary to prediction, neither attachment security as communicated in the narratives of children or reported self evaluations improved following the nurture group intervention, relative to the comparison group. Due to the non-significant findings no further analysis in the form of correlation and regression was carried out (hypothesis b). Now, we shall consider whether there were changes with respect to social, emotional and behavioural function.

Findings - social, emotional and behavioural functioning

In contrast the main predictions there were several significant group by time effects in terms of social emotional and behavioural functioning (hypothesis c). The means and SDs of the SDQ and Boxall Profile are shown in Tables 8 and 9. As with the other ANCOVAs presented, age and academic ability were included as co-variants.

As described above, the SDQ provides an overall problems score that combines emotional and behavioural problems across five subscales. The ANCOVA yielded a significant time by group interaction for the overall problems score with children in the index group showing greater improvement (F (1,69) = 4.619, p=.035, d = .503). Referring to the earlier power calculation and reviewing the total score means (see Table 8) we note that the improvement in mean scores between baseline and time 2 was 3.85; just failing to reach a clinical significance (i.e. a 4 point change). There was no time by

group effect for either emotional difficulties or conduct problems (both F (1, 69) <1, N.S.). For the hyperactivity scale, the time by group interaction was close to significance (F (1, 69) = 3.449, p = .068, d= .435). Examining changes in hyperactivity within each group, indicated that there was a significant decrease in the reported levels of hyperactivity in the nurture group condition (F (1,69) = 7.528, p = .008, d= 0.22) but not in the comparison condition (F (1,69) <1, NS). A further significant interaction between time and group was found with the peer difficulties scale (F (1, 69) = 6.07, p = .016, d = .577) with a greater reduction of such difficulties in Nurture Group children. Similarly, there was a significant interaction between time and group in terms of prosocial behaviour (F (1,69) = 5.53, p = .022, d= .551) indicating there was an increase in the positive social behaviour in the nurture group, compared to the comparison group.

Table 8. *Mean T-SDQ scores and standard deviations over time by group*

Note. For all scales apart from prosocial behaviour, a higher score indicates greater difficulties.
Means in parentheses have been adjusted for age and academic attainment.
* Significant time x group effect (p < 0.05).

	Nurture group		Comparison group	
	Time 1	Time 2	Time 1	Time 2
Total score*	17.58 (17.46) (sd 4.61)	13.73 (13.85) (sd 6.15) *	17.00 (17.33) (sd 6.57)	16.69 (16.69) (sd 8.18)
Emotional problems	3.95 (3.87) (sd 2.65)	3.58 (3.54) (sd 2.51)	3.62 (3.50) (sd 3.66)	3.50 (3.50) (sd 3.11)
Conduct problems	2.79 (2.77) (sd 2.29)	2.20 (2.26) (sd 1.96)	3.00 (3.17) (sd 2.54)	3.19 (3.19) (sd 2.86)
Hyperactivity	6.53 (6.46) (sd 2.48)	5.25 (5.31) (sd 3.39)	6.92 (7.25) (sd 2.91)	6.94 (6.94) (sd 2.93)
Peer problems*	3.98 (3.97) (sd 1.99)	2.70 (2.74) (sd 2.08) *	2.92 (2.83) (sd .24)	2.72 (2.72) (sd 2.13)
Prosocial behaviour*	4.19 (4.10) (sd 2.45)	5.73 (5.69) (sd 2.28) *	5.15 (5.00) (sd 2.86)	5.28 (5.28) (sd 3.18)

Behavioural changes were also observed on a further teacher rated instrument, the Boxall Profile (see Table 9 for means and standard deviations). Firstly, the two developmental subscales detected the positive impact of the intervention. With regard to organisation of experience, the nurture group improved substantially relative to the comparison group and the ANCOVA yielded a significant interaction between time and group (F (1, 71) = 5.65, p = 0.02, d= .550). Similarly, the time by group effect was

Table 9. *Mean Boxall Profile scores and standard deviations over time by group*
Note: For Organisation of experience and Internalisation of comparisons higher score indicates improvement; Self limiting features, undeveloped behaviour and unsupported development lower score indicates improvement. Each mean is derived from the total scores by dividing by the number of strand totals that make up the cluster.
Means in parentheses have been adjusted for age and academic attainment.
* Significant time x group effect ($p < 0.05$).

Boxall sub-scale	Nurture group		Comparison group	
	Time 1	Time 2	Time 1	Time 2
Organisation of experience*	8.02 (8.39) (sd 2.23)	10.08 (10.56) (sd 2.64)	8.94 (8.40) (sd2.09)	9.63 (9.08) (sd 2.56)
Internalisation of comparisons*	7.34 (7.45) (sd 2.23)	9.02 (9.28) (sd 2.65)	7.91 (8.02) (sd 2.05)	8.58 (8.65) (sd 2.26)
Self limiting Features - disengaged	6.10 (5.73) (sd 3.77)	3.51 (3.17) (sd 2.93)	4.61 (5.41) (sd 3.34)	4.47 (5.02) (sd 3.65)
Self limiting features - self negating	5.27 (5.64) (sd 3.08)	4.20 (4.43) (sd 2.97)	5.33 (5.06) (sd 3.49)	4.47 (4.11) (sd 3.25)
Undeveloped behaviour	4.11(3.97) (sd 2.72)	2.84 (2.74) (sd 2.35)	3.72 (3.88) (sd 2.73)	3.46 (3.30) (sd 3.35)
Unsupported development	5.76 (6.03) (sd 3.22)	3.87 (3.83) (sd 2.60)	5.19 (4.99) (sd 3.76)	4.64 (4.25) (sd 4.06)

significant for the internalisation of comparisons cluster (F (1, 72) = 4.77, p = 0.032, d= .503) again with greater improvement in the nurture group. With regard to the diagnostic profile, there were no group by time effects for undeveloped behaviour or the strands that make up the "self limiting features" sub-scale (all: F 1, 71) < 1 N.S.). However, there was a tendency towards a significant group by time interaction with regard to unsupported development (F (1. 71) = 3.074, p = .084) with a significant T1 vs T2 contrast observed in the nurture group alone (F (1, 71) = 18.574, p = .000, d=.964).

There were a number of significant effects of the nurture group detected by the SDQ and Boxall Profile, indicating that there are improvements in socio-emotional and behavioural functioning as a consequence of time in nurture groups. Broadly, these changes consist of a developing behavioural capacity to relate to and respond to others and reduced hyperactivity. As we have seen, there were not correspondingly significant group effects with regard to attachment security and self concept despite the conceptual affinity between the constructs. Before abandoning an explanation of the observed change by an attachment related mechanism (hypothesis d), two subsidiary questions can be tested through a series of exploratory analyses. The first set of analysis investigates the nature of the changes observed through looking at the relationship between changes on the attachment, self esteem and behavioural variables; the second considers whether children with lower security and less perceived competence and social acceptance at the start of the nurture group benefit more from the intervention.

Relationship between changes in attachment representations and self concept in nurture groups and positive social/behavioural outcomes (T-SDQ and Boxall Profile)

It will be recalled that there was an approaching group by time significant effect with an increase in nurture group references to peers/siblings helping and comforting one another. Additionally, there was a significant increase in the nurture group condition in the acknowledgement of child (doll) distress by the child telling the story. A series of correlations focusing upon the nurture group were carried out between these codes and the SDQ and Boxall domains where significant group by time changes were found. Only significant or approaching significant findings are reported, but Bonferroni adjustments were used to reduce the possibility of Type I error.

There were no significant correlations between nurture group score changes in the SSAP and the Boxall Profile. In terms of the SDQ, there was a significant correlation between change in acknowledgement of child distress scores and change in peer difficulties scores (r (39) = -.383, p = .016)[8]. In addition, there were three findings that appear to indicate a relationship but do not reach significance: change in the acknowledgment of child distress scores and change in the general difficulties scores (r (39) = -.299, p = .065); change in sibling/peer help scores and change in the general difficulties scores (r (39) = -.318, p = .048); change in sibling/peer help scores and change in peer difficulties scores (r (39) = -.309, p = .056). These findings suggest that acknowledgment of child distress and an increase in representations of children helping were associated with decreases in reporting of general and peer difficulties.

[8] As with all subsequent correlations involving the SDQ, the effect size is set at .017, since three analyses took place.

Although there were no significant time by group effects with regard to perceived competence and acceptance, there was some indication of positive change with regard to perceived physical competence and peer acceptance in the nurture group condition. Correlation analyses were conducted to test whether there was a relationship in the nurture group between score changes in these domains and score changes in the SDQ and Boxall Profile. Change in the perceived physical competence score was significantly correlated with change in the general difficulties score ($r\ (37) = -.496$, $p = .002$). Change in perceived peer acceptance was also associated with score changes in general difficulties ($r\ (37) = -.355$, $p = .031$) although this is not significant once Bonferroni corrections are applied. These findings indicate that as children perceive themselves as increasingly physically competent and accepted by their peers there may be somewhat fewer reports of general social, emotional and behavioural difficulties. There was, in addition, a negative association between change in perceived physical competence scores and score changes in the organisation of experience scale ($r\ (39) = -.350$, $p = .029$). In summary, there is some suggestive evidence that changes in attachment representations and self concept scores are associated with changes in SDQ scores.

There is one further way that the importance of attachment may be demonstrated for the nurture group intervention. It might be expected that if nurture groups are effective because of their impact on the attachment system, then children with more insecure attachment and lower self esteem are more likely to benefit in terms of socio-emotional and behavioural variables. We therefore now consider whether children who entered the

nurture group with low attachment security and low self concept were observed to benefit most from the intervention. This was tested by conducting correlation analyses examining the relationship between individually computed mean attachment composites, specific codes and perceived competence and acceptance of nurture group children at baseline and change in the specified domains of the SDQ and Boxall Profile. There was no statistically significant Pearson correlation between changes in the SDQ or Boxall domains and secure, insecure, disorganised or avoidant attachment representation at baseline. There was a significant negative correlation between change in SDQ peer difficulties and representations of siblings/peers helping and comforting one another prior to the nurture group intervention ($r\ (39)$ =-.400, p = .012). This indicates that children who had fewer of these representations in their stories at baseline, improved most in terms of decreased ratings of peer difficulties. There were no other significant relationships between specific codes and change in outcome variables. There were several positive correlations between perceived physical competence at T1 and change as recorded by the SDQ and Boxall measures. The correlations were with score changes in: SDQ - general difficulties ($r\ (38)$ = .460, p = .004), SDQ - peer difficulties ($r\ (38)$ = .337, p = .030), Boxall - organisation of experience ($r\ (38)$ = .413, p = .008). Finally, there was also a positive correlation between perceived acceptance by peers at baseline and changes in the SDQ general difficulties score ($r\ (38)$ = .551, p = < .000). This suggests that children with *higher* perceived cognitive competence and peer acceptance at baseline, changed most in terms of the outcome variables considered.

In summary, there did not seem to be a relationship between low security at baseline and positive behavioural /social change for the nurture group; although children who showed

fewer representations of siblings/peers helping one another at baseline changed most. Children with higher perceived competence and acceptance at T1 appeared to change more than those who have lower perceived competence. Thus, in general, there was no support for the prediction that nurture groups would specifically benefit children with insecure attachments and low self esteem.

Discussion

This study investigated whether nurture groups would have a positive impact upon children's attachment security and self concept by comparing baseline scores with follow up scores taken approximately five months later and comparing these against a comparison group. It was predicted that by establishing positive and accepting relationships with the children, adults running the groups would function as positive attachment figures and this would be evident through the attachment representations of children and adults in children's stories. However, there were no significant changes in the nurture group, relative to the comparison group, in the four composite areas of secure, insecure, disorganised or avoidant attachment. There were some suggestive findings with regard to particular codes, perhaps indicating that whilst there were no marked changes in the quality of attachment representations associated with attendance in the nurture group, there may have been indications of more specific and subtle, fine grained, change (see below). The second hypothesis, that children's perceived competence and acceptance would increase following time in a nurture group, was also not supported as there were no significant time by group interactions in the four areas of self-concept investigated in this study. There was some indication of positive change

within the nurture group in terms of perceived peer acceptance and physical competence and there was a significant time by group effect indicating an improvement in nurture group children's physical competence as rated by their teacher.

Alongside these limited findings, there was evidence that children in the nurture group condition *did* improve relative to the comparisons in terms of social, emotional and behavioural functioning as reported by their teachers. Thus while nurture groups appear to have been a broadly effective intervention in this study, their impact was not readily measurable in terms of change in self esteem or attachment security. Whilst (as discussed below) this may be an issue of inadequate measurement of the latter constructs, the alternative explanation is that attachment and self concepts are not the mediating mechanisms of the effects of the nurture groups; a somewhat surprising conclusion, given the overt attachment and self esteem enhancing focus of the intervention. We will now seek to consider and interpret the findings in more detail.

The descriptive findings reported suggest that the children assessed in this study are quite a heterogeneous group and this may have influenced the results. Whilst it is not possible to consider the participants attachment representations against the wider population (as there is no normative data for the SSAP), the descriptive information suggests that there was quite a range of narrative responses at baseline. Given this range, it seems plausible that, as a group, they were less insecure in terms of attachment and more positive in terms of self-concept than assumed. With regard to self concept, although it is normative for young children to over-estimate their abilities (Harter, 1999) group differences have been established elsewhere and the children included in this

study reported higher perceived competence and acceptance than might have been expected. It is possible that difficulties relating to behaviour (either in terms of internalising or externalising behaviour) or lack of educational progress are the determining criteria in selecting children for the groups. If there was a distinct sub-group of children with higher levels of insecurity and lower self esteem in nurture groups they were of insufficient number to influence the overall findings. In the future, screening at baseline would help staff to obtain a better understanding of children in terms of attachment security and self concept.

In terms of additional factors that may have influenced the findings, it has been noted that there were staffing changes in three out of the ten nurture groups involved in this study and that, given the emphasis placed upon the adult/child relationship, this is likely to have had a negative effect, at least in the short term. Another factor that may have influenced the findings is the relatively short time between baseline and the follow up. The majority of children were still attending nurture group when retested and it could be argued that insufficient time was given for change to occur. It has been noted that internal working models are established at an early age, function automatically, and can be resistant to change (Bretheton and Munholland, 1999). One might expect that changes in behaviour precede representational change. In this study, behavioural change was indeed established through the outcome measures used and it might be that some representational change would occur in time.

The relationship between staff and children is regarded as a central feature of nurture groups and was at the basis of the hypotheses of this study. Self worth and perceived

acceptance and competence, it has been argued, are outcomes of secure attachment. A significant change in terms of attachment security, as inferred through children's narratives, might have been attributable to this key relationship yet we have seen that no such change occurred. Further, the specific attachment representations of adults as accepting and positive, against prediction, did not become more frequent. In this study, such change would have been viewed both as indicating secure attachment and increased self worth (as it suggests the child figure is valued and accepted). Although, as we have seen, there may have been some factors that influenced the finding, it needs to be acknowledged that the relationship between adults and children may not be of the sort implied in the premise of this study. It is possible that although teachers and teaching assistants in the nurture group fulfil some of the criteria for attachment figures, they do not fulfil them all. For example, it is possible that a teacher might offer children physical care, continuity and consistency, without offering the degree of emotional investment that a traditional caregiver might (Howes, 1999). A recent qualitative study suggests that nurture group teachers vary in the degree to which they place emphasis upon encouraging children's self esteem and confidence (Cooper & Tiknaz, 2005). Relationships in the nurture group clearly take place in an educational setting and there may be certain expectations against "too much" emotional investment, quite apart from the individual differences that characterise specific relationships. Although not possible with this study, the attachment security of both parents and adults running the groups no doubt had a bearing upon the outcomes. Further investigation into the characteristics of (and variations in) the adult/child relationships within nurture groups is needed.

In reviewing individual codes relevant to the children's self worth, there were no significant changes in those codes that may be regarded as having direct bearing upon self representation. Thus, there was no evidence of change in the nurture group children in terms of the frequency by which the child figure is represented as help seeking or as being able to resolve a dilemma in a realistic way ("realistic active mastery"). This corresponds to the lack of change in terms of adult representation, since these representations tend to be reciprocal. In contrast, there was some indication that children in the nurture group condition over time were referring more to sibling/peer figures helping and comforting one another within their narratives. This code perhaps says as much about the child's representation of other children, as it does of the self. In a similar way to the equivalent adult codes, it tells us about the extent to which the child protagonist is valued and accepted by others. The finding is of particular interest in light of the apparently positive changes reported in children's actual interactions with one another (see below) and may suggest that a change in peer relations is the most substantial positive outcome of the intervention.

In addition, there were indications children made increasing reference to the child dolls' distress/anxiety following time in the nurture group. In the context of narratives that involve some degree of conflict, this is viewed as a positive feature and as indicative of secure attachment. The "acknowledges distress" code is distinct, in that it is not representational but rather indicates a more direct change in the child (as narrator of the story). Given the emphasis placed upon helping children in nurture groups to recognise and describe emotion, this appears to be a clinically significant change. Reference to the dolls' emotions within a narrative context may be indicative of an increasing reflective

capacity (Fonagy, Steele, Steele, Higgitt and Target, 1994) and might be influenced by the emphasis placed by the adults in nurture groups upon appropriate "mind related" comments (Meins, Fernyhough, Fradley and Tuckey, 2001). In a narrative study with a non-clinical preschool sample children were asked the question: "how do you think the little boy / girl feels?" Those who answered with an emotion together with a plausible reason for that emotion were rated as having higher self esteem by their teachers (Oppenheim, 1997). To summarise, whilst attachment representations of child and adult did not change following time in nurture groups, there were changes in peer representations and acknowledgement of child distress that seem in keeping with the other behavioural findings. Although these findings are suggestive of positive and conceptually explicable change, further investigation is needed in order to draw firmer conclusions.

Despite the lack of significant predicted interactions, looking just at change within the nurture group condition, there were some positive signs in terms of perceived peer acceptance and physical competence. There was also a significant increase in teacher reported physical competence in children in the nurture group (but not in the comparison group). Harter and Pike (1984) have noted that there is a modest correlation between children's perceptions and teacher reports of the same domain. This tends to support the interpretation that there was meaningful change in nurture group children's perceived physical competence. It is of interest that physical competence is a domain where nurture group children seem to consider themselves as becoming more competent. One of the features of the nurture groups is that the children continue to participate in physical education with the mainstream class. As such, this may be an area where these

children do not feel separate from their wider peer group. At the same time, there is emphasis in nurture groups upon children developing co-ordination skills to aid concentration so it is possible that this too informs a growing sense of competence. Physical self concept (consisting of appraisals relating to physical prowess and appearance) has been associated most closely to global self esteem (Keller, Ford & Meacham, 1978).

There was an unexpected decrease in teacher rated academic ability in both groups. As this does not correspond to our more robust measures of academic change, this may have been a measurement issue with the items contained in the PSPCSA not fully reflecting the curriculum as experienced by these children. Change in behavioural, social and emotional functioning appeared to be associated with children who reported as having higher perceived peer acceptance and physical competence at base line. This suggests that children who already had relatively positive views of themselves benefited most from the intervention. This could be because positive self beliefs support these children in making use of the support provided (i.e. the children are more likely to refer the experience of the caring adult to themselves, construing that they are good and adults behaviour is an affirmation of this, making them feel even more confident). Since low scores are rare (and high scores normative) on these measures, an alternative explanation may be that those children who rated themselves low might take longer to change. Whatever the explanation, it highlights the need to identify children with low self concept at baseline and possibly modify the approach taken based upon the specific characteristics of these appraisals.

As noted, there were several time by group findings with regard to the children's social, emotional and behavioural functioning as rated by teachers. Perhaps the most marked change in terms of the nurture group children relates to the different ways they were able to relate to their peers. This was reflected in the reported reduction in peer difficulties and the increase in pro-social behaviour. Some caution is required with regard to the SDQ findings as a baseline difference was found with a higher frequency of nurture group children placed in the "borderline / abnormal" category. It may be that the relatively greater change over time detected in the nurture group condition indicates a regression towards the mean. However, some support to the positive effect of nurture groups is provided by detected change in conceptually related areas. In addition to these SDQ domains, peer relations are relevant to a number of the items contained in the Boxall Profile such as "participates constructively" and "engages cognitively with peers" (the organisation of experience strand); and "accommodates to others" and "responds constructively to others" (the internalisation of comparisons strand). Peer - relational changes were also reflected in the finding that there were more references to peers helping and comforting one another in nurture group children's narratives. The significant increase in nurture group children's reference (as narrator) to the child doll's distress or anxiety, is also in keeping with this pattern of findings; particularly as we have detected a negative correlation between change in this area and change in the peer difficulties SDQ score. We also found that children with fewer representations of peer help in their narratives at baseline improved most in terms of decreasing peer difficulties as rated by their teachers. It seems likely that the small size of nurture groups together with the emphasis upon such behaviours as sharing and turn taking in the nurture group helps children to relate more effectively with one another. Emphasis upon the children's

emotional states may help them to understand their own experiences and those of other children. It may be that the importance of the teacher (and teaching assistant) running the nurture group is therefore less as an attachment figure, but as a mediator in peer relations, perhaps facilitating attachments with other children. In light of these findings there may be some value in making explicit the aspects of the intervention that focus upon promoting empathy and peer acceptance in the children, perhaps drawing from related short term mentalising and relational therapy (SMART) interventions (Fearon, Target, Fonagy, Williams, McGregor, Sargent et al., in press).

This study has the merit of being a "real world" preliminary outcome study, looking at applications of a centrally important psychological theory in a non-clinical setting. However, before concluding, we shall consider the limitations of the study. This is not a randomized study and lacks the internal validity afforded by randomized controlled trial. Although attempts were made to minimize extraneous group differences the children were drawn from different schools and there may have been condition effects that influenced the findings. We have seen that broadly all schools in this study fulfil the criteria to become nurture groups and that they serve populations with similar levels of deprivation. However, there may have been distinctive features about the schools and the authority in which they are run and this limits the extent to which we may generalise the conclusions. Differences between schools (both within the nurture group condition and relative to the comparison group) may have had some influence both on children's progress and on the responses to the teacher rated questionnaires, including a condition related difference, whereby the nurture group teachers were more familiar with the measures and perhaps more expectant of progress. Similarly, the fact that testers were

not blind to the condition might have rendered the design vulnerable to an expectancy effect. Although well matched in a number of respects, the comparison group differed significantly with regard to age and academic ability. The analysis took account of this and with regard to the main effects there were very few instances of academic ability by time or age by time effects. Even so, a more standardised indicator of ability would have been preferable. The numbers of participants were adequate to test broad group by time effects, but did not enable further investigation of sub-groups.

Given the theoretical basis of the intervention, the choice of measures and the use of explicit and implicit measures to investigate self concept were appropriate. There were, despite this, some methodological limitations. Firstly, the SSAP was used both as a measure of attachment composites and implicit self worth. In fact, since there were no broad changes in terms of attachment, the potential confusion did not influence the interpretation of the findings. Whilst there is evidence that the SSAP is a reliable and valid instrument in detecting particular attachment based representations, there is less reported evidence for the psychometric properties of the security composites. Further validation studies are therefore needed to support the use of the SSAP as a measure of attachment security. The PSPCSA has been widely used in studies of self concept, however, there is limited evidence for its effectiveness as an outcome measure. This is, in part, a limitation of using self report methodology in investigating the self concept of young children. The rapidity of developmental change and inconsistencies of response pose difficulties for outcome research. Interpretation of change in perceived competence and acceptance of young children can be difficult. In this study, the teacher scales were a helpful means of interpreting changes in perceived physical competence. There was, in

addition, some convergence between the story stem codes, behavioural reports and the perceived peer acceptance code that tend to support the modest findings.

Conclusion

As we have seen, there was significant change in social and behavioural functioning observed following time in the nurture group that appears to be characterised by improved peer relationships (although for an alternative account see above). Increases in the frequency of "peers/siblings shown to help one another" and in "acknowledgment of child distress" in children's narratives tend to support this finding, as do apparent improvement in nurture group children's perceived peer acceptance. It has been noted that this latter change may be indicative of increasing reflective function in children. These changes may help to explain why reintegration into the mainstream class is generally successful (Iszatt and Wasileska, 1997). By contrast, despite the theoretical underpinnings of nurture groups in attachment theory, security of attachment was neither an outcome of the intervention nor the main mechanism for change. Nor were there significant changes in terms of self concept or implicit self worth. Although these findings may have been influenced somewhat by the limitations of this study, they suggest that the role of adult as caregiver is of less central importance than supposed and that the relationships in the nurture group may be characterised, for the most part, by affectional bonds and roles outside the attachment paradigm (Main, 1999). One such adult role may be as facilitator, enabling children to relate to one another in more rewarding ways. However, it would be premature to discount the relevance of attachment theory for those involved in nurture groups. The methodological limitations of this study have been discussed and more emphatic conclusions might be drawn

following a larger, randomized study. In this study, there are some indications of positive change with regard to children's narrative representations and it is possible that these would increase and become more evident over a longer time period. The positive findings that did occur in children's narratives are associated with secure attachment. Further, it is possible that the nurture group has a protective function in that it guards against the child failing within the mainstream school and, as social comparison plays a greater part, perhaps protects against the formation of low self esteem. The heterogeneous nature of the children participating suggests that different children may benefit from different facets of this complex intervention. Given the multi-facetted nature of nurture groups, the active ingredients of change are likely to be better understood if the intervention is rendered more consistent across schools and dismantling studies are conducted. Future studies may seek to identify children with marked insecure attachment and low self esteem within nurture groups to investigate further the effectiveness of the intervention and whether, at least for these children, the hypotheses of this study is borne out. Such research would help to evaluate further the particular forms of nurturance and support that nurture groups are best equipped to provide.

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Part three: Critical Appraisal

Introduction

This paper reflects upon a study that investigated the attachment security and self concept of children who attended nurture groups, an infant school intervention informed by attachment theory. It was predicted that, in comparison to a control group, there would be positive change as indicated by attachment representations, derived from the children's narratives, and self esteem. Despite the grounding of nurture groups in attachment theory, and although there was evidence of behavioural change, the hypotheses were broadly disconfirmed. The findings suggested that the main area of change related to peer relationships and it was hypothesised that the teacher may have a less direct but more facilitative role in the process of change. This paper will focus on some of the issues raised by the findings of this study, specifically with regard to the role of the teacher in nurture groups and the use of self concept and narrative methodology in outcome research. A case illustration is provided to examine the ways in which these approaches can be used clinically. Finally, before concluding, the paper considers the implications of the proceeding discussion, both clinically and with regard to future research.

The role of adults in nurture groups

At the heart of the nurture group intervention is the relationship between the adults (the teacher and teaching assistant) and the children (Bennathan & Boxall, 2000). In the light of the finding that security representations did not substantially change it is perhaps

worth looking more critically at both the findings and at the role of the adults in the nurture group.

Although it is acknowledged that children form multiple attachments and these are organised in an "attachment hierarchy" not much is known about how these interact or whether they result in generalised or specific attachment representations (Cassidy, 1999). This study reported upon generalised adult (and child) representations across all the stories. Although there were some specific school-based stories developed by the research team, these were not separately examined. It may be that there were some differences in the ways in which adults and children were represented in "school" and "home" stories (see below for a discussion of story stem specificity). Further investigation of the data might also help to clarify whether self representations are differentiated with respect to separate attachment figures.

Howes (1999) proposed that attachment figures/caregivers provide: 1) physical and emotional care; 2) continuity and consistency; 3) emotional investment in the child. It may be that certain teachers place greater emphasis upon the physical care, continuity and consistency and less upon emotional care and investment. Main (1999) has made the useful distinction between attachment bonds and other affectional bonds, reminding us that there are many adult roles in relation to children that are not characterised by caregiving (the behavioural system in parents that is directly complementary to child attachment). No doubt several of these roles - guide, teacher, facilitator - are carried out by adults in the nurture group and they may have proved more relevant to the observed change.

Nonetheless, children do form attachment bonds with teachers and these are distinct from those formed with parents (Howes, 1999). The quality of these bonds may be somewhat stronger within the nurture group, where the adult roles place more emphasis upon every day care giving and nurturance than is usual in a school setting. It is important to remember, however, that the adults in nurture groups are not parent substitutes. In one study of a large normative sample of toddlers and young children in a variety of care situations, Howes and Smith (1995) classified a disproportionate number as "avoidant", using an observationally based measure - the Attachment Q Sort (AQS) (Waters, 1990). Further analysis of the coding showed that this was more marked in older children and was specific to one code: "avoiding the caregiver". In other respects, these children were secure. Bowlby (1982) noted that in normal development, children require less physical contact with their caregiver and they use them more to organise their environment in what is described as a "goal-corrected partnership". It has been suggested that non-parental figures, particularly teachers, take more of an "organising" and less of a "comforting" role (Pianta and Walch, 1995). Thus we might expect somewhat different indicators of secure attachment between children and adults in the nurture group and perhaps these were not fully captured in the story stems or through the coding system employed. One aspect of the teacher's organising role may be to structure the social environment in such a way that enabled the child to establish relationships with peers. This was perhaps the most robust finding in the study. To sum up, the adults probably perform a number of roles for children both inside and outside the attachment paradigm of care and these may be distinct from those of a primary caregiver.

In this study, the focus of attention was the children and there were logistical and pragmatic reasons why more attention was not directed upon the adults involved with the children. In our contact with schools, we noted different qualities in teachers, which, on a subjective level, suggested differences in their own attachment security. One teacher struck me as very structured, capable and consistent, but lacking overt warmth and having a rather defensive quality. It is likely that such a teacher would have very different relationships with the children in the group, than another teacher who seemed to be more "nurturing" in her manner. In a therapeutic context, Holmes (2001) has proposed how attachment characteristics of the therapist and client may prove complementary or pose challenges to the alliance. It may be that the characteristics different teachers match, to a greater or lesser extent, the reciprocal characteristics of children and this is likely to influence the extent and nature of change. In this respect, further consideration of the complimentary roles of the teacher and teaching assistant (TAs) is needed. It may be that the TA typically takes on a more comforting role in contrast to the organising role of the teacher. Although structural/hierarchical factors may help to determine these roles, individual differences, including attachment security, may also be of relevance.

Lastly, in addition to not being parents, the adults running the groups are not therapists, although there is clearly a therapeutic dimension to the work. With this in mind, it is worth considering the kind of support is required by the staff to fully meet the needs of children who are - by definition - posing difficulties. The emotional impact upon staff of working with troubled children is often underestimated in school environments. As there are policy imperatives (e.g. *National Service Framework for CAMHS*) for clinical

services to engage more in community settings, one possible extension of the nurture group provision would be for staff to receive increased consultation and/or supervision in order to make further sense of their own responses to children (Solomon and Nashat, 2006)

Use of self concept measures in outcome studies

My experience of administering the Pictorial Perceived Competence and Social Acceptance Scale (PSPCSA) (Harter and Pike, 1984) was equivocal. It was chosen because it has been widely used and is one of the few measures specifically designed for young children. Although Harter's attentive developmental account of self concept has contributed much to the field (for an account see Harter, 1999), this is not fully reflected in the PSPCSA. Although conceptually the subscales were relevant and appropriate for this age group, it felt as though some of the items were somewhat idiosyncratic and did not fully tap the constructs under consideration. One example, in the maternal acceptance scale, is where the mother either allows the child to sleep over at a friend's house or does not. There may be quite a range of individual, familial and culturally based responses to this item, that do not relate to the child's sense of acceptance. Additionally in this measure, adult acceptance is reflected only with regard to the mother. It is unfortunate that despite planning to include a paternal and teacher acceptance scale, these have not been realised (Byrne, 1996).

In administering the measure, it was noticeable that some children "rattled off" responses in a somewhat automatic way. Often this would be characterised by the child

indicating that he or she was *very like* the positive depiction of a child. Other children were more considered and there was greater variation in their responses. The normative characteristic of young children overestimating their abilities and (to a lesser extent) their acceptance, makes it difficult to interpret change. Probably there was not enough time between testing to detect the trend towards more accurate self evaluation that is reflected in somewhat lower scores. Change in self evaluations can only meaningfully be understood by interpreting it in the light of other information (including the teacher-rated scales for competence and acceptance in the PSPCSA). Further, it is difficult for a measure to adequately reflect the changing salience of particular activities/experiences children have as they get older. If the items in a scale vary according to age (as they do somewhat in the PSPCSA) it is difficult to evaluate their equivalence.

My immersion in the field of self concept through the literature review and this study have certainly made me appreciate the complexity of the "self system" (Harter, 1999) and the reductive quality of certain approaches that simply equate high self esteem with positive outcomes. Perhaps in response to this there are theorists who have questioned the assumption that high self esteem is necessarily a good outcome (Kohn, 1996). In the adult population high self esteem is sometimes associated with "normal narcissism" (Sedikides, Rudich, Gregg, Kumashiro & Rusbult, 2004), not a personality structure indicative of close social relationships. In including "openness" (related also to secure attachment) as a relevant dimension to self worth, Cassidy (1988) allows us to make the distinction between children who defensively report themselves as "perfect" and those who are basically positive about themselves but aware of their limitations. One strength of the study under review was that it used several measures (including an implicit

measure that could be used to indicate self worth) that provided a wider picture of the child. If the focus of the study had been more exclusively upon self concept, then perhaps these different measures could have been used more actively to help interpret the findings (see case study below).

I also have a sense that alternatives to self report, not used in this study, such as certain interview techniques, offer a richer and more contextualised understanding of how children see themselves and how this changes over time. One such approach is the Self Understanding Interview (Damon and Hart, 1988) which can be used with younger children and includes such questions as "what are you proud of about yourself?". As the authors state: "the conceptual basis of children's self evaluations differ from individual to individual, and is certain to change dramatically in the course of development" (p. 15, Damon & Hart, 1988). One of the virtues of this approach is the equal emphasis placed upon the "self as agent" (the "I" part of the self) as "self as object" (the "me" part of the self). The latter is the exclusive concern of self concept measures; and the former is relatively under explored in children (Harter, 1995), as is the relationship between the two. The "I self" constitutes the subjective experiences of continuity, distinctness and agency. The importance of the self as agent is clear, as disturbances in this dimension are likely to have a profound effect upon the child's development and capacity to make accurate evaluations about themselves. Although this conceptualisation is more challenging to incorporate into outcome research, it needs to be acknowledged if substantial progress in the field is to be made. I discuss the potential of narrative approaches in this respect below.

Use of narrative measures in outcome studies

The principal outcome measure from the point of view of our studies was the Story Stem Assessment Procedure (SSAP, Hodges, Hillman & Steele, 2004). This was theoretically appropriate and generated a richer set of responses than provided by self or adult report. Outcome research imposes certain limitations upon what can be studied and whilst reviewing the results, I felt some tension between my interest in specific features of change and the need to report upon group change. To some extent it felt, given these constraints, as if the qualities of the measure were not fully utilised in this particular study. Whilst, clearly, it is necessary evaluate group change it seemed that there was much of clinical interest that was missed in amalgamating scores across stories and children. In administering the stories to a reasonably large number of children, one begins to establish a sense of whether responses are more or less typical. It seemed to me, that there were relatively few children with markedly disturbed narratives and this perhaps is borne out by the non-significant findings. With these more disturbed children, the characteristics evident at baseline were also often present when they were assessed again. Changes when they did occur were quite small. For example, a child might on reassessment continue to tell disorganised stories but to indicate greater security in one or two stories. Although it is evident that the child's responses usually form something of a pattern and that this suggests that they provide information about underlying expectations and representations (Hodges, 2005), it also seems plausible that different stories evoke different responses in different children. One important variable in this respect is age and the associated developmental stage of the child. Bretherton and Munholland (1999), in reviewing their narrative attachment system, noted that with three year olds a "monster in the bedroom" story seemed to discriminate them best in terms of

attachment security. In older children (in Piaget's terms, at the pre-operational stage) who, it is argued, have acquired greater realism, a hurt knee or separation-reunion story is more discrimatory. Thus it may be that, according to age, certain story responses were more clinically significant than others. For this reason a design that was able to investigate children's responses to particular stories would perhaps generate more clinically significant information than the one reported.

Case example

To make more sense of these issues, an account is now presented of one child's response to the story stem measure and to one story in particular. I hope to illustrate how much potential narrative measures have in indicating change and how if used in conjunction with self concept measures they can help obtain a meaningful impression of the child's sense of self worth. The child in question is a boy, referred to as John, who was five years nine months when first assessed and six years two months at follow up. Briefly, John's parents had separated several years before his starting at the nurture group and he had a degenerative illness about which he had limited knowledge and which his mother, it was reported, had not fully acknowledged.

John's stories were characterised by their somewhat repetitive form and lack of connection between characters. Things seemed to "just happen" rather than get resolved in a satisfactory way. One unusual feature in several of his stories was that characters would be laid down and pieces of furniture placed on top of them. Using the SSAP coding system these characteristics were indicated by an absence of secure codes and the

presence of insecure codes (marked by a high frequency of the "adult unaware" code). There were no indications of a positive sense of self as might have been inferred by codes such as "child seeks help" or "realistic active mastery". In addition, there were process features concerning the *way* John told the stories that indicated some specific disorganised features ("bizarre responses") and more consistently avoidant responses ("premature foreclosure" and "avoidance in the narrative frame" where the child ignores the basic dilemma of the story). Although attachment composite mean scores between baseline and follow up were not markedly different (and one might speculate that John's illness and its impact within the family may have influenced this), there were some interesting changes in particular stories.

In one SSAP story stem, "Crying Outside", the main protagonist child is shown to go around the side of the family house and is then heard crying, whilst the family (mother, father and sibling) remain indoors. In this particular story, the pivotal codes relate to the parent figures' responsiveness to the child's distress and the codes "adult helps" and "adult comforts" could be viewed both as indicative of secure attachment and that the child figure is valued and acknowledged. In this respect, the presence or absence of a negative code "adult unaware" is also of central importance. At baseline, John told (although he showed what happened rather than spoke for the most part) a long story where the child outside was not noticed at all. The father doll is shown to cook the dinner as if nothing had happened. At one point the sibling goes outside, but does not see or respond to the protagonist. The rest of the family are then shown to watch TV. The protagonist re-enters the house and stands in front of the TV. The mother pushes him out of the way. Then, in turn, both brothers are placed on a brick representing a

wall, which the narrator describes as the roof. They fall off the roof and the mother throws the sibling figure into the bin. The story ends with the other characters separately lying down. Despite its length, the story has the quality of ending abruptly as there is no clear resolution. In John's follow up version, five months later, certain patterns are repeated in that the adults remain unaware and the father doll is again preoccupied (this time fixing the aerial). The sibling again is shown to walk outside but this time, he gets his brother and sits him on the sofa. After pushing the wall to move the house he sits down next to his brother and the story ends. The mother does not feature at all this time. This version of the story then is characterised by help in the form of the child rather than parents. Given the paucity of reciprocal responses, this narrative event seems clinically significant. Additionally, the concision and shape of the story suggested a less avoidant response than formerly.

Without some attention to the specific features of John's responses - both across and within stories - a good deal of relevant clinical information is lost. In this particular case, the child's reported competence and acceptance were quite high when we first met him. In the light of his narrative responses (as well as teacher reports) it seems fair to conclude that this response was, at least in part, defensive. Although arguably a categorical variable (defensive / open) might have been created through triangulating the various measures, it is difficult to replicate the kind of specificity afforded in this case report across children and groups. Such an approach in a modified form might be used within nurture groups to establish a clearer profile of individual children and, by so doing, help to determine their particular needs.

Clinical and research implications

This paper has highlighted some of the findings of a study investigating change in nurture groups and there are some clinical and research implications that arise from this. In terms of clinical practice, it may be that nurture groups will benefit from more careful screening of children to provide information of attachment security and self concept and this information is used to inform and track progress. It is possible that an adapted version of the SSAP could be helpful in this respect, as well as use of observational measures to rate self concept and attachment security (see below). Staff may also benefit from some clinical consultation and supervision, which might make more explicit the aspects of their work that relate to forming relationships with children and help them to reflect upon the emotional impact of working in this quite intense setting. In terms of research, there is further work to be done in terms of examining the patterns of change in children who are characterised upon entry into the nurture group by insecure attachment and / or low self esteem. More consideration is needed of the relationship between teachers, parents and children, including the possible use of the Adult Attachment Interview (Main & Goldwyn, 1994) with the adults involved. Further consideration of which story stems seem to discriminate change most effectively within the nurture group would also be helpful, if the promise of this methodology is to be fully realised. In addition to the measures used in this study, it is worth considering the introduction of complementary methodology such as observation based indicators of attachment and self esteem both for clinical and research purposes. One measure of attachment security that might be used alongside a narrative approach such as the SSAP, is the Attachment Q Sort (AQS) (Waters, 1990), based upon observation of the child it is designed for use with children between one and five years old (so would not be applicable to all children

in nurture groups). It might then be possible to trace predictable relationships between attachment representations and behaviour, as well as tracking change. In terms of self worth, it would be possible to make use of teacher-rated inferred self esteem (Haltiwanger & Harter, 1989) as well as implicit self worth based on the child's response to a puppet interview (Cassidy, 1988). If the study was specifically interested in self concept then use of an interview technique (e.g. Damon & Hart, 1988) might also prove revealing. More broadly, with regard to studies that seek to understand children's self system, there is potential for a narrative measure such as the SSAP to provide insight into the "self as agent" by investigating the way in which the child tells the story. The storyteller can be distinguished from the story and a child who, for example, tends to neutralise negative events or repeat events without achieving resolution, and may reflect useful information about the way the child deals (or fails to deal) with anxiety provoking material.

Conclusion

This study has opened up my understanding of the complexity of evaluating children's self understanding and convinced me that a range of approaches are required to adequately go about this task. Although I have found the experience of conducting this piece of research at times taxing and frustrating, it has helped me to better understand the process of research and the challenges involved in seeking to evaluate complex interventions. There is no doubt that although coming from the "outside", I became engaged with the adults and children who make up the different nurture groups and realised that, although it is helpful to question the basis of any endeavour, it is important to see it as something beyond the scope of a particular piece of research. It is difficult

and, perhaps not appropriate, to remain neutral about an intervention that is seeking to promote the social and emotional well-being of children within an educational climate which tends to view progress in a narrow and instrumental way. Clearly, there is (or should be) an ethical dimension to all research but it is perhaps more pressing in outcome research; there is a responsibility on the part of the researcher to be open-minded about the benefits of an intervention and to do justice to those involved. Partly, this is achieved by looking attentively at the intervention and through doing so helping to clarify those aspects that seem to give rise to positive change. Part of this process may involve disconfirming certain assumptions and helping to consider why expected change did not occur. Hopefully the study discussed in this report will contribute to establishing a better understanding of both the particular ways in which nurture groups benefit children and the active ingredients of change.

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Appendices - Empirical study

Appendix 1a – Criteria for nurture group schools and selection of children

CRITERIA FOR NURTURE GROUP FROM LEA GUIDELINES

Nurture groups will be established and funded by the Authority in schools where the need for such provision is greatest and where schools are likely to be able to maintain a consistent nurture group roll of 10-12 pupils. The following criteria will be considered:

7.1 a minimum of two forms of entry, except in the 25 most deprived wards in the LEA where the minimum size will be 1.5 forms of entry

7.2 high level of need as shown by non-statemented special educational needs funding and economic deprivation funding received by the school

7.3 situated in an area of deprivation, based on the Department of the Environment Index of Conditions, Child Poverty Index

7.4 high percentage of Children in Need (Children's Act 1989), based on Children in Need Survey 2002

7.5 the percentage of pupils entitled to free school meals is high

7.6 attainment of pupils on entry is low compared to other schools in Hertfordshire

7.7 school quality and stability as reported by SIAS and Ofsted

7.8 accommodation available in Infant/Early Years part of the school to provide a nurture group room with floor area not less than 40 square metres

7.9 predicted long-term need for nurture group provision based on the special educational needs of current and previous school cohorts, i.e. a minimum of 20 children in Key Stage 1 for whom nurture group provision would be appropriate, to be confirmed by the school's attached EP and/or the Quadrant SN team

7.10 whole school commitment to educational inclusion and the establishment of nurture group principles and practice in the school

1 CRITERIA FOR NURTURE GROUP PUPILS

8.1 Nurture group placement will be considered for children who are underachieving for social emotional and behavioural reasons:

· Children who are very restless, cannot listen, behave impulsively, aggressively, or show inappropriate emotional responses to a range of situations
· Children who are withdrawn and unresponsive and who have difficulty relating to others
· Children whose known early or recent history suggests that they may be at risk
· Children whose recent history suggests they may be vulnerable in the school setting due to difficulties in relationships at home

8.2 Parental agreement to nurture group placement is essential

Appendix 1b - *Comparative information about schools participating in study*

These figures are based on information compiled in 2006. The ranking system was applied to 123 infant and primary schools in the education authority that were eligible based upon pupil intake (minimum admission limit of 45 children) to become nurture groups. In all domains reported a low rank signifies a high level of need. A final ranking is given based upon the summed ranks in the five domains under consideration. See below for a description of these different domains. NB insufficient information was available on the rankings of NG schools 9 and 10 An estimated rank (*) has been given by the senior educational psychologist co-ordinating nurture group provision in the area, based on the ratings of local schools.

School (Total number of schools eligible = 123)	Pupils on roll During last term of study	Income deprivation affecting children (IDAC) rank (2004)	Index of multiple deprivation (IMD) rank (2004)	Free School Meals Entitlement (FSN) rank (2006)	Key Stage 1 Average point score (KS1 APS) rank (2006)	Foundation Stage Profile (FSP) rank (2006)	Final Rank
Comparison School 1	222	8	4	2	48	29	7
Comparison school 2	185	17	20	5	13	46	10
Comparison school 3	200	38	48	14	27		18
Comparison school 4	146	5	6	10	65	64	20
Comparison school 5	217	59	69	27	18	18	26
NG school 1	240	10	8	9	3	2	1
NG school 2	378	3	15	11	9	3	2
NG school 3	265	7	14	15	29	7	5
NG school 4	178	2	10	1	8	99	13
NG school 5	119	40	50	21	1	16	16
NG school 6	289	50	40	3	4	61	21
NG school 7	325	30	36	55	22	55	28
NG school 8	235	37	24	13	102	101	54
NG school 9	180						8*
NG school 10	289						11*

Appendix 1b continued
Indices of Need – summary of domains that influence over all school ranking

Income deprivation affecting children – measures the proportion of children aged under 16 years who were living in families in receipt of income support and other means tested benefits.

Index of multiple deprivation – provides an overall score of deprivation combining scores for 7 domains affecting people in a given areas. These are:

- Income
- Employment
- Health and disability
- Education, skills and training
- Barriers to housing and services
- Crime
- The Living Environment

Free school meals entitlement – children, who's parents receive a range of support payments, are entitled to free school meals

Key Stage 1 average point score – the average score for pupils within each school in key stage 1 (ages 5-7 years) of the National Curriculum.

Foundation Stage Profile Rank – the foundation stage profile a way of summing up each child's progress and learning needs at the end of the pre-school foundation stage (at 5 years old). Schools are ranked according to average pupil achievement at this point.

Appendix 2 – Life events information

Summary of the range of life events experienced by children between Time 1 and Time 2

Nurture Group	Control group
Divorce (n = 0)	Divorce (n = 0)
Birth of a sibling (n = 2)	Birth of a sibling (n = 2)
Parental separation (n = 4)	Parental separation (n = 2)
Moved schools (n = 3)	Moved schools (n = 5)
Onset of parental mental health problems (n = 0)	Onset of parental mental health problems (n = 1)
Illness of child (n = 2)	Illness of child (n = 0)
Father in prison (n = 1)	Father in prison (n = 1)
Social Services involvement because of concerns (n = 1)	Social Services involvement because of concerns (n = 1)
Positive event (Parents getting married) (n = 1)	Positive event (Mum's depression improved, Resumed contact with Dad, Returned to mother by social services) (n = 3)
Disruptions to attendance, aggression reported at home, (n = 2)	Disruptions to attendance, aggression reported at home (n = 0)

Appendix 3a – Story Stem Assessment Protocol (SSAP) (Hodges, Hillman, Steele, 2004)

Appendix 3a – Outline of story stems

Abridged Protocol for Story Stem Assessment (SSAP)

The Anna Freud Centre /
Great Ormond Street Hospital

STORY 1 - Crying Outside

Characters: Child 1, Child 2, mum, dad
Props: Sofa, Side of house, TV
Layout: All 4 characters sitting on sofa

So, here is (Child 1) and s/he lived in a house with his/her mum and his/her dad, brother/sister. One day they were all sitting in their house and this little boy/girl (Child 1) went out and she went right round the back of the house - we cannot see him/her anymore but now listen (MAKE CRYING SOUNDS).
Now, show and tell me what happens next?

STORY 2 - Little Pig

Characters: Pigs, Cows, Lions/Tigers, Crocodile, Camels
Props: None
Layout: Animals in groups of same species.

Do not refer to 'families' in talking about the animals.

In arranging animals, the animals should be in the bottom left hand of the table nearest to the child with the pig family in the most extreme corner.

Now, let me start off the story. Once there was a little pig and it lived here with all the other pigs, big ones and little ones. And the cows lived here, the lions lived here, the crocodile lived here. And the camels lived here.
One day, the little pig went for a long walk. He went a long way, past the cows, past the lions/tigers, past the crocodile, past the camels. (Show little pig as far away as possible from all the other animals - in the top right hand corner of the table)

Then he said "oh!, oh! I'm lost! I can't see the other pigs! I don't know how to get back!"

Show me and tell me what happens now?

STORY 3 - Stamping Elephant

Characters: Elephant, all the animals, Child 1, Child 2, mum, dad
Props: Side of house
Layout: Same as for last story with family sitting on the ground (backs to the side of the house)

The people are having a picnic in the garden and all the animals are there too. And there's a big elephant (bring elephant onto table). The elephant sometimes gets fierce and it goes stamp, stamp, stamp (showing elephant stamping). The children and the animals get a bit scared of the elephant when it is going stamp, stamp, stamp (repeat the action).

Show me and tell me what happens now in the story?

STORY 4 - Picture from School

Characters: Child 1, Child 2, mum, dad
Props: Sofa, Side of House, paper
Layout: Mum, dad and Child 2 sitting on sofa at home.
Child 1 is separate (at school)

So, here's Mum and dad and Child 2 are at home and Child 1 is at school (show Child 1 separate).
And he/she was at school and s/he has made a really good drawing.
And s/he thought - "this is a really good drawing I've made. I'm going to take this home when I get home from school".
So, then school ended and s/he took her/his picture and went home, it was just round the corner - and s/he knocked at the door.

Show me and tell me what happens now?

STORY 5 - Spilled Juice (MSSB story stem)

Characters: Mum, Dad, Child 1, Child 2
Props: Table, chairs, cups, jug,

Layout: Four characters sitting on chairs around the table, each with a cup on the table.

For this story, the family is thirsty and they are going to have some juice.
They are all sitting around the table drinking their juice when Child 1 gets up and reaches across the table (demonstrate Child 1 doing this) and "Uh, oh, s/he spilled the juice all over the floor" (make Child 1 knock jug off table so it can be seen by the subject)

Now, can you show me and tell what happens now?

STORY 6 - Mum's Headache (MSSB story stem)

Characters: Mum, Child 1, Child 3 (same-sex friend)
Props: Couch/sofa, smaller sofa chair, television, side of house
Layout: Mum and Child 1 on sofa watching TV. Smaller chair next to sofa. (Examiner has Child 3 ready in hand)

For this story, mum and Child 1 are sitting on the couch watching TV (mum turns to Child 1).

MUM: Oh, Child 1, I have such a headache! I just have to turn this TV off and go and lie down.

So, mum gets up and turn the TV off (make a clicking noise to indicate it is off)

MUM: Child 1, can you find something quiet to do for a while?

CHILD 1: OK, mum, I'll read a book.

So, mum is lying down on the couch (put her there) whilst Child 1 is sitting in his/her chair (put Child 1 on chair) reading his/her book.

Then, there's a ring at the door (make a doorbell noise) and Child 1 goes to answer it (move Child 1 towards side of house) where Child 3 (friend) has appeared.

Look, it's Child 1's friend Child 3

CHILD 3: Hey, Child 1, there's this really good TV show on, can I come in and watch it with you?

Show me and tell me what happens now?

STORY 7 - Burnt Hand (MSSB story stem)

Characters: Mum, Dad, Child 1, Child 2
Props: Stove, table, chairs, pan
Layout: Daddy and Child 2 at table on chairs; Mummy and Child 1 at stove/cooker (with Child 2 on left in front of cooker)

For this story, the family are in the kitchen. Now, mummy and Child 1 are at the stove (pointing at them). Mummy is making dinner for everyone. Daddy and Child 2 (pointing at them) are sitting at the table.

MUM: We're going to have a really good supper but it's not quite ready yet. Don't get too close to the stove.

CHILD 1: Mmmmmmm, that looks good. I don't want to wait. I want some now.

(show Child 1 leaning over and knocking the pan off the stove onto the floor)

CHILD 1: Ow! I've burnt my hand! It hurts!

Now, can you show and tell me what happens now.

STORY 8 - Lost Keys (MSSB story stem)

Characters: Mum, Dad, Child 1
Props: None
Layout: Mum and dad facing each other. Child 1 approaching them (equidistant from both).

Child 1 comes into the room and sees Mum and Dad looking at each other like this. Look at my face (examiner does an angry scowl).

MUM (angrily): You lost my keys!
DAD (angrily): I did not!
MUM: Yes, you did, you always lose my keys!
DAD: Well, I did not lose them this time.

Can you show and tell me what happens now.

STORY 9 - Burglar in the Dark (modified from MSSB story stem)

Characters: Mum, Dad, Child 1
Props: Couch, bed, side of house
Layout: Mum and dad on couch downstairs. Child 1 on sofa bed lying down upstairs (separated from parents by side of house)

It's night time and mum and dad are downstairs (show mum and dad on couch). Upstairs, Child 1 is in his/her room in bed, and suddenly the lights go out and Child 1 hears a sound (scratch the underside of the table to create noise).

CHILD 1: (gasps and then pauses) It's a burglar! It's a thief! (in a soft creepy voice)

Now, can you show and tell me what happens now.

STORY 10 - Exclusion

Characters: Mum, Dad, Child 1
Props: Couch, Side of house
Layout: Mum and dad on sofa. Child opposite them.

Mum and dad are sitting on the couch talking.

DAD/MUM(same sex parent talks to child 1): Child 1, mum/dad and I would like some time alone together. Will you go up to your room and play with your toys. Please shut the door so it is quiet.
CHILD 1: OK, dad/mum (show child leaving lounge and put him/her aside.

Now, mum and dad hug each other (show them hugging).

Now, can you show and tell me what happens now.

Appendix 3a - SSAP (Continued)
THE THREE ADDITIONAL SCHOOL BASED STORIES DEVELOPED FOR THIS STUDY

After "Spilt Juice"

Link: Now in this story we don't need all these people apart from Child 1 who is going to be at school.

SCHOOL STORY 1 - Spoilt Story

Characters: Teacher, Child 1, Child 3, small piece of 'drawing paper'.
Props: Board, Teachers desk, child's desk, teachers chair, two children's Chairs
Layout: Teacher sitting at desk, Child 1 sitting at desk working, Child 3 in researcher's hand.

In the next story, CHLID 1 is in his/her classroom at school and the TEACHER, let's call her Mrs Smith is sitting at his/her desk.

CHILD 1 is practicing writing letters/a story (depending on age choose one of these). The Child is writing very carefully and well. Then CHILD 3 who's a new girl/boy (same sex) in his/her class comes over and says 'can I help you writing your story/letters?'.
CHILD 1 says 'yes OK'. Then CHILD 3 picks up a pen and suddenly scribbles all over child 1's page and ruins it.

Now, can you show me and tell me what happens now?

Prompts

What's happened about the spoilt picture/story.

SCHOOL STORY 2 - School Play

Characters: Teacher, Child 1, Child 2, Child 3
Props: Two children's desks, blackboard
Layout: Teacher standing facing Children 1, 2 (n.b. use the sibling and if the child asks, say 'this is one of child 1's classmates in this story') and 3

Here's the teacher Mrs Smith (Show Mrs Smith standing in front of CHILD 1,2 & CHILD 3. All the children in Child 1's year are excited because they are practicing for a school play when the children will dress in costumes. On the day of the dress rehearsal the TEACHER says to the children: 'you must and not play around because the rehearsal is important'. During the rehearsal Child 1 is playing around, jumping on and off a bench and he/she suddenly falls over in front of everyone and hurts her/himself ...

Now, can you show me and tell me what happens next?

Prompts

Did anyone do anything about it?

After "Exclusion" Link: Now for this last one we're going to go back to school.

STORY 3 – Picture from home

Characters: Teacher, Child 1, Child 2, Child 3 small piece of 'drawing paper' (optional).
Props: Board, Teacher's chair.
Layout: Teacher sitting facing Children 2 and 3 sitting down in front of her. CHILD1 with piece of paper in researcher's hand

The TEACHER is sitting with the class who are all on the mat at register time.

CHILD 1 has done a painting over the weekend which he/she is really proud of. So he/she takes it into school (show child bringing picture into the room and sitting down).

Now, can you show me and tell me what happens next?

Prompts

Did anyone do anything about the picture?

SSAP - Appendix 3a (continued)

Full Set of Toys for Story Stems

Note: The characters that we use are Playmobil figures and other props should be in scale.

Characters:
1 x Mother
1 x Father
1 x male (neighbour)
3 x female child
3 x male child

Animals:
Pigs (ie. including 3-4 adults and 2-3 piglets)
Lions/Tigers (3-4 adults and 2 plus cubs)
Camels (2 large camels, 1 small)
Cows (3-4 large cows, 1-2 calves)
1 x crocodile
1 x large elephant with tusks (trunk down)

Props:
1 x wooden brick (approx. 15 cm long, 8 cm wide and 3 cm deep) to use as side of house, garden fence or bed.

1 x sofa
1 x armchair
1 x television
1 x dining room table
4 x chairs/stool (for use with table)
1 x cooker
1 x jug *
4 x cups/beakers *
1 x frying pan
1 x football (we use a ball of blue tack)
1 x bathroom shelves/cabinet
1 x wash hand basin
1 x small piece of paper (square)

* These can be made from play dough, fimo or plasticene

Appendix 3b

Guidance on SSAP coding

(Hodges, Hillman & Steele, 2004)

HOW TO RATE:

For each story, read the child's story completion through and then go back and rate. If you are unsure, you may wish to put a question mark **?** so that you can go back and conference with a fellow coder.

For those unfamiliar with the narratives, it may be advisable to keep a protocol close at hand to refer to.

Please write down any clinical notes or observations which have not been picked up by any of the codes or whose code you are not sure of.

All codes are on a 3-point scale

0 = NOT PRESENT

1 = LIMITED / MODERATE

- Somewhat or Doubtful
- After prompts (see note below)
- Lower level of intensity to a '2'

2 = DEFINITELY PRESENT

NOTES ON RATING NARRATIVES

Rating where a child is repeating or paraphrasing from the Narrative Stem

The child might repeat something from the interviewer's story stem.

- Feeling (e.g. crying in 'Crying Outside', fierceness of elephant and 'scared' feeling of children/animals)
- Limit Setting (e.g. Bathroom Shelf, Bikes, Burnt Hand, Mum's Headache)
- Injury (e.g. Burnt Hand or Bathroom Shelf)
- Being in Danger (e.g. Lost Pig, Stamping Elephant, Burglar in the Dark)
- Coherent Aggression (e.g. Lost Keys, Stamping Elephant, Three's A Crowd)

Code **0** if the child is repeating the same theme/action/feeling **using the same words and level**
e.g. the children are scared in 'Stamping Elephant' *(rates 0 on Acknowledgment of Distress/Anxiety)*
e.g. 'I told you to be careful' in 'Bikes' *(rates 0 on Limit Setting)*
e.g. he hurt his hand in 'Burnt Hand' *(rates 0 on Child Injured/Dead)*
e.g. Mum and dad are fighting in 'Lost Keys' *(rates 0 on Coherent Aggression)*

Code **1** if the child is repeating the same theme/action/feeling **but using different words and/or a higher intensity**
e.g. the child is crying in 'Crying Outside' - note that the interviewer does not use the word 'crying'
(rates 1 on Acknowledgment of Distress/Anxiety)
e.g. the children are frightened in 'Stamping Elephant' - using a synonym for 'scared'
(rates 1 on Acknowledgment of Distress/Anxiety)
e.g. his hand has lots of blood on it in 'Bathroom Shelf' *(rates 1 on Child Injured/Dead)*
e.g. the family run away in 'Stamping Elephant' *(rates 1 on Child Endangered)*
e.g. Go away, I won't play with you in 'Three's A Crowd' *(rates 1 on Coherent Aggression)*

Code **2** if the intensity is much higher and if the child introduces a different idea or feeling.
e.g. the hand falls off in 'Burnt Hand'
e.g. he is angry in 'Crying Outside'
e.g. the elephant is stamping all over the animals in 'Stamping Elephant'
e.g. she is not allowed to eat dinner in 'Burnt Hand'
e.g. the burglar is hiding under the child's bed in 'Burglar in the Dark'

Rating After Prompts

In many cases, the interviewer will need to prompt the child in order to obtain the information s/he needs. A prompt is often needed to elicit the ratings for the above (see examples under each category), and a rating of **1** should be given if a prompt is required.

- Changing Narrative Constraints
- Avoidance within Narrative Frame
- Acknowledgement of Distress or Anxiety (for both child and adult)
- Adult Provides Help, Comfort or Protection
- Adult shows Affection/Appreciation
- Adult Unaware

Appendix 3b (continued)

CODES THAT MAKE UP ATTACHMENT SECURITY COMPOSITES (SSAP)

Secure	Insecure	Disorganised	Avoidant
Child seeks help	Child endangered	Child parents/controls	No engagement
Siblings /peers help	Child injured dead	Catastrophic fantasy	Disengagement
Realistic active mastery	Excessive Compliance	Bizarre / atypical	Initial aversion
Adult provides comfort	Adult unaware	Bad/Good shift	Premature foreclosure
Adult provides affection	Adult rejects	Magic / Omnipotence	Changing narrative constraints
Limit setting	Adult injured / dead	Extreme aggression	Avoidance in narrative frame
Acknowledgement of child distress	Neutralisation		Denial / distortion of affect
Acknowledgement of adult distress	Throwing away		

Appendix 3b (continued)

7 AVOIDENCE CODES FOR TEACHER STEMS

Spoilt Picture	No reference to the child's spoilt picture
School Play	No reference the child's injury
Picture From Home	No reference to the child's picture

Rated **1** or **2** in the same way as other avoidance codes, according to need for and responses to prompts (see manual p.14)

Examples:

School Play: *Teacher said get up and the teacher goes why are laying on the floor? (gets the toys up...and sits her down) She said I was just sitting down and then I fell off. I was sitting on it and I just went (bang) down.*

Spoilt Picture:....*So that boy, he jumps over the board. He hurt his self. And the other boy jumps over the board. (rotates board so flat surface that he places characters on) And he's standing on the board, He ok (story continues with no reference to picture).*

20a TEACHER CONTROL / FAIR

Teachers in the narrative are depicted as in control and fair in the narrative. This means that the teacher seems to exercise a balanced and appropriate response to the protagonist and non-protagonist children in the story.

In order to be coded 'Teacher Control/Fair', a teacher needs to administer reprimands which are appropriate to the misdemeanour and/or show a responsiveness to the child (through reward or praise).

NOTE:
'Teacher Fair' may be coded in addition to 'limit setting' if the behaviour is appropriate and not excessive. If it is unnecessarily punitive this should be coded under coherent aggression and not under teacher fair.

'Teacher Fair' should not be coded if the teacher is overly sympathetic and lenient towards all characters.

Rated 2: If the teacher shows a level of control/fairness to **all** the children involved.

Rated 1
If prompted or if the representation seems to be limited, but it must be appropriate to all children directly involved in the narrative. If the teacher shows a sense of fairness but this is not consistent throughout the story it should be coded as a **1**.

Rated 2
Spoilt Picture:
Teacher shows mild discipline towards the protagonist child and also understanding towards the victim.
School Play
Teacher again shows disappointment/dismay/distress and disciplines appropriately but does not punish the child to the point of being excluded from the play. If the teacher only either administers reprimands or shows responsiveness to the child (and therefore only responds to one aspect of the dilemma) they should be coded a one.
Picture from Home
Teacher is aware and appreciative of picture but also doesn't allow the praise and attention to deflect from the rest of the class.

Examples rated 2:
...Ben got off his chair and telled the teacher and the teacher got up and walked to the new boy and told him off and he brang his chair and he had to sit next to the teacher...and gave Ben a new piece of paper...

...and the teacher said you shouldn't play around...and says you children stay there with the other teacher and I'll take Jack to the medicine room and be good, when I come back we will finish the practice.
...The teacher told that little girl off and said go and sit back down...and she gave Polly a new sheet.

Examples of punitive teacher responses to be coded under limit setting but rated 0 under teacher fair:
...and then the teacher told them off again, and they both got detention.

35. PLEASURABLE REALISTIC REPRESENTATIONS OF SCHOOL LIFE

Representations of school routines and interactions where the child's affective tone in showing these representations is neutral or positive.

Examples of School Life can include:
The child looking forward to or actually receiving stickers/rewards for good work, behaviour etc.
Inclusion of two or more school routines such as circle time and getting into line (one would not be sufficient).
References to more than one friend in the narrative.

Playing together, playful interactions.

Rated 0 if the Child Uses the Props but does not create anything

Rated 1
If the child adds some slight classroom representation to the narrative (i.e. putting up picture on the wall.

Rated 2
. *...So she sat at her bit and then she was always writing her best. She got a star of the week certificate.*

H ADULT 'CHILDLIKE' (Analogous to Parent Childlike)

Parents or Teachers are depicted as children in the Narrative. The depiction may or may not also meet the criteria for 'Child Parents or controls'.

Examples: (Rated 2)

Mummy is very naughty she has to come to school today.

Spoilt Picture:*...and the teacher sits on her (child's) chair and she has the teachers chair and writes on the board*

School Play: *Yeah and they are playing. (making them do handstands, makes the teacher do handstands)...Yeah lie under there (puts under bench). And then he (puts figure near teacher) stands there and that little girl stands there (puts them lying near teacher).*

Picture from Home: *One of the little girls pretends to be the teacher and the teacher sits on the carpet, and the little girl giggles and the teacher likes to learn a bit more, she has to sit it up nicely because a new visitor was coming.*

Appendix 3c

Internal consistencies and correlations between adult and child SSAP codes

Table 1. *Principal component analysis – positive adult / positive child codes*

Component matrix			
Adult codes		**Child codes**	
Adult provides comfort	.869	Acknowledge child distress	.765
Adult affectionate	.827	Child seeks help	.682
Adult provides help	.808	Siblings / peers help	.633
Limit setting	.649	Realistic mastery	-

Table 2. *Correlations between positive child codes and positive adult codes*
Total number of participants at time 1 - N 83
** correlation significant at the 0.01 level (2-tailed) * correlation significant at the 0.05 level (2-tailed)

	1	2	3	4	5	6	7	8
1) Acknowledge Distress child								
2) Child seeks Help	.325**							
3) Siblings peers help	.294**	.126						
4) Realistic active mastery	.012	.128	.095					
5) Acknowledge Distress adult	.400**	.260*	.127	.381**				
6) Adult Comfort	.416**	.281*	.203	-.060	.194			
7) Adult Help	.270*	.419**	.239*	.170	.139	.568**		
8) Adult affection	.386**	.384**	.362**	.064	.353**	.738**	.501**	
9) Limit Setting	.231*	.144	.232*	.233*	.216*	.376**	.481**	.314**

Appendix 4 – Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA) (Harter and Pike, 1984)

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children*
Individual Recording and Scoring Sheet, Form P-K

Child's Name _____ Age _____ Gender: M F

Class/Grade _____ Teacher _____ Testing Date _____

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence	Maternal Acceptance
1. Good at puzzles	1 ___			
2. Has lots of friends		2 ___		
3. Good at swinging			3 ___	
4. Mom smiles				4 ___
5. Gets stars on papers	5 ___			
6. Stays overnight at friends		6 ___		
7. Good at climbing			7 ___	
8. Mom takes you places				8 ___
9. Knows names of colors	9 ___			
10. Has friends to play with		10 ___		
11. Can tie shoes			11 ___	
12. Mom cooks favorite foods				12 ___
13. Good at counting	13 ___			
14. Has friends on playground		14 ___		
15. Good at skipping			15 ___	
16. Mom reads to you				16 ___
17. Knows alphabet	17 ___			
18. Gets asked to play by others		18 ___		
19. Good at running			19 ___	
20. Mom plays with you				20 ___
21. Knows first letter of name	21 ___			
22. Eats dinner at friends'		22 ___		
23. Good at hopping			23 ___	
24. Mom talks to you				24 ___
Column (Subscale) Total:	☐	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	_____	_____	_____	_____

Comments:

*Susan Harter and Robin Pike, University of Denver, 1983

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children*
Individual Recording and Scoring Sheet, Form 1-2

Child's Name _____ Age _____ Gender: M F

Class/Grade _____ Teacher _____ Testing Date _____

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence	Maternal Acceptance
1. Good at numbers	1 ___			
2. Friends to play with		2 ___		
3. Good at swinging			3 ___	
4. Eats at friends				4 ___
5. Knows alot in school	5 ___			
6. Others share		6 ___		
7. Good at climbing			7 ___	
8. Mom takes you places				8 ___
9. Can read alone	9 ___			
10. Friends to play games with		10 ___		
11. Good at bouncing ball			11 ___	
12. Mom cooks favorite foods				12 ___
13. Good at writing words	13 ___			
14. Has friends on playground		14 ___		
15. Good at skipping			15 ___	
16. Mom reads to you				16 ___
17. Good at spelling	17 ___			
18. Gets asked to play by others		18 ___		
19. Good at running			19 ___	
20. Stays overnight at friends				20 ___
21. Good at adding	21 ___			
22. Others sit next to you		22 ___		
23. Good at jumping rope			23 ___	
24. Mom talks to you				24 ___
Column (Subscale) Total:	☐	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	_____	_____	_____	_____

Comments:

*Susan Harter and Robin Pike, University of Denver, 1983

Teacher's Rating Scale
of Child's Actual Competence and Social Acceptance*
Form P-K

Child's Name _____ Class/Grade _____ Rater _____

Instructions: Place the appropriate number indicating how true the statement is for this child in the designated space to the right of each item:

Not Very True = 1, Sort of True = 2, Pretty True = 3, Really True = 4

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence
1. Good at puzzles	1 ___		
2. Has lots of friends		2 ___	
3. Good at swinging			3 ___
4. Gets stars on papers	4 ___		
5. Stays overnight at friends		5 ___	
6. Good at climbing			6 ___
7. Knows names of colors	7 ___		
8. Has friends to play with		8 ___	
9. Can tie shoe			9 ___
10. Good at counting	10 ___		
11. Has friends on playground		11 ___	
12. Good at skipping			12 ___
13. Knows alphabet	13 ___		
14. Gets asked to play by others		14 ___	
15. Good at running			15 ___
16. Knows first letter of name	16 ___		
17. Eats dinner at friends		17 ___	
18. Good at hopping			18 ___
Column (Subscale) Total:	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	___	___	___

Comments:

arallels the Pictorial Scale of Perceived Competence and Acceptance for Young Children, Susan Harter and Robin Pike, niversity of Denver, 1983.

Teacher's Rating Scale
of Child's Actual Competence and Social Acceptance*
Form 1-2

Child's Name _____ Class/Grade _____ Rater _____

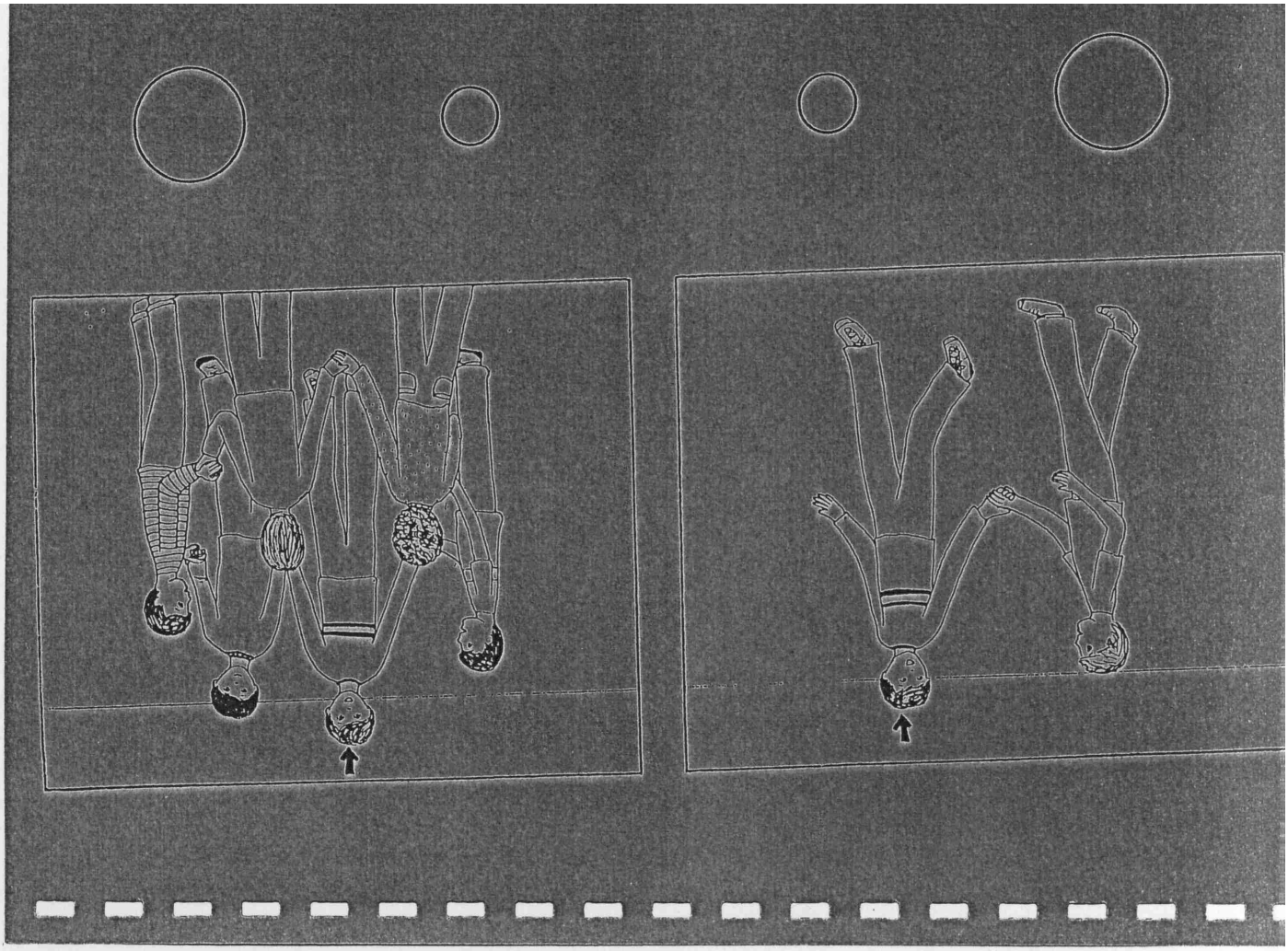
Instructions: Place the appropriate number indicating how true the statement is for this child in the designated space to the right of each item:

Not Very True = 1, Sort of True = 2, Pretty True = 3, Really True = 4

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence
1. Good at numbers	1 ___		
2. Friends to play with		2 ___	
3. Good at swinging			3 ___
4. Knows alot in school	4 ___		
5. Others share with this child		5 ___	
6. Good at climbing			6 ___
7. Can read alone	7 ___		
8. Has friends to play games with		8 ___	
9. Good at bouncing a ball			9 ___
0. Good at writing words	10 ___		
1. Has friends on playground		11 ___	
2. Good at skipping			12 ___
3. Good at spelling	13 ___		
4. Gets asked to play by others		14 ___	
5. Good at running			15 ___
6. Good at adding	16 ___		
7. Others want to sit next to this child		17 ___	
8. Good at jumping rope			18 ___
Column (Subscale) Total:	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	_____	_____	_____

Comments:

allels the Pictorial Scale of Perceived Competence and Acceptance for Young Children, Susan Harter and Robin Pike, versity of Denver, 1981.



ITEM 2

This boy has lots of friends to play with. Do you have:

A whole lot of friends to play with (4) OR Pretty many (3)

This boy doesn't have very many friends to play with. Do you have:

A few (2) OR Hardly any friends (1)

Appendix 5 - Strengths and Difficulties Questionnaire - teacher version (taken from www.sdqinfo.com website)

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name ..... Male/Female

Date of Birth .....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Signature ..... Date.....

Parent/Teacher/Other (please specify:)

Thank you very much for your help

UCL Committee for the Ethics of Non-NHS Human Research

Amendment Approval Request Form

1. ID Number:	**Name and Address of Principal Investigator:** **Professor Peter Fonagy** **Sub Department Clinical Health Psychology** **University College London, Gower St** **WC1E 6BT**
2. Title of Project: ***Assessing the Impact Nurture Groups***	
3. Information about the amendment: **(a) Is the amendment purely administrative?** **YES** NO N/A **(b) Has the Participant Information Sheet/Consent Form been changed as a result of the amendment?** **YES** NO N/A **If yes, please enclose a copy.**	
4. Summarise the issues contained in the amendment. **The parent information sheet was reviewed by a number of Head Teachers who felt that it was too detailed (and potentially off-putting) and suggested a shorter version (attached). This indicates that should parents require further information it will be available at the school.**	
5. Please give any other information you feel may be necessary:	
Signature of Principal Investigator: **Signed hard copy sent on**	**Date of Submission:** **23.03.2005**
FOR OFFICE USE ONLY:	

ave been approved **by the Committee for the**

Date: 4/4/2005.

Please return completed form to:

Ms Helen Dougal, Secretary of the Committee for the Ethics of Non-NHS Human Research
Graduate School, North Cloisters, Wilkins Building

Appendix 6a – Boxall Profile

The Boxall Profile

For the structured assessment of the developmental progress of school-age children
The Profile should only be used in conjunction with the Boxall Profile Handbook for Teachers.*

Child's Name:
School:
Date of assessment:
Date of birth:
Age at assessment:
Profile completed by
For how many terms have you known this child?
Relationship to child, e.g. class teacher, SENCO

Situation in which assessed - please give details, including class or group size
Mainstream class
Small group or unit within the school
Other special provision

Current provision for this child's special educational needs
Code of practice level
Date of most recent I.E.P. / B.S.P.
Date of next review
Current special provision made - please describe in as much detail as possible
Special provision made in the past
History of pre-school provision, e.g. nursery or playgroup attendance - please describe

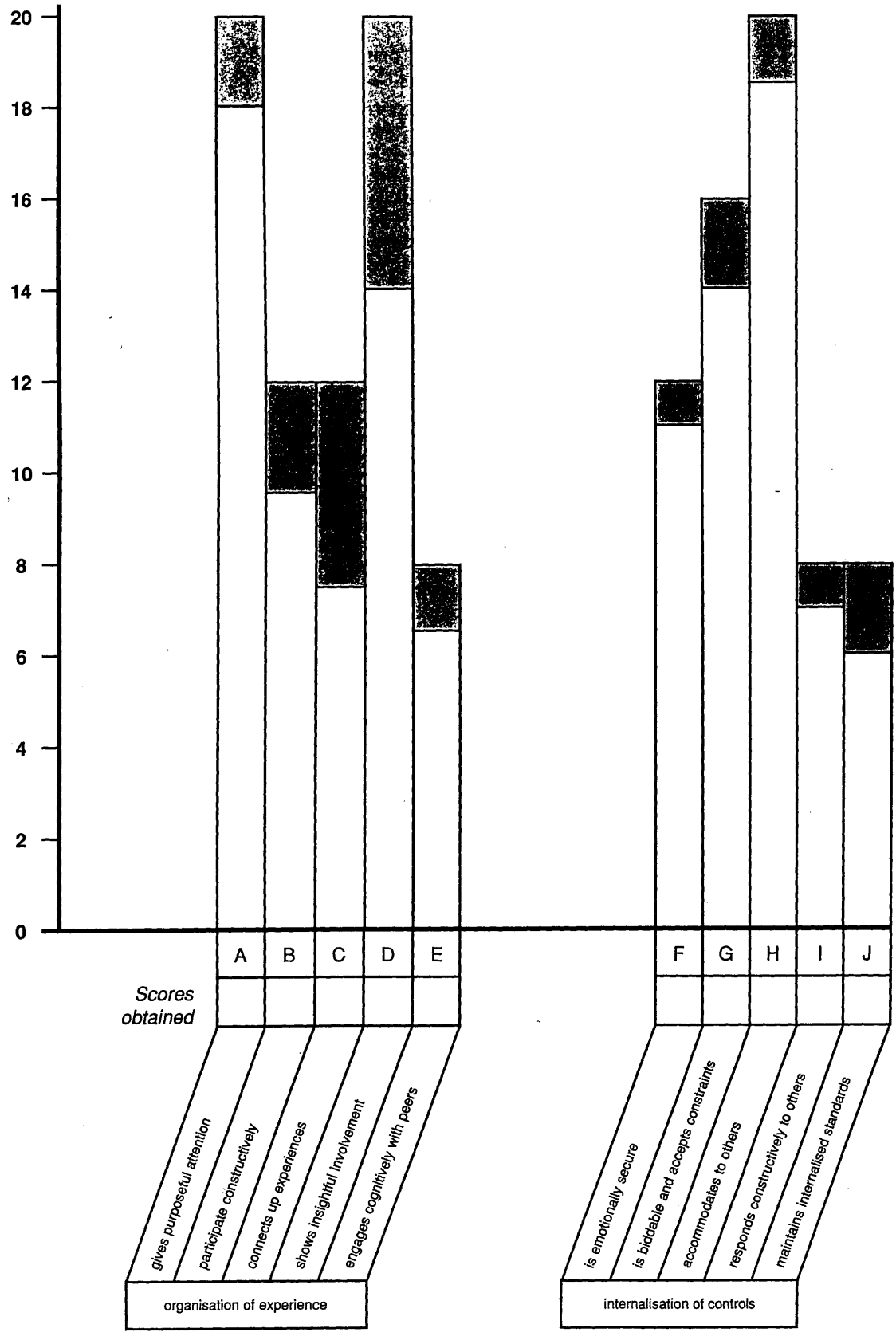
* By Marion Bennathan and Marjorie Boxall, available from the Nurture Group Network, 24 Murray Mews, London NW1 9RJ. Tel/Fax 020 7485

Section I

DEVELOPMENTAL STRANDS

The scores for the items in Section I are entered in the histogram below in the column indicated by the relevant letter (A, B etc ...J). The outline is irregular because the number of items varies from column to column.

The shaded green areas indicate the range of average scores in a sample of competently functioning children in five age groups from 3 years 4 months to 8 years.



Section I

DEVELOPMENTAL STRANDS

Enter scores for Section I items in the appropriate column of Section I histogram

Score each item in turn according to the Key below
4 Yes, or usually
3 At times
2 To some extent
1 Not really, or virtually never
0 Does not arise, not relevant.
(Refer to page 9, 2nd bullet point, of Handbook for discussion).

		Score	*Column*
1	**Listens with interest when the teacher explains something to the class**		A
2	**Takes appropriate care of something s/he has made or work s/he has done** *investment of feeling in his/her achievement is implied, and self esteem*		F
3	**Appreciates a joke or is amused by an incongruous statement or situation** *disregard lack of appreciation of a joke which is at his/her expense* *disregard amusement that is clearly inappropriate*		D
4	**Begins to clear up or bring to a close an enjoyable work or play activity when the teacher, with adequate warning, makes a general request to the group** score 2 if a personal and specific request is needed		G
5	**Makes and accepts normal physical contact with others** *e.g. when holding hands in a game*		H
6	**Makes appropriate and purposeful use of the materials/equipment/toys provided by the teacher without the need for continuing direct support** *disregard repetitive activity which does not progress*		A
7	**Maintains acceptable behaviour and functions adequately when the routine of the day is disturbed** *e.g. when there are visitors in his/her class, or the class is taken by a teacher s/he does not know well*		H
8	**Makes an appropriate verbal request to another child who is in his/her way or has something s/he needs** *disregard situations of provocation*		H
9	**Complies with specific verbal prohibitions on his/her personal use of classroom equipment** *score 2 if s/he complies but often protests or sulks*		G
10	**Abides by the rules of an organised group game in the playground or school hall** *interacts and co-operates and continues to take part for the duration of the game*		J
11	**Accommodates to other children when they show friendly and constructive interest in joining his/her play or game**		H
12	**Listens, attends and does what is required when the teacher addresses a simple positive request specifically to him/her** *e.g. to get out his/her work book*		A
13	**Works or plays alongside a child who is independently occupied, without interfering or causing disturbance**		G
14	**Shows awareness of happenings in the natural world, is interested and curious, and genuinely seeks explanations**		B
15	**Of his/her own accord returns to and completes a satisfying activity that has been interrupted** *e.g. s/he finishes a painting or carries on with a written story later in the day or the following day*		C
16	**Is adequately competent and self-reliant in managing his/her basic personal needs** *i.e. clothes; toilet; food*		A

17	**In freely developing activities involving other children s/he constructively adapts to their ideas and suggestions**		I
18	**Turns to his/her teacher for help, reassurance or acknowledgement, in the expectation that support will be forthcoming** *disregard occasional normal negativism*		F
19	**Accepts disappointments** *e.g. if an outing is cancelled because it is raining, or s/he is not chosen for favourite activity, s/he does no more than complain or briefly moan*		J
20	**Takes part in a teacher centred group activity** *e.g. number or language work, or finger games* *score 2 if s/he does no more than try to follow*		A
21	**Shows genuine interest in another child's activity or news; looks or listens and gains from experience** *does not intrude unduly; does not take over*		B
22	**Shows genuine concern and thoughtfulness for other people; is sympathetic and offers help**		I
23	**Recalls information of relevance to something s/he reads or hears about and makes a constructive link**		C
24	**Makes constructive and reciprocal friendships which provide companionship** *score 3 if the friendship is with one child only* *score 2 if no friendship lasts longer than a week* *score 1 if the association is fleeting, albeit constructive and reciprocal*		D
25	**Contributes actively to the course of co-operative and developing play with two or more other children and shows some variation in the roles s/he takes** *e.g. in the Play House, other free play activities, or improvised class drama*		E
26	**Is reasonably well organised in assembling the materials s/he needs and in clearing away** *reminders only are needed*		B
27	**Communicates a simple train of thought with coherence** *e.g. when telling or writing a story, or describing an event*		C
28	**Responds to stories about animals and people with appropriate feeling; appropriately identifies the characters as good, bad, funny, kind etc.** *disregard response to nursery rhymes or fairy stories*		D
29	**Makes pertinent observations about the relationship between two other people; appropriately attributes attitudes and motives to them**		D
30	**Engages in conversation with another child** *an interchange of information, ideas or opinions is implied*		E
31	**Looks up and makes eye contact when the teacher is nearby and addresses him/her by name** *i.e. heeds the teacher; does not necessarily pay attention*		F
32	**Sits reasonably still without talking or causing disturbance when the teacher makes a general request to all the children for their attention**		G
33	**Gives way to another child's legitimate need for the classroom equipment s/he is using by sharing it with him/her, or taking turns** *no more than a reminder is needed*		H
34	**Shows curiosity and constructive interest when something out of the ordinary happens** *is secure enough to accept a change or the introduction of something new, is alert to the possibilities of the event and gains from it*		D

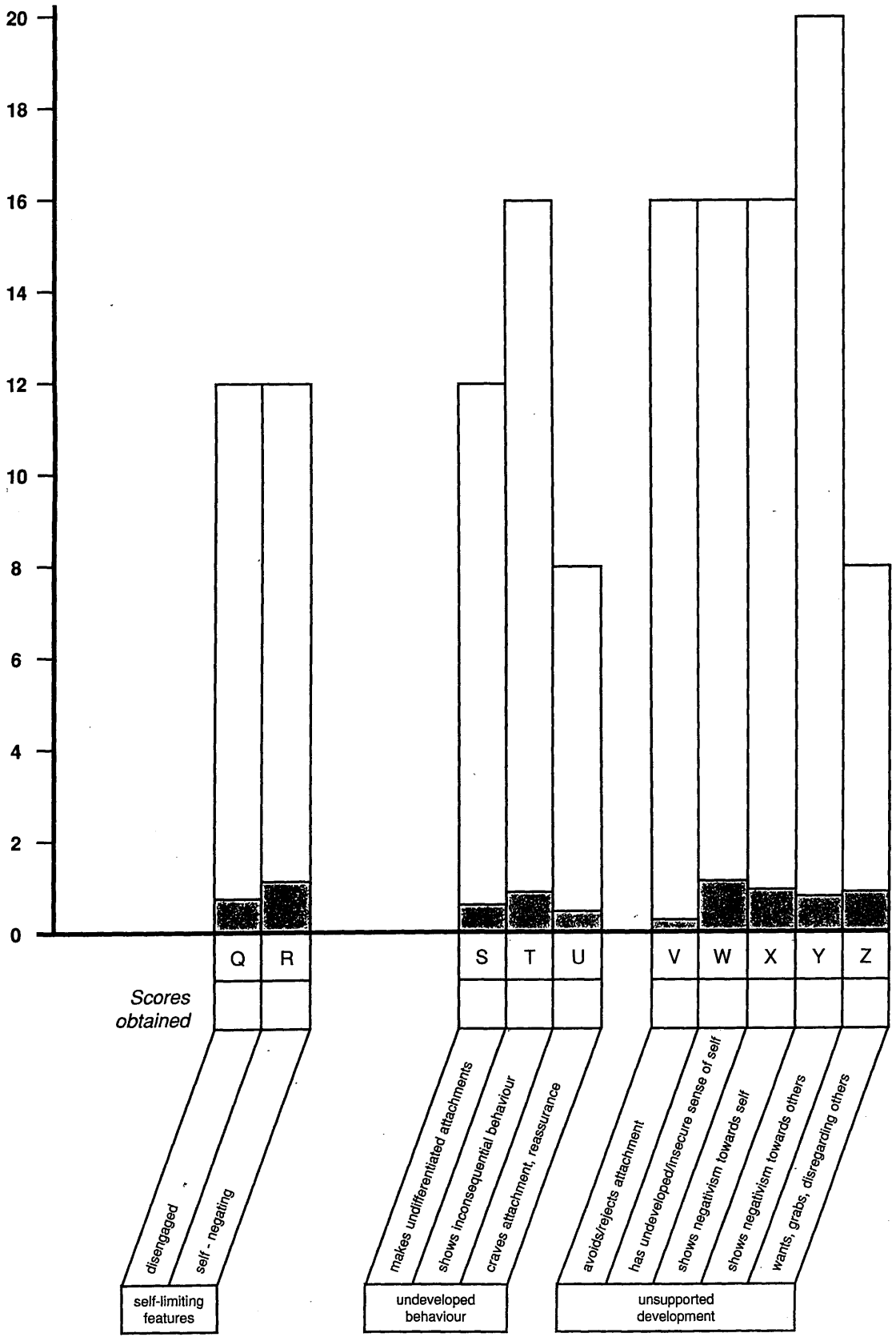
Any additional comments to amend or extend the information provided by the Profile?

Section II

DIAGNOSTIC PROFILE

The scores for the items in Section II are entered in the histogram below in the column indicated by the relevant letter (Q, R etc ...Z). The outline is irregular because the number of items varies from column to column.

The shaded green areas indicate the range of average scores in a sample of competently functioning children in five age groups from 3 years 4 months to 8 years.



Section II

DIAGNOSTIC PROFILE

Enter scores for Section II items in the appropriate column of Section II histogram

Score each item in turn according to the Key below
4 Like this to a marked extent
3 Like this at times
2 Like this to some extent
1 Only slightly or occasionally like this
0 Not like this
(If behaviour may exist but has not been observed leave Score blank.
Refer to page 9, 2nd bullet point, of Handbook for discussion).

		Score	*Column*
1	**Abnormal eye contact and gaze**		V
2	**Avoids, rejects or becomes upset when faced with a new and unfamiliar task, or a difficult or competitive situation**		R
3	**Variable in mood; sometimes seeks and responds to affectionate contact with the adult, at other times rejects or avoids**		W
4	**Oblivious of people and events; doesn't relate; is 'out of contact and can't be reached'**		Q
5	**Uncontrolled and unpredictable emotional outburst or eruptions that release and relieve pent-up and endured anger or distress**		X
6	**Inappropriate noises or remarks, or patterns of behaviour, that are bizarre fragments of no obvious relevance**		T
7	**Erupts into temper, rage or violence when thwarted, frustrated, criticised or touched; the 'trigger' is immediate and specific**		Y
8	**Relates and responds to the adult as a baby would; enjoys baby-level pleasures; may happily babble and coo, call out or crawl about, or mirror the others**		S
9	**Always has to be first, or the best, or have the most attention or get immediate attention**		Z
10	**Adopts stratagems to gain and maintain close physical contact with the adult**		U
11	**Lacks trust in the adults' intentions and is wary of what they might do; avoids contact, and readily shows fear**		V
12	**Self-conscious and easily rebuffed, and hypersensitive to disapproval or the regard in which s/he is held by others**		R
13	**Contrary in behaviour; sometimes helpful, co-operative and compliant, at other times stubborn, obstinate and resistive, or unheeding**		W
14	**Repetitively pursues a limited work or play activity which does not progress**		Q
15	**Spoils, destroys, or otherwise negates the achievement or success s/he has worked for and values**		X
16	**Gives uninhibited expression to boisterous and noisy behaviour; is not influenced by normal social constraints and expectations**		T
17	**Reacts defensively even when there is no real threat; is evasive, blames others, finds excuses or denies**		Y
18	**Over-reacts to affection, attention or praise; gets very excited and may become out of control**		S
19	**Desperately craves affection, approval and reassurance, but doubts and questions the regard shown; seeks it repeatedly but remains insecure**		U

20	**Can't wait for his/her turn or something s/he wants; plunges in or grabs**		Z
21	**Functions and relates to others minimally, and resists or erupts when attempts are made to engage him/her further**		V
22	**Self-disparaging and self-demeaning**		R
23	**Attention-seeking in a bid for recognition or admiration**		W
24	**Disparaging attitude to other children; is critical and contemptuous**		Y
25	**Listless and aimless; lacks motivation and functions only with direct and continuing support or pressure**		Q
26	**Sulks when disapproval is shown, or when attention is withdrawn, or when thwarted**		X
27	**'Is into everything'; shows fleeting interest, but doesn't attend to anything for long**		T
28	**Remembers a real or imagined offence, bears a grudge and determinedly takes his/her revenge**		Y
29	**Clings tenaciously to inconsequential objects and resists having them taken away**		S
30	**Sullen, resentful, and negative in general attitude and mood**		V
31	**Can't tolerate even a slight imperfection in his/her work and is upset or angry if s/he can't put it right**		W
32	**Feels persecuted; imagines that others are against him/her, and complains of being 'got at' and left out**		X
33	**Restless and erratic; behaviour is without purposeful sequence, continuity and direction**		T
34	**Determinedly dominates or persecutes by bullying, intimidation, or the use of force**		Y

Any additional comments to amend or extend the information provided by the Profile?

Factors Likely To Affect The Scores Obtained

A number of factors may be affecting the overall development of the child and the extent of his/her participation in school. Please use your judgement to give a score for each factor below, according to the following key:

3 = considerable
2 = to some extent
1 = no, or not evident
0 = not known

	Score	*Additional information / Description of Difficulties*
Limited understanding or use of language *(including English as an Additional Language)*		
Overall learning difficulties *irrespective of cause.*		
Speech defects e.g. articulation difficulties		
Visual Impairment		
Hearing Impairment		
Gross or fine motor co-ordination difficulties		
Any medical condition or treatment which is affecting participation in school		
Problem of attendance and / or late arrival in school		

Additional notes and observations from the child's teacher;

Appendix 6b - Internal reliabilities for Boxall clusters

Boxall strand	Alpha if item deleted	Standardised item alpha
Organisation of experience		.8546
Gives purposeful attention	.8071	
Participates constructively	.7830	
Connects up experiences	.7732	
Shows insightful involvement	.8069	
Engages cognitively with peers	.8243	
Internalisation of controls		.8419
Is emotionally secure	.8401	
Is biddable/accepts constraints	.7579	
Accommodates to others	.7398	
Responds constructively	.8020	
Maintains internalised standards	.8084	
Self limiting features		.2499
Disengaged	Not calculated*	
Self-negating	Not calculated*	
Undeveloped behaviour		.6657
Makes undifferentiated attachments	.2529	
Shows inconsequential behaviour	.6658	
Craves attachment, reassurance	.5990	
Unsupported development		.8721
Avoids/rejects attachment	.8838	
Has undeveloped/insecure sense of self	.8112	
Shows negativism towards self	.7913	
Shows negativism towards others	.8201	
Wants, grabs, disregarding others	.8574	

*Not calculated as only 2 items in strand

Appendix 7 – Letter of approval from UCL Graduate School Ethics Committee

The Graduate School
University College London
Gower Street London WC1E 6BT

Professor Leslie C Aiello
Head of the Graduate School

25 January 2005

Professor Peter Fonagy
Sub-Department of Clinical Health Psychology
Torrington Place
University College London

Dear Professor Fonagy

Re: Notification of Ethical Approval

Project ID: 0407/001: Assessing the Impact of Nurture Groups

The above research has been given ethical approval following review by the UCL Committee for the Ethics of non-NHS Human Research for the duration of the project subject to the following conditions:

1. You must seek Chair's approval for proposed amendments to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form'.

The form identified can be accessed by logging on to the ethics website homepage: http://www.grad.ucl.ac.uk/ethics/ and clicking on the button marked 'Key Responsibilities of the Researcher Following Approval'.

2. It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. Both non-serious and serious adverse events must be reported.

   Reporting Non-Serious Adverse Events.
   For non-serious adverse events you will need to inform the Ethics Committee Administrator within ten days of an adverse incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair of the Ethics Committee will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

   Reporting Serious Adverse Events
   The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator immediately the incident occurs. Where the adverse incident is

unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. The adverse event will be considered at the next Committee meeting and a decision will be made on the need to change the information leaflet and/or study protocol.

3. The Committee thought that this was an extremely interesting piece of research and therefore look forward to receiving a copy of your brief final report (maximum of two sides of A4), which MUST be submitted on completion of the research. It would be helpful if you could comment in particular on any ethical issues you might wish to draw to the attention of the Committee.

Yours sincerely

Sir John Birch
Chair of the UCL Committee for the Ethics of Non-NHS Human Research

Cc: Fiona Seth-Smith, Netali Levi and Richard Pratt, Sub-Department of Clinical Health Psychology, UCL

Appendix 8 – Amendment approval form from Ethics Committee

Appendix 9a
Original information sheet for parents

PARENTS INFORMATION SHEET ABOUT NURTURE GROUP STUDY
Do nurture groups have a positive effect upon children's relationships?

Introduction
In the next six months, three researchers from University College London are planning to visit your child's school to look closely at a form of school support known as "Nurture groups". As you may know, Nurture groups aim to help children improve their relationships with adults, their concentration and enjoyment of school. Although Nurture groups have been shown to help children manage at school it is not known how they help. As part of the Nurture group the child develops a supportive relationship with one particular teacher. The study is interested in finding out how important this relationship is in helping children who have been part of the Nurture group. The researchers will seek to improve understanding of the way children think about teachers and other adults, to see how their views of adults influence their performance in school, both in the classroom and playground.

Who will participate?
Children aged between 4 and 8 years (Reception, Years 1, 2 and 3) will be selected from a number of schools in this area. Children will be selected who are due to attend a Nurture group. They will be assessed as they start the Nurture group and after 5 months of belonging to the group. In order to check whether any changes are indeed due to attending the Nurture group the study will also assess children from the same schools who do not attend Nurture groups. These children will also be tested on two occasions.

A small number of children will be selected for a pilot study before the main study begins and they will be assessed on one occasion.

What will be asked of the children?
Some time will be spent putting each child at ease and making sure they understand the activity. Verbal agreement will be obtained and the children will be informed that they can withdraw from the activity at any point. Children's views will be assessed with a simple story completion task. The story is introduced by using a set of dolls and the child is then asked to finish it in their own way. Each story involves imaginary figures. To give you an idea of the activity here is an example:

The child is shown some dolls or animal toys. The researcher shows the child the characters and sets up the story. For example: "A little pig goes away from the other pigs and gets lost." The researcher will say: "Show and tell me what happens next?"

In addition to the stories the children will be asked some general questions to get an idea of how they think about themselves. The activity will take place in a quiet area within the school environment and take less than one hour. In order to keep an accurate record of the stories the sessions will be video taped. The videos will be confidential and only

be viewed by people helping with the study. The children's names and identities will be kept confidential.

We will also be asking the school to supply information about the children's academic achievement and peer relations.

Research Team
Netali Levi
Fiona Seth-Smith
Richard Pratt

Trainee Clinical Psychologists at the Sub-department of Clinical Health Psychology, University College London, Gower Street, London, WC1
The team can be contacted via a named teacher at your child's school or alternatively you can contact Richard Pratt on (mobile number)

Project Supervisor
Professor Peter Fonagy
Sub-department of Clinical Health Psychology, University College London, Gower Street, London, WC1

Risks, Discomforts and Benefits
Most children enjoy telling stories and welcome the opportunity to use their imagination. The time may well be thought of as a welcome break from the school routine. Most children are also happy to talk about themselves. In the unlikely event that a child should become upset during the activity it will be discontinued and appropriate support would be given to the child. Children have the right to withdraw from the study at any point. This study will increase understanding of how Nurture groups help children. In doing so, it may help children in the future get the support they need.

Confidentiality
Any information shared during the study will be treated with strict confidence and once completed, it will not be possible to identify individuals. Throughout the study only the researchers (see above) will have access to the information. The data (videos and written material) will be collected and stored in accordance with the Data Protection Act for 5 years, after which time it will be destroyed.

Request for Further Information
You or your child are encouraged to discuss any concerns regarding the study with one of the research team at any time, and to ask any questions that you might have.

Refusal or withdrawal
You or your child may refuse to participate. If you were to decide you did not want your child to continue with the study, then please contact one of the research team at the earliest opportunity. In the event of withdrawal, all information gathered in the study concerning your child will be destroyed.

Thank you for taking time reading through this information sheet. Please fill in the enclosed form if you DO NOT want your child to participate in this study.
Should you require any further information or wish to speak to a researcher they would be very pleased to hear from you.

NURTURE GROUP STUDY – University College London

IF YOU CONSENT TO YOUR CHILD PARTICIPATING IN THIS RESEARCH, PLEASE COULD YOU SIGN AND RETURN THIS SLIP TO THE SCHOOL.

I CONSENT TO MY CHILD PARTICIPATING IN THE NURTURE GROUP RESEARCH PROJECT

Childs Name:.....

Class:.....

Parents/Guardian Name: .....

Parents/Guardian Signature .....

Date.....

Appendix 9b - Letter sent to parents

Dear Parents/Carers,

Re: School Involvement in Research

Our school has been selected to be involved in some research being conducted by a team from University College London. This is an exciting project looking at children's feelings about grown-ups in school.

It will involve some children working with a researcher on two occasions, using play materials and toys to tell stories. The sessions will need to be videotaped.

There will be just one copy of the all tapes made which will be held by the researchers for academic purposes only. They may be used as a basis for discussion in academic/research groups. Steps will be taken to ensure the anonymity of the school and the individual children. (Children may need to remove their school sweatshirts or reverse the logos when being filmed!) Children's names will be changed to ensure confidentiality in any written transcripts of the video recordings.

Please contact me by..... if you have any objections to your child's involvement in this project or if you have any further queries.

Yours sincerely,

Headteacher

Appendix 10 – Information shared with children

INFORMATION FOR CHILDREN PARTICIPATING IN NURTURE GROUP STUDY

(To be told to child before commencing with story completion task)

I am visiting the school today to meet some of the children. I am going to ask you to help me with some stories. We will tell the stories using toys like these (shows a model). I will start the story and then I would like you to carry on. You can tell and show me the rest of the story yourself.

If you feel upset or worried about a story please tell me. We can stop and wait for a while. Then I will check if you want to carry on. If you don't that's ok. Most children find the stories lots of fun.

After we have stopped I'll give you some time to ask some questions about what we have done.

We're going to video the stories so I can watch them later. (Show child camera). Is that ok? The tape will be kept safe. It will only be watched by me and a few other people who are helping me. We won't show the stories to anyone else. Your name will not be used in any of the things we write about the stories. No one will know that you made up the stories. (Check child understands).

So do you think you can help me finish some of these stories?

Remember if you want to stop at any time, please let me know.