



**The 'Supporting Kids, avoiding Problems' (SKIP) study.
Relationships between school exclusion, psychopathology,
development and attainment; a case control study**

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3 The 'Supporting Kids, avoiding Problems' (SKIP) study. Relationships between school exclusion,
4 psychopathology, development and attainment; a case control study
5

6 **Introduction**

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8 Schools have a recognised role in the identification and for the social, emotional and behavioural
9 needs of the child (NICE, 2008, Department for Education, 2014a). Persistent disruptive behaviour is
10 the most common reason given by headteachers for excluding a child from school (Department for
11 Education, 2015b). The breakdown or potential breakdown of a child's school placement particularly
12 during primary school should prompt a thorough assessment to explore tractable contributing factors
13 related to learning, mental health and the relationships between the school- child- family context.
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16 Research suggests that children may be excluded from school with unidentified, unsupported, or
17 poorly managed Attention Deficit Hyperactivity Disorder (ADHD) (O'Regan, 2010). Similarly, a
18 small case-control study identified undetected autistic behavioural traits among children reported to
19 be at risk of exclusion due to persistent disruptive behaviour (Donno et al., 2010). Failure to recognise
20 or accurately identify a child's additional needs could be a significant problem as further school
21 placements may rupture, with potential adverse educational, social and health consequences for the
22 child and their family, and with an inevitable economic burden to society. School exclusion predicts
23 many adverse outcomes including offending, substance misuse and poor educational attainment
24 (Daniels et al., 2003, Hayden and Dunne, 2001, Hemphill et al., 2010, Parsons et al., 2001).
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28 Childhood psychopathology places a heavy burden on schools and the government and NHS England
29 have recently confirmed the launch of 'The Mental Health Services and Schools Link Pilots'
30 (Department for Education, 2015a). In a large nationally representative study of children's mental
31 health the most commonly consulted professionals regarding children's mental health were teachers;
32 while the proportion of children with psychiatric disorder in contact with special educational
33 professionals equalled the proportion (25%) in contact with child and adolescent mental health
34 services (Ford et al., 2007). These mental health related contacts with the education system incur costs
35 that dwarf those to other public sector services (schools £799.2 million, specialist educational services
36 £508.8 million, £162.8 million for health and welfare combined; 2007-8 prices (Snell et al., 2013)).
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40 Government statistics report a continuing overall downward trend in exclusions from school in
41 England (Department for Education, 2015b). The rate of permanent exclusions (expulsions) reportedly
42 decreased from 12 exclusions per 10,000 pupils enrolled in 2006/07, to 6 exclusions per 10,000 pupils
43 enrolled in 2013/14 (Department for Education, 2015b). A similar longer term downward trend has
44 been reported for pupils receiving a fixed-term exclusion (suspension), however the number of fixed-
45 term exclusions from primary schools has increased, accounting for 0.02% of pupil enrolment
46 (Department for Education, 2015b). Some groups of children are disproportionately represented in the
47 exclusion figures. Boys are over three times more likely to receive a permanent exclusion from school
48 than girls and are more likely to be excluded at a younger age. Similarly, children from certain ethnic
49 groups, namely Gypsy/Roma and Traveller of Irish Heritage, Black Caribbean and White and Black
50 Caribbean dual heritage all have a higher rate of exclusion, as do children eligible for Free School
51 Meals. It is particularly concerning seven in ten of all permanent exclusions are of children with a
52 statement of Special Educational Needs (SEN), as are six in ten for fixed-term exclusion. Similarly,
53 children with SEN without a statement are nine times more likely to be excluded than their peers
54 without SEN (Department for Education, 2015b). This last point would seem to suggest that
55 inadequate support and resources may contribute to the exclusion of vulnerable children.
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3 It is however likely that the decline in overall rate of exclusions presented by government statistics are
4 misrepresentative for a number of reasons. Managed moves, where children are formally moved
5 between schools to avoid exclusions, are thought to be becoming more common and are not included
6 in statutory returns to government (Abdelnoor, 2007). More worryingly it has been suggested that
7 pressures on schools to remain inclusive have led to higher levels of *hidden* exclusions; the Children's
8 Commissioner for England reported there to be a number of illegal exclusions from school where for
9 example, the headteacher would send pupils home to 'cool off' (Children's Commissioner, 2012,
10 Children's Commissioner, 2013).
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12
13 Few recent studies have explored the relationship between exclusion from school and children's
14 psychopathology (Parker et al., 2014, Whear et al., 2013). This case-control study aimed to explore
15 the level of psychopathology and learning difficulties and the extent to which they were recognised
16 and supported among children who had been excluded from school or were *at risk* of exclusion
17 (cases) compared to peers of the same age and gender who were coping well with school (controls).
18 Based on government statistics and literature regarding the potential vulnerabilities of this group we
19 predicted that there would be higher levels of psychopathology, greater levels of developmental
20 difficulties, and lower levels of attainment among the cases, but that most cases would have
21 recognised needs and have accessed services for support.
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24 **Methods**

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26 Ethical approval was granted by the University of Exeter Medical School Research Ethics Committee.
27 Written consent was obtained from parents and teachers. Verbal assent was gathered from children
28 and distress during assessment was treated as withdrawal of assent for that appointment.
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31 **Design and Sample**

32 This was a prospective case-control study with additional comparison to normative population data
33 where available. Cases were defined on the basis of *exclusion/risk of exclusion*. Cases were eligible
34 for inclusion if after the start of the study they were either excluded permanently or for a fixed-term or
35 if they were identified by an educational or mental health practitioner (for example, Special
36 Educational Needs Coordinator, Educational Psychologist, Behavioural Support Teacher) as being at
37 risk of exclusion.
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40 Eligible children were those aged between 4-12 years, which included all primary school year groups
41 and those in Year 7 (first year) of secondary school whose current or most recently attended school
42 was a mainstream school. Families were excluded from the study if any health, education or social
43 care practitioners working with them deemed them to be too vulnerable, or family members did not
44 speak sufficient English in order to complete the questionnaires and assessments despite support.
45 Families were also excluded from the study if children had voluntarily left school (e.g. parental
46 removal, child refusing to attend).
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49 The control group included children who were identified as *currently* not struggling with school at the
50 time of the study, whether or not they had identified psychiatric disorders, SEN or had previous
51 exclusions from school.
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54 **Recruitment**

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56 The study was advertised through newsletters distributed to all schools and to key education
57 professional networks in Devon during the period of November 2011-July 2013. Parents of potential
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3 cases were notified directly of the study if their child had experienced a permanent or fixed-term
4 exclusion from school either by an educational or mental health professional who was known to them
5 or through a letter sent to them by the Inclusion and Reintegration Team. Following consent the
6 parents' details were passed onto the researcher by the professional involved or the parents could
7 contact the researcher directly. Parents of children who had experienced multiple exclusions during
8 the period of study were sent a maximum of two letters inviting them to participate in the study during
9 the six months after the initial exclusion.
10

11
12 Nineteen primary schools and four secondary schools within Devon were approached to take part in
13 the study as control schools, and four primary schools and two secondary schools agreed to
14 participate. Information sheets were distributed by the schools to those children they deemed were
15 currently "*not struggling*" with school at the time of the study. Although we initially aimed to match
16 control children to each case by age and gender, recruitment proved difficult and schools were
17 therefore encouraged to select children of the same gender and age to the cases where possible.
18 Consequently, this was not an individually matched design, but recruitment of controls was stratified
19 by year group and gender.
20

21
22 Parents of both cases and controls indicated to the researchers whether they gave consent for the
23 school staff to complete the measures described below.
24

25 **Measures**

26 **Psychopathology**

27 ***Strengths and Difficulties Questionnaire (SDQ)***

28
29 The SDQ is a validated (Cronbach alpha, 0.73, test-retest reliability of 0.62) and widely used
30 behavioural screening tool for common childhood psychopathology among children aged 4-16 years
31 (Goodman, 2001). It was completed by both parents and teachers and comprises 25 items, half stated
32 as positive and half as negative. These items contribute to five sub-scales; emotional symptoms,
33 conduct difficulties, hyperactivity/inattention, peer problems and pro-social behaviour. A total
34 difficulties score is calculated by adding the sub-totals from the first four subscales, and ranges
35 between 0 and 40 with high scores indicating distress. In contrast, the prosocial scale is scored so that
36 high scores indicate strong social skills. The impact supplement asks the informant about whether
37 they consider the child to have a significant mental health problem and if so the impact of these in
38 terms of the distress to the child, the impact for the child on their home life, friendships, classroom
39 learning and leisure activities; and the burden on the informant. The SDQ impact supplement asked
40 parents and teachers how much burden the child's difficulties had put on '*you and the family*' or '*you*
41 *and the class*' as a whole, ranging from *not a lot*, to a *great deal*.
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46 ***Development and Well-being Assessment (DAWBA)***

47 The DAWBA is a validated, standardised diagnostic interview used to generate psychiatric diagnoses
48 based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)
49 (Goodman et al., 2000, APA, 1994). The DAWBA combines both structured and semi-structured
50 features of interviews, with the closed questions relating directly to diagnostic criteria within the
51 International Classification of Diseases, Tenth Edition (ICD-10) (WHO, 1993) and the DSM IV
52 (APA, 1994). The open-ended questions enable the informant to provide any further information
53 about the child's difficulties, which were used by the clinician alongside the generated computer
54 algorithm to decide on diagnosis. A validation study demonstrated clear differentiation between
55 clinical and community samples (Goodman et al., 2000). Within the community sample those with
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3 and without disorders demonstrated markedly different characteristics and prognosis, while there was
4 substantial agreement (Kendall's Tau from 0.47- 0.70) between the DAWBA and clinical case notes
5 among the clinical sample, despite a lack of detail and poor recording of comorbidity in the clinical
6 notes.
7

8 The DAWBA was completed by parents and teachers. Two child psychiatrists (TF, OM) used the
9 quantitative and qualitative information from all respondents to assign clinical diagnoses according to
10 DSM IV (APA, 1994). The level of chance corrected agreement between them was high across the
11 main categories of disorder (any disorder, emotional disorder, any ADHD, any behavioural and any
12 Autism Spectrum Disorders (ASD), Kappa= 0.93, 0.82, 0.96, 0.97. 0.77 respectively).
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15 *Deliberate Self Harm*

16 The DAWBA interview contained questions for parents about whether their child had talked about or
17 deliberately harmed themselves in the last 4 weeks and whether their child had *ever* tried to harm/hurt
18 themselves over their lifetime. Parents could respond "yes" or "no".
19

20 *Affective Reactive Index (ARI)*

21 The ARI is a novel measure of irritability (Stringaris et al., 2012). The measure comprises of six items
22 where parents are asked '*in the last six months and compared to others of the same age, how well*
23 *does each of the following statements describe the behaviour/feelings of your child?*' Parents could
24 respond on a three point scale to give an overall score and a separate impairment score. The measure
25 has been found to be reliable in mental health settings in the US (Cronbach's alpha, 0.92) and the UK
26 (Cronbach's alpha 0.89) (Stringaris et al., 2012). The ARI was completed by parents only.
27
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29 **Development**

30 Learning difficulty was reported by the parents (responding "yes" or "no") within the DAWBA
31 interview. Parents were asked *does child have a specific learning difficulty?*
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34 *Children's Communication Checklist (CCC2)*

35 The CCC2 was used to assess aspects of communicative and language impairment (Bishop, 2003). It
36 is a widely used, validated (test-retest reliability 0.86-0.96) assessment tool that enables the
37 identification of children with possible speech and language impairment as well as those children who
38 may warrant further investigation (Bishop, 2003). The measure comprises of 70 items, divided into 10
39 subscales (speech, syntax, semantics, coherence, inappropriate initiation, stereotyped language, use of
40 context, nonverbal communication, social relations and interests). Each scale includes seven
41 questions; five of these refer to difficulties that may affect the child's ability to communicate and two
42 refer to the strengths of the child. The CCC2 was completed by parents only.
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45 *The Short Sensory Profile (SSP)*

46 The SSP completed by the parent is a widely used standardised measure (Cronbach's alpha 0.47-0.91)
47 designed to screen and identify whether a child is experiencing sensory modulation difficulties (Dunn,
48 1999). It includes 38 items, grouped into seven categories; tactile sensitivity, taste/smell sensitivity,
49 movement sensitivity, under responsive/seeking sensation, auditory filtering, low energy/weak and
50 visual/auditory sensitivity. Parents can respond to the items on a five-point Likert scale these are
51 scored from, 1 'always' – 5 'never'. Scores at or above one standard deviation of the mean for each
52 category represent 'typical performance', those at or above two standard deviations below the mean
53 (but lower than one standard deviation), represent 'probable difficulties' and those falling two
54 standard deviations below the mean are deemed to have 'definite difficulties'.
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British Picture Vocabulary Scale (BPVS)

The BPVS provided a measure of receptive vocabulary of the child (Dunn et al., 1997). The measure administered by the researcher (CP) to the child, contains 14 sets of 12 test items (168 in total). Each page contains four black and white illustrations that get progressively more difficult as the sets proceed. It is a widely used measure, reliability (0.91) (Dunn et al., 1997).

The Emotional Literacy Scale (Faupel, 2003) was completed by the parent, teacher and child if aged seven years or older. The parent and the pupil measures both included 25 questions compared to 20 questions in the teacher questionnaire; which all provided an overall emotional literacy score. Descriptive categories were used to interpret the child's total emotional literacy score; these ranged from "well below average" to "well above average" on a five point scale. Internal consistency for the total emotional literacy score was 0.76, 0.94 and 0.87 for the pupil, parent and teacher scale respectively (Faupel, 2003).

Attainment

Raven's Coloured Progressive Matrices

The child's intellectual potential was estimated using the Ravens Coloured Progressive Matrices (CPM) (Raven, 2008). The measure was administered by the researcher (CP) to the child and consists of 36 diagrammatic puzzles. These are designed to assess the intellectual processes of young children, and do not require high levels of verbal ability. These are therefore often used with children who have SEN or language difficulties. The test manual reports most studies test-retest reliability to be above $r=0.80$ (Raven, 2008).

The British Ability Scales (BAS-III)

The BAS were used to gather an overall impression of the child's level of attainment (Elliot and Smith, 2011). The BAS-III is a standardised assessment battery that is widely used by educational psychologists to test cognitive abilities and educational achievement. Five subscales were selected to be completed by the child, this included; quantitative reasoning (or picture similarities if the child was aged 5 years), digits forward, digits backwards, number skills and word reading. The subscales were chosen to mirror educational attainment skills.

Standardised t-scores and s-scores are presented for both the Raven's CPM and the BAS-III, to enable comparison to the normative populations. All tests were administered by the lead author (CP).

Other relevant measures used

General demographic information about the child and their family were gathered within the on-line DAWBA interview. Information was provided on the type of school the child attended, the level of support given within the school, external services attended and the number of exclusions, if the child had received any. The Family Life Questionnaire (FaLQ) was completed by the parent, (Last et al., 2012) and provided a measure of the child's experience within the family environment. Fourteen items assessed four theoretical scales; affirmation (four items), discipline (four items), special allowances (three items) and rules (two items). Internal consistency of the four scales ranged from 0.40-0.70, with affirmation and rules particularly good (Cronbach's alpha =0.61-0.74) and good test retest reliability (Intraclass correlation coefficient (ICC) =0.80, 0.70 respectively), discipline showed poor internal consistency (Cronbach's alpha =0.30-0.40) but good test retest reliability (ICC=0.60) (Last et al., 2012).

Parents' postcodes were used to link to the Index of Multiple Deprivation (IMD) scores (ONS, 2001), which provided a measure of neighbourhood deprivation for small geographical areas. The IMD

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3 score was ranked from the most deprived (0-20%) to the wealthiest quintile (80-100%) based on a
4 combination of factors that included, income, education, health, housing and living environment
5 (Department for Communities and Local Government, 2007, Shilling et al., 2011).
6

7 8 **Procedure**

9 An initial meeting was set-up between the parent and the researcher to discuss participation and to
10 gain informed consent after parents had been sent information about the study. Parental assessments
11 were either completed face to face or the parents completed the assessments independently,
12 completing the DAWBA interview online and mailing the questionnaires back to the researcher. With
13 parental permission the school completed assessments; the informant was selected by the parents as a
14 member of staff who knew the child well. Parents' specified whether they would prefer the child
15 assessments to be completed at home or at school, and assessments were completed as rapidly as
16 possible after the exclusion or referral into the study.
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19 Once all the assessments had been completed the results were shared with the parents in the SKIP
20 feedback form (available from the author's on request). Parents were encouraged to share the
21 feedback with the school and any other services deemed important that may be working with the child
22 (multiple copies were provided as per parents' requests).
23

24 **Data analysis**

25 The sample was grouped by diagnosis and difficulties using the DAWBA and SDQ impact
26 supplement in order to explore the extent to which psychopathology was recognised. The SDQ
27 impact supplement asks *'has s/he got difficulty in one or more of the following areas: emotions,*
28 *concentration, behaviour or being able to get on with other people'*; possible responses are on a four
29 point Likert scale; *no, yes: minor difficulties, yes: definite difficulties or yes: severe difficulties*. The
30 child was recorded as having no difficulty if the parent and teacher had report *no* or *yes: minor*
31 *difficulties* or as having a difficulty if both had reported *yes: definite* or *yes: severe*. Children were
32 split into four groups using this recognition variable and the presence / absence of psychiatric disorder
33 according to the DAWBA. A "no disorder" group, those children who had no clinical diagnosis and
34 neither the parent or teacher had reported any difficulty. A "sub-clinical" group included children who
35 had no DAWBA diagnosis but the parent and teacher did report there was a difficulty. An
36 "unrecognised" group in which children had a DAWBA diagnosis but neither parent nor the teacher
37 had reported a difficulty and a "recognised" group, who had both a DAWBA diagnosis and a parent
38 or teacher reported difficulty.
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43 Population norms were sought for as many measures as possible because of concerns the size and
44 selection of the control sample. Descriptive statistics were examined to seek systematic differences
45 between the cases and the control group, and population norms where available. Fisher's Exact tests
46 was used to examine the significance of associations between categorical variables. The Wilcoxon
47 Rank-Sum test was used to assess the significance of differences between cases and controls for
48 continuous variables, given its improved efficiency compared to the t-test for non-normal
49 distributions.
50

51
52 Multivariable logistic regression models were fitted to explore combined effects of explanatory
53 factors on case-control status. Following initial screening of unadjusted models the following
54 variables were considered for inclusion in multivariable models: psychopathology, communication,
55 sensory differences and emotional literacy. These variables were selected due to clinical
56 consideration.
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The results will be presented in three sections that discuss psychopathology, development and lastly attainment.

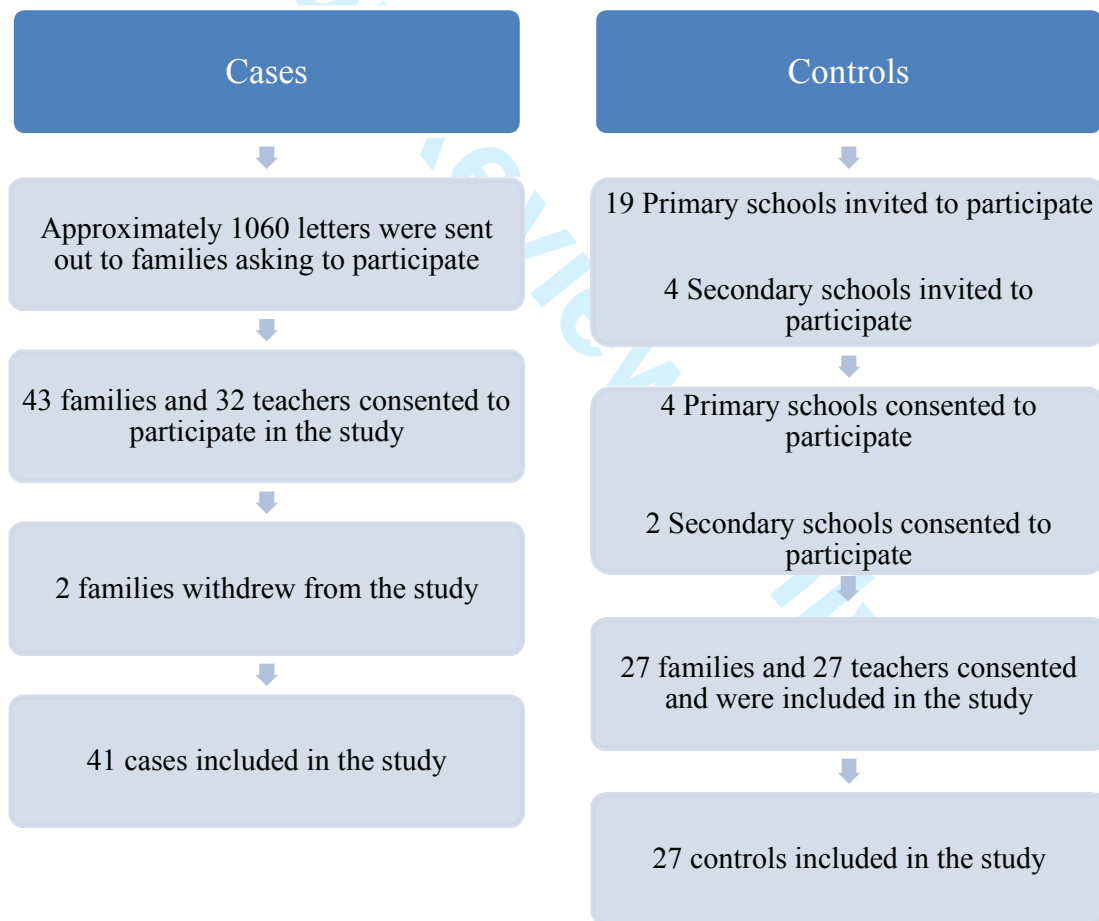
All analysis was conducted in STATA version 13.0 (StataCorp, 2013).

Results

Sample

A total of 70 families were recruited, of whom 43 were cases and 27 controls (Figure 1). With parental consent, 54 teachers completed assessments (cases n=32 (74%), controls n=27 (100%)). Subsequently two of the cases withdrew from the study and three parents opted to not involve the school in the study. The majority of missing data in the case group was accounted for by teacher non-response. All teacher and child assessments for the control group were completed.

Figure 1 - Flow diagram of recruitment for both cases and controls



As expected, the majority of the sample were boys, and there were only five children from year seven (Table 1). Cases and controls did not differ in terms of age, gender, ethnicity or general health, which suggests some success in the selection process. The cases had attended more schools and received more support within the school compared to the control group, as would be expected for a group of

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3 children experiencing difficulties in coping with school. All except two of the cases had experienced
4 an exclusion from school with just over half of them experiencing three or more exclusions (n=22,
5 56.4%). The cases experienced more psychological distress within their families compared to the
6 control families. Parents of the cases gave significantly less affirmation (mean 10.6, SD 1.5)
7 compared to parents of the controls (mean 11.5, SD 1.0) and had a higher mean for coercive parenting
8 (discipline subscale) but no difference was found for the implementation of rules and boundaries
9 (Table 1).

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11 >>>>INSERT TABLE 1 ABOUT HERE

12 13 14 **Psychopathology**

15 Table 2, shows the mean scores and percentages for psychopathology among the cases, controls and
16 normative group. Clear differences are apparent between the cases and controls and also in
17 comparison between the cases and normative samples. Children's mean SDQ total difficulty scores
18 from both the parent and teacher showed cases to score more than two standard deviations higher than
19 the population norm and significant differences were shown between the cases and controls (parent:
20 $z = -6.007$, $p < 0.001$; teacher: $z = -6.463$). This was consistent across all subscales of the SDQ, with the
21 exception of parent reported peer problems.
22

23
24 The impact of psychopathology reported by parents (Table 2) was much higher among cases than the
25 controls (mean impact score for cases = 6.7, SD 2.6; mean for controls = 0.2, SD 0.8; $z = -12.3$
26 $p < 0.001$) and normative data (mean = 0.5, 1.5; $z = -25.2$ $p < 0.001$). Similarly, teachers reported
27 significantly higher levels of impact among cases than controls (mean for cases = 4.6, SD 1.5; mean
28 for controls = 0.04, SD 0.2; $z = -16.0$ $p < 0.001$) and normative data (mean = 0.4, 0.9; $z = -23.2$ $p < 0.001$).
29 Both parents and teachers of the cases experienced high levels of burden, although 20% of parents had
30 reported 'no/only a little' burden, which may indicate the school-based nature of these children's
31 difficulties.
32

33
34 >>>>INSERT TABLE 2 ABOUT HERE

35
36 Cases had higher percentages of disorder across all the categories (see Tables 2 and 3); almost all
37 cases had a diagnosis of any behavioural disorder (n=36, 90.0%) but half had an emotional disorder
38 (n= 20, 50%, Table 3). Cases had over five times the prevalence of oppositional defiant disorder
39 (ODD) and more than 25 times the prevalence of conduct disorder than children of a comparable age
40 in the general population. The majority of the cases (n=39/40) and one of the controls had a comorbid
41 diagnoses, compared with 20% in the general population. A fifth of the cases (n= 9, 22%) compared
42 with 2% of the school age children within the general population have experienced deliberate self-
43 harm at some point during their lives (Table 2).
44

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46 >>>>INSERT TABLE 3 ABOUT HERE

47 48 **Development**

49 The sensory profile of the cases was atypical, with over two thirds of them categorised as having
50 'definite' difficulties, compared to only one in the control group (Table 4). Similarly, the mean total
51 communication scores among the cases were below the 10th percentile whereas controls had
52 significantly higher levels of communication. Interestingly, the receptive vocabulary of cases and
53 controls receptive vocabulary did not differ. Parents of the cases reported over half of them to have a
54 learning difficulty compared to none of the controls; this however may reflect a recruitment bias of
55 children with additional problems whose parents wished to access assessment via the study. The total
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emotional literacy scores from all three informants (parent, child and teacher) were almost two standard deviations below the population mean among cases while the control group scored consistently higher than the population mean, suggesting that the cases struggled to read, understand and regulate their emotions (Table 4).

>>>> INSERT TABLE 4 ABOUT HERE

Attainment

Table 5, shows the differences between the cases and controls in terms of their attainment and ability. The majority of the control group were performing at levels appropriate for their age across subscales of the BAS, while cases performed less well on all but picture similarities. Cases and controls did not differ in performance on the Ravens Coloured Progressive Matrices; however the range of scores was much greater among the cases, which suggests that a larger sample may have detected differences, and implies that more children scored at both extremes of the distribution among the cases.

>>>>INSERT TABLE 5 ABOUT HERE

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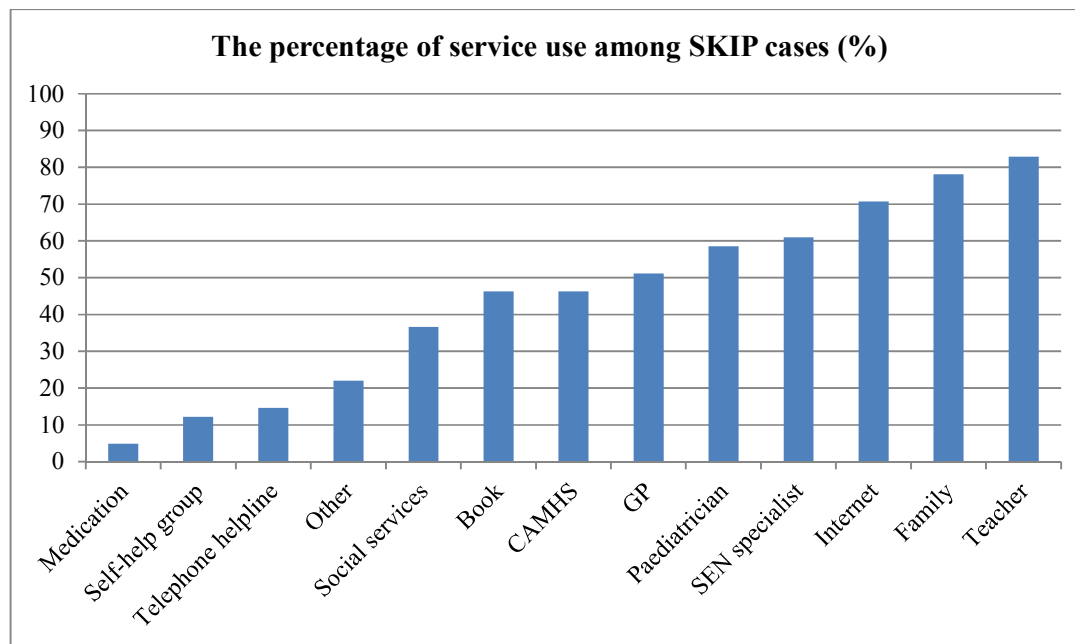
A model was developed to explore whether if the child was a case or a control was associated with the child's psychopathology and / or the presence / absence of psychiatric disorder (Table 6). Initial unadjusted logistic regression models showed that psychopathology, communication, sensory processing and emotional literacy were statistically significant predictors of group membership, but that age, gender and ethnicity were not. The second model included all four variables (SDQ, CCC2, SSP and ELS), but only the SDQ remained significant suggesting that the child's psychopathology and behaviour was the most significant driver of whether a child was a case or control (Table 6).

Recognition and support of difficulties

Of the 40 cases who had completed the SDQ and DAWBA, nearly two thirds were reported to have 'definite' or 'severe' problems with emotions, behaviour or paying attention by both the parent and teacher (n=25, 62.5%) (Table 7). More children had difficulties reported only by the teacher (n=8, 20%) compared to the parents (n=4, 10%), which may be related to differences in reporting how the child functions in different environments, and / or the perceptions of these key adults about how the child functions. The remaining children had unrecognised difficulties (n=2) or were in the subclinical group (n=1). One parent did not complete the SDQ. Disagreement about the presence/absence of difficulties might complicate home and school relationships. Most families of children who were cases had made contact with services (n= 39, 90.7%); the mean number of services consulted for the cases was five and the range 0 to 9. Teachers were most commonly consulted professional (n=34, 82.9%, Figure 2. 36.6% (n=15) of cases had a learning difficulty as reported by the parent, none of the controls had a reported learning difficulty (Table 4). Given that these children were at risk of exclusion from their schools and nearly all met criteria for psychiatric disorder, it is perhaps surprising that the level of contact with specialist services, particularly in education and mental health is not higher than indicated in Figure 2.

>>>>INSERT TABLE 7 ABOUT HERE

Figure 2- Percentage of service use among the cases of the SKIP sample



Discussion

The SKIP study aimed to explore the levels of psychopathology, development and attainment among children who were at risk of or had been excluded from school in the Southwest of England. Through systematic assessment the study highlighted the complex and overlapping pattern of difficulties across multiple functional domains experienced by this group of children compared to our control group and to normative data. There was a high level of recognition of difficulty by parents and teachers, but given the severity of the children's needs the proportion of cases in contact with services was surprisingly low. The findings reflect the challenges for families, schools and services to both *identify* and *support* the needs of this vulnerable group. Parental psychological distress was evident among the cases families and studies have shown potentially tractable links between parental and child mental health (Schepman et al., 2011). Of particular concern within this study was the high proportion of children reported to have deliberately self-harmed, which was unexpected among such young children.

Our findings reflect similar results from earlier studies of children excluded from primary school in England in the 1990's (Hayden, 1997, Hayden and Dunne, 2001, Hayden and Lawrence, 1995, Parsons et al., 2001) and those conducted more recently in the US (Bowman-Perrott et al., 2011). A case control study of 26 children identified to have persistent disruptive behaviour found the majority of them to have social communication impairment that had not previously been identified (Donno et al., 2010). The SKIP study extended these findings further by the inclusion of a broader range of assessments on a larger group of children and their families.

The majority of the SKIP cases were boys, in line with government statistics (Department for Education, 2015b) with nearly all of them reaching research diagnostic criteria for conduct or

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3 oppositional defiant disorder. Improving behaviour in the classroom is an ongoing focus of recent
4 policy (Department for Education, 2014a, Great Britain, 2011). A survey conducted by the OECD
5 found 30% of effective teaching time was lost due to poor behaviour in schools (Department for
6 Education, 2012). This study indicates the importance that school staff are trained and supported to
7 manage and understand the challenging behaviour that they will inevitably be required to handle.
8 Interestingly, we found that there were less extensive differences between the cases and controls with
9 regards to their levels of attainment, suggesting that poor mental health was more influential than poor
10 attainment among the ability of children who struggled to function in school. The range of scores for
11 the cases was much greater, which suggests a spectrum of ability that did not cluster towards the
12 lower ability range as might have been expected. Our sample of cases included children who were
13 attaining above average for their age and might therefore be expected to thrive within school.
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17 Nearly all the cases had emotional and behavioural needs recognised by both the teacher and parent
18 and both informants reported a great deal of impact and burden. As previously reported (Ford et al.,
19 2007), teachers were the most consulted source of support by parents in the SKIP study. Similarly,
20 nearly two thirds of the cases had sought support from specialist educational sources. Given the
21 severity and prevalence of psychiatric disorder (97.1%) detected, the proportion in contact with child
22 and adolescent mental health services is surprisingly low (46.3%) but exceeds the 25% reported in
23 previous epidemiological studies (Ford et al., 2007). Considering all of the cases were having severe
24 difficulties within the school environment we might expect a higher percentage to be in contact with
25 special education practitioners, however our findings that some children faced the possible rupture of
26 their primary school placement without such input could reflect a serious lack of resources to respond
27 effectively and promptly. The costs of specialist provision are high and early identification and
28 remediation may actually cost less in the longer term.
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31 **Strengths and Limitations of the study**

32 The SKIP study benefitted from the breadth and robustness of the assessments used with the child,
33 family and school. The SKIP study encouraged a joint understanding of the child's strengths and
34 needs from both a health and educational perspective, and enabled the sharing of assessments through
35 the development of the feedback form (available from the author's on request) to support access to
36 support.
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39 A number of limitations need to be considered when considering these findings. Difficulties with
40 recruitment were anticipated when working with hard to reach populations at a particularly vulnerable
41 time (Curtis, 2004, Macnab, 2007). Although all families who were at risk of or experienced an
42 exclusion from school were invited to take part in the study the actual participants were likely to be
43 families who were more predisposed to undergo assessments and to want to understand their child's
44 difficulties. A very small proportion of children who had experienced exclusion from school were
45 recruited, given the number of letters that were dispatched to families of excluded children, which
46 limited the extent of the analysis that we could undertake as well introducing the threat of selection
47 bias. Although we achieved a larger number of cases than the only other similar study (Donno et al,
48 2010) we studied a much broader range of outcomes and while interpreting our findings it is
49 worthwhile remembering that at a level of $p=0.05$, one in twenty tests is likely to be significant by
50 chance alone. The demographic profile of the children included in the SKIP sample were not
51 completely reflective of national data (Department for Education, 2015b); although the majority of the
52 cases were boys and over a third of them had learning difficulties the majority of the cases were from
53 a white British ethnicity and two thirds lived in more affluent neighbourhoods (middle to upper levels
54 of the index multiple deprivation). This could be a reflection of the area the study was located as well
55 as the types of families that were willing to participate.
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3 The control group were atypical to the normative data on some of the measures, performing better
4 than average compared to the cases and the normative group; however they were not more privileged
5 to the cases in terms of neighbourhood deprivation. These potential selection biases might inflate
6 differences between the cases and control groups and were addressed by the presentation of
7 population-based normative data where possible. Missing teacher data for the cases may also have
8 meant that diagnoses of ADHD or conduct disorder were underestimated, as multiple sources of
9 information facilitates the most accurate estimate of these diagnosis (Meltzer et al., 2000).

11 The measures and assessments selected for the study were based on guidance from literature and our
12 steering group, which consisted of a number of educational and clinical professionals; however future
13 research may benefit exploring other measures. As with all psychometric tests, there are difficulties in
14 the consistency of reporting and the impact that events will have on how the child, parent and teacher
15 completes the measure. Many of the measures relied on self-report data which could lead to concerns
16 about the accuracy of the information provided. Most of the measures focused on the child or young
17 persons 'typical' behaviour, or the behaviour over the last few months however, for the parents whose
18 children were very distressed this may have been difficult to quantify and they may have been
19 reporting on isolated incidents of distress. This therefore, may mean the results were fluctuations due
20 to distress and / or social desirability but these influences would work in different directions. The
21 selection of validated measures and sensitive timing and conduct of data collection aimed to minimise
22 the impact of these potential biases.

26 While we had data on services accessed, we had no data on any intervention offered. Service contact
27 does not necessarily imply that needs are accurately assessed or supported. However, we were keen to
28 keep the level of burden on our participants as low possible and focused our attention on getting
29 detailed descriptions of the child's mental health status, developmental level and attainment.
30 Similarly, we do not have detailed information about how parents and teachers' understood children's
31 difficulties only that they thought that the child did or did not have a difficulty. Both could be usefully
32 explored in depth in future studies, as how people understand difficulties is likely to influence what
33 and how support is sought, and it would be important to understand schools and families experiences
34 of the effectiveness of interventions in this complex and vulnerable group.

38 **Future research**

39 Future work could also develop and evaluate the implementation of standardised assessments in
40 response to a child who risks future exclusion from school. However, assessment would need to be
41 combined with effective intervention to improve outcomes. Khan and colleagues (2015) reported
42 there to be a wealth of interventions related to clinically diagnosable mental health conditions for
43 children that are effective at improving outcomes related to their social, emotional, learning,
44 communication and peer relations. The balance between the costs of intervention against future gains
45 in specialist input and provision requires formal economic evaluation to support commissioning
46 decisions.

49 Further longitudinal studies could explore the predictors and developmental, scholastic and mental
50 health trajectories of children who are later excluded from school in more detail. Although this study
51 was able to capture the impact of the exclusion on the parents and teachers in terms of quantitative
52 findings, it would be of interest to conduct further qualitative research to gather these experiences, and
53 to include measures of the school context. Few such studies have reported the views and experiences
54 of primary school age children and their parents.

Implications for practice

This paper is timely in identifying the complex difficulties faced by children excluded from school, particularly in light of the recent changes in Special Educational Needs and Disability (SEND) and a focus on the mental health and well-being of children (Department for Education and Department of Health, 2014, CMO, 2014). Most of the children were recognised by parents and / or teachers to have poor mental health, which suggests a failure to provide adequate support, whereas the current policy focus aspires to early identification and *prevention rather than remediation* (Taggart et al., 2006); (Department for Education and Department of Health, 2014).

The promotion of the emotional mental health and well-being of pupils is emphasised actively in the literature and current policy (Department for Education, 2014a, Kidger et al., 2012, Weare and Markham, 2005, DeSocio and Hootman, 2004). A recent government initiative to improve the knowledge and confidence with mental health issues among those working within children in any capacity includes the MindEd website, which is a cost-free resource covering a wide range of topics related to children's mental health (MindEd, 2014). Schools are thought to be well placed to identify and potentially support the mental health needs of children (Department for Education, 2014a, NICE, 2008) and recent initiatives to improve joint working between schools and child mental health services are hoping to harness links further between education and children's mental health (Department for Education, 2015a). Recent policy changes have replaced statements of educational needs with education, health and care plans (Great Britain, 2014), which enables a broader approach to thinking about children's needs that can explicitly include mental health. There are however, limits to the level of input provided within the school environment and teachers have reported feeling uncomfortable about devoting scarce funds to manage such what are perceived by some as a "non-educational" needs of their pupils (Gowers, 2004).

The Department for Education (2012) stated, 'disruptive behaviour may indicate unmet need, so it is essential to explore reasons behind'. While our findings clearly identified a number of vulnerabilities among the cases, the child's behaviour seem key to their difficulties in school, which is unsurprising as this is the main reason given by headteachers to exclude a pupil (Department for Education, 2014b). Teachers need support in the management of disruptive behaviour at all levels as a matter of urgency. Comprehensive assessment of children's mental health, development and attainment may provide opportunities to think differently about the way these children are disciplined and supported. There is a recognised need to be cautious in terms of the adverse effects of *labelling* and the appropriateness of diagnosis at such a young age, in terms of stigma and separation. These issues around stigma and labelling relate as much as to how the information from such assessments is or is not shared and applied as to the assignment of the labels themselves (Shah and Mountain, 2007). It should also be remembered that, exclusion from school also carries stigma. Some children will require specialist provision, but surely it is preferable for all concerned if this occurs as planned transition for the child's benefit, rather than as a result of the rupture of a school placement. The failure to conduct systematic broad-based assessments can mean that particular types of difficulties may be missed, and may not respond to the non-specific psychological interventions that then tend to be offered. We should be careful not to deprive families and children of information that could support their access to resources. Ours findings illustrate the complex needs of this group of children, and emphasise that they are not just *naughty* children; the risk of the breakdown of a primary school placement should trigger systematic and comprehensive assessment for tractable difficulties that may respond to remediation.

Conclusion

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3 This study has shown that children who struggle to cope in primary school to the extent that they are
4 excluded from school often have impairing levels of psychopathology, developmental and learning
5 difficulties. Worryingly, the study found a number of children who had experienced very low mood at
6 a comparatively young age or even self-harmed, and given the severity of the difficulties found it is
7 surprising that not all children had accessed services. Disruptive behaviour was almost universal,
8 emphasising the need for effective management and training for staff and families to understand and
9 support children who are displaying challenging behaviour and distress. The current study underlines
10 the importance of situating and seeing the child within their context and thoroughly understanding all
11 of their needs in order to support them engage in education and fulfil their potential. A systematic
12 assessment as presented in this study may enable an improved identification of the child's needs and
13 strengths, and if coupled with appropriate support could lead to improved outcomes for children, their
14 families and schools. There is a wealth of evidence that outlines the potential adverse outcomes
15 associated with exclusion from school; by understanding and addressing the needs further through
16 joint working we will potentially divert vulnerable children onto positive trajectories for the future.
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The 'Supporting Kids, avoiding Problems' (SKIP) study; Relationships between school exclusion, psychopathology, development and attainment; a case control study

Introduction

Schools have ~~been a~~ recognised ~~as a place to identify and support~~ role in the identification and for the social, emotional and behavioural needs of the child (NICE, 2008, Department for Education, 2014a). Persistent disruptive behaviour is the most common reason given by headteachers for excluding a child from school (Department for Education, 2015b). The breakdown or potential breakdown of a child's school placement; particularly ~~at~~ during primary school; ~~strongly suggests the need for~~ should prompt a thorough assessment to explore tractable contributing factors related to learning, mental health and ~~or~~ the relationships between the school- child- family context.

Research suggests that children may be excluded from school with unidentified, unsupported, or poorly managed Attention Deficit Hyperactivity Disorder (ADHD) (O'Regan, 2010). Similarly, a small case-control study identified undetected autistic ~~like~~ behavioural difficulties among traits among children reported to be at risk of exclusion due to persistent disruptive behaviour (Donno et al., 2010). Failure to recognise or accurately identify a child's additional needs could be a significant problem as further school placements may rupture, with potential adverse educational, social and health consequences for the child and their family, and not to mention a large with an inevitable economic burden to society. School exclusion predicts many adverse outcomes including offending, substance misuse and poor educational attainment (Daniels et al., 2003, Hayden and Dunne, 2001, Hemphill et al., 2010, Parsons et al., 2001).

Childhood psychopathology; places a heavy burden on schools and the government and NHS England have recently confirmed the launch of 'The Mental Health Services and Schools Link Pilots' (Department for Education, 2015a). In a large nationally representative study of children's mental health ~~teachers were~~ the most commonly consulted professionals regarding children's mental health were teachers; and while the proportion of children with psychiatric disorder in contact with special educational professionals equalled the proportion (25%) in contact with child and adolescent mental health services (Ford et al., 2007). ~~The costs of~~ These mental health related additional contacts with the education system incur costs that dwarfed those to other public sector services (schools £799.2 million, specialist educational services £508.8 million, £162.8 million for health and welfare combined; 2007-8 prices (Snell et al., 2013)).

Government statistics report a continuing overall downward trend in exclusions from school in England (Department for Education, 2015b). The rate of permanent exclusions (expulsions) reportedly decreased from 12 exclusions per 10,000 pupils enrolled in 2006/07, to 6 exclusions per 10,000 pupils enrolled in ~~2012/13~~ 2013/14 (Department for Education, 2015b). A similar ~~overall~~ longer term downward trend has been reported for pupils receiving a fixed-term exclusion (suspension); ~~but with~~ a slight rise in however the number of fixed-term exclusions from primary schools has increased, accounting for 0.02% of pupil enrolment (Department for Education, 2015b). Some groups of children are disproportionately represented in the exclusion figures. Boys are approximately over three times more likely to receive a permanent ~~be excluded from~~ exclusion from school than girls; and are more likely to be excluded at a younger age. Similarly, children from certain ethnic groups, namely Gypsy/Roma and Traveller of Irish Heritage, Black Caribbean and White and Black Caribbean dual heritage; all have a higher rate of exclusion, as do children eligible for Free School Meals ~~(FSM)~~ (FSM, Department for Education, 2015b). It is particularly concerning ~~that~~ seven in ten of all permanent exclusions are of children with a statement of Special Educational Needs (SEN) ~~are~~

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3 approximately six times more likely to be excluded from school than their peers with no SEN, as are
4 six in ten for fixed-term exclusion. Similarly, children, while a child with SEN without a statement is
5 ~~ten~~ are nine times more likely to be excluded than their peers without SEN (Department for Education,
6 2015b). This last point would seem to suggest that inadequate support and resources may contribute to
7 the exclusion of vulnerable children.
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10 It is, however, likely that ~~these~~ the decline in overall rate of exclusions presented by government
11 statistics are misrepresentative for a number of reasons. Managed moves, where children are formally
12 moved between schools to avoid exclusions, are thought to be becoming more common and are not
13 included in statutory returns to government routinely recorded (Abdelnoor, 2007). More worryingly it
14 has been suggested that pressures on schools to remain inclusive have led to higher levels of hidden
15 exclusions; the Children's Commissioner for England reported there to be a number of illegal
16 exclusions from school, where for example, the headteacher would send pupils home to 'cool off'
17 (Children's Commissioner, 2012, Children's Commissioner, 2013).
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20 Few recent studies ~~that~~ have explored the relationship between exclusion from school exclusion and
21 children's psychopathology (Parker et al., 2014, Whear et al., 2013). This case-control study aimed to
22 explore the level of psychopathology and learning difficulties, and the extent to which they were
23 recognised and supported, among children who had been excluded from school or were at risk of
24 exclusion (cases) compared to peers of the same age and gender who were coping well with school
25 (controls). Based on government statistics and literature regarding the potential vulnerabilities of this
26 group we predicted that there would be higher levels of psychopathology, greater levels of
27 developmental delays difficulties, and lower levels of attainment among the cases, but that most cases
28 would have recognised needs and have accessed services for support.
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31 Methods

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33 Ethical approval was granted by the University of Exeter Medical School Research Ethics Committee.
34 Written consent was obtained from parents and teachers. Verbal assent was gathered from children
35 and distress during assessment was treated as withdrawal of assent for that appointment.
36

37 Design and Sample

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39 This was a prospective case-control study with additional comparison to normative population data
40 where available. Cases were defined on the basis of exclusion/risk of exclusion. Cases were eligible
41 for inclusion if, after the start of the study, they were either excluded permanently or for a fixed-term
42 or if they were identified by an educational or mental health practitioner (-for example, Special
43 Educational Needs Coordinator, Educational Psychologist, Behavioural Support Teacher) as being at
44 risk of exclusion.
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47 Eligible children were those aged between 4-12 years, which included all primary school year groups
48 and those in Year 7 (first year) of secondary school, whose currently attended or their most recently
49 attended school was a mainstream school. Families were excluded from the study if any health,
50 education or social care practitioners working with them deemed them to be too vulnerable, or family
51 members did not speak sufficient English in order to complete the questionnaires and assessments;
52 even with despite support. Families were also excluded from the study if children had voluntarily left
53 school (e.g. parental removal, child refusing to attend).
54

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56 The control group included children who were identified as currently not struggling with school at the
57 time of the study, whether or not they had identified psychiatric disorders, SEN or had previous
58 exclusions from school.
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A power calculation was not conducted as based on a ~~The~~ previous similar study conducted by Donno and colleagues (2010) they reported a sample of 26 was required in order to have the power to detect an effect as large as $d = 0.9$ (Cohen, 1992) ~~on~~ (Bishop, 2003).

Recruitment

The study was advertised through newsletters distributed to all schools and ~~to~~ key education professional networks in Devon during the period of November 2011-July 2013. Parents of potential cases were notified directly of the study if their child had experienced a permanent or fixed-term exclusion from school ~~either by through~~ an educational or mental health professional ~~who was known to them~~ or through a letter sent to them by the Inclusion and Reintegration Team. ~~Following consent the -Pparent's-~~ details were passed onto the researcher by the professional involved ~~if they family agreed~~, or the parents could contact the researcher directly. Parents of children who had experienced multiple exclusions during the period of study were sent a maximum of two letters inviting them to participate in the study ~~-during the~~ six months after the initial exclusion.

Nineteen primary schools and four secondary schools ~~within Devon~~ were approached to take part in the study as control schools. ~~and f-~~ Four primary schools and two secondary schools agreed to participate. Information sheets were distributed by the schools to those children they deemed were currently "not struggling" with school at the time of the study. Although we ~~were~~ initially aimed ~~to recruit-match~~ for control children ~~to be matched~~ to each case ~~on-by year groupage~~ and gender, ~~due to~~ recruitment ~~proved difficult and difficulties this was not possible~~, ~~s-~~ schools were ~~therefore~~ encouraged to select children ~~that reflected the of the same~~ gender and age to the cases ~~where possible~~. ~~Consequently, t~~ This was ~~therefore~~ not an individually matched design, but recruitment of controls was ~~then~~ stratified by year group and gender.

Parents of both cases and controls indicated to the researchers whether they gave consent for the school ~~staff~~ to complete ~~the measures described below~~.

Measures

Psychopathology

Strengths and Difficulties Questionnaire (SDQ)

The SDQ is a ~~well-~~validated (Cronbach alpha, 0.73, test-retest reliability of 0.62) ~~and widely used~~ behavioural screening tool for common childhood psychopathology among children aged 4-16 years (Goodman, 2001). ~~The SDQIt~~ was completed by both parents and teachers and comprises 25 items, half stated as positive and half as negative. These items contribute to five sub-scales; emotional symptoms, conduct difficulties, hyperactivity/inattention, peer problems and pro-social behaviour. A total difficulties score is calculated by adding the sub-totals from the first four subscales, and ranges between 0 and 40 ~~with high scores indicating distress~~. ~~In contrast, the prosocial scale is scored so that high scores indicate strong social skills~~. The impact supplement asks the informant about whether they consider the child to have a significant mental health problem and if so the impact of these in terms of the distress to the child, the impact for the child on their home life, friendships, classroom learning and leisure activities; and the burden on the informant. The SDQ ~~also included an~~ impact ~~scale; which asked~~ supplement asked parents and teachers how much burden the child's difficulties had put on 'you and the family' or 'you and the class' as a whole, ranging from *not a lot*, to a *great deal*.

Development and Well-being Assessment (DAWBA)

The DAWBA is a validated, standardised diagnostic interview used to generate psychiatric diagnoses, based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (Goodman et al., 2000, APA, 1994). The DAWBA combines both structured and semi-structured features of interviews, with the closed questions relating directly to diagnostic criteria within the International Classification of Diseases, Tenth Edition (ICD-10) (WHO, 1993) and the DSM IV (APA, 1994). The open-ended questions enable the informant to provide any further information about the child's difficulties, which ~~were~~ used by the clinician alongside the generated computer algorithm to decide on diagnosis. A validation study demonstrated clear differentiation between clinical and community samples (Goodman et al., 2000). Within the community sample those with and without disorders demonstrated markedly different characteristics and prognosis, while there was substantial agreement (Kendall's Tau from 0.47- 0.70) between the DAWBA and clinical case notes among the clinical sample, despite a lack of detail and poor recording of comorbidity in the clinical notes.

The DAWBA was completed by parents and teachers. Two child psychiatrists (TF, OM) used the quantitative and qualitative information from all respondents to assign clinical diagnoses according to DSM IV (APA, 1994). The level of chance corrected agreement between them was high across the main categories of disorder (any disorder, emotional disorder, any ADHD, any behavioural and any Autism Spectrum Disorders (ASD), Kappa= 0.93, 0.82, 0.96, 0.97, 0.77 respectively).

Deliberate Self Harm

The DAWBA interview contained questions for parents about ~~yes or no~~ whether their child had talked about or deliberately harmed themselves in the last 4 weeks and whether their child had *ever* tried to harm/hurt themselves over their lifetime. ~~Parents could~~ Responses were "yes" respond "yes" or "no".

Affective Reactive Index (ARI)

The ARI is a novel measure of irritability (Stringaris et al., 2012). The measure comprises of six items where parents are asked 'in the last six months and compared to others of the same age, how well does each of the following statements describe the behaviour/feelings of your child?' Parents could respond on a three point scale to give an overall score and a separate impairment score. The measure has been found to be reliable in mental health settings in the US (Cronbach's alpha, 0.92) and the UK (Cronbach's alpha 0.89) (Stringaris et al., 2012). The ARI was completed by parents only.

Development

Learning difficulty was reported by the parents (responding "yes" or "no") within the DAWBA interview. Parents were asked *does child have a specific learning difficulty?* ~~They could respond "yes" or "no"~~.

Children's Communication Checklist (CCC2)

The CCC2 was used to assess aspects of communicative and language impairment (Bishop, 2003). It is a widely used, ~~well~~-validated (test-retest reliability 0.86-0.96) assessment tool that enables the identification of children with possible speech and language impairment as well as those children who may warrant further investigation (Bishop, 2003). The measure comprises of 70 items, divided into 10 subscales (speech, syntax, semantics, coherence, inappropriate initiation, stereotyped language, use of context, nonverbal communication, social relations and interests). Each scale includes seven questions; five of these refer to difficulties that may affect the child's ability to communicate and two refer to the strengths of the child. The CCC2 was completed by parents only.

The Short Sensory Profile (SSP)

The SSP, completed by the parent is a widely used standardised measure (Cronbach's alpha 0.47-0.91) designed to screen and identify whether a child is experiencing sensory modulation difficulties (Dunn, 1999). It includes 38 items, grouped into seven categories; tactile sensitivity, taste/smell sensitivity, movement sensitivity, under responsive/seeking sensation, auditory filtering, low energy/weak and visual/auditory sensitivity. Parents can respond to the items on a five-point Likert scale, these are scored from, 1 'always' – 5 'never'. Scores at or above one standard deviation of the mean for each category represent 'typical performance', those at or above two standard deviations below the mean (but lower than one standard deviation), represent 'probable difficulties' and those falling two standard deviations below the mean are deemed to have 'definite difficulties'.

British Picture Vocabulary Scale (BPVS)

The BPVS provided a measure of receptive vocabulary of the child (Dunn et al., 1997). The measure administered by the researcher (CP) to the child, contains 14 sets of 12 test items (168 in total). Each page contains four black and white illustrations that get progressively more difficult as the sets proceed. It is a widely used measure, reliability (0.91) (Dunn et al., 1997).

The Emotional Literacy Scale (Faupel, 2003) was completed by the parent, teacher and child if aged seven years or older. The parent and the pupil measures both included 25 questions compared to 20 questions in the teacher questionnaire; which all provided an overall emotional literacy score. Descriptive categories were used to interpret the child's total emotional literacy score; these ranged from "well below average" to "well above average" on a five point scale. Internal consistency for the total emotional literacy score was 0.76, 0.94 and 0.87 for the pupil, parent and teacher scale respectively (Faupel, 2003).

Attainment

Raven's Coloured Progressive Matrices

The child's intellectual potential was estimated using the Ravens Coloured Progressive Matrices (CPM) (Raven, 2008). The measure was administered by the researcher (CP) to the child and consists of 36 diagrammatic puzzles. These are designed to assess the intellectual processes of young children, and do not require high levels of verbal ability. ~~and are~~ These are therefore often used with children who have SEN or language difficulties. The test manual reports most studies test-retest reliability to be above $r=0.80$ (Raven, 2008).

The British Ability Scales (BAS-III)

The BAS were used to gather an overall impression of the child's level of attainment (Elliot and Smith, 2011). The BAS-III is a standardised assessment battery that is widely used by educational psychologists to test cognitive abilities and educational achievement. Five subscales were selected to be completed by the child, this included; quantitative reasoning (or picture similarities if the child was aged 5 years), digits forward, digits backwards, number skills and word reading. The subscales were chosen to mirror educational attainment skills.

Standardised t-scores and s-scores are presented for both the Raven's CPM and the BAS-III, to enable comparison to the normative populations. All tests were administered by the lead author/researcher (CP).

Other relevant measures used

The Emotional Literacy Scale (Faupel, 2003) was completed by the parent, teacher and child if aged seven years or older. The parent and the pupil measures both include 25 questions compared to 20 questions in the teacher questionnaire; which all provided an overall emotional literacy score. Descriptive categories were used to interpret the child's total emotional literacy score; these ranged from "well below average" to "well above average" on a five point scale. Internal consistency total was 0.76, 0.94 and 0.87 for the pupil, parent and teacher scale respectively for the overall emotional literacy score (Faupel, 2003).

General demographic information about the child and their family were gathered within the on-line DAWBA interview. Information was provided on the type of school the child attended, the level of support given within the school, external services ~~added-attended~~ and the number of exclusions, if the child had received any. The Family Life Questionnaire (FaLQ) was completed by the parent, (Last et al., 2012) and provided a measure of the child's experience within the family environment. Fourteen items assessed four theoretical scales; affirmation (four items), discipline (four items), special allowances (three items) and rules (two items). Internal consistency of the four scales ranged from 0.40-0.70, with affirmation and rules particularly good (Cronbach's alpha =0.61-0.74) and good test retest reliability (Intraclass correlation coefficient (ICC) =0.80, 0.70 respectively), discipline showed poor internal consistency (Cronbach's alpha =0.30-0.40) but good test retest reliability (ICC=0.60) (Last et al., 2012).

Parents' postcodes were used to link to the Index of Multiple Deprivation (IMD) scores (ONS, 2001), ~~this-which~~ provided a measure of neighbourhood deprivation ~~for in~~ small geographical areas. The IMD score was ranked from the most deprived (0-20%) to the wealthiest ~~area-quintile~~ (80-100%) based on a combination of factors that included, income, education, health, housing and living environment (Department for Communities and Local Government, 2007, Shilling et al., 2011).

Procedure

An initial meeting was set-up between the parent and the researcher to discuss participation and to gain informed consent after parents had been sent information about the study. Parental assessments were either completed face to face or the parents completed the assessments independently, completing the DAWBA interview online and mailing the questionnaires back to the researcher. With parental permission; the school completed assessments; the informant was selected by the parents as a member of staff who knew the child well. Parents' specified whether they would prefer the child assessments to be completed at home or at school, and assessments were completed as rapidly as possible after the exclusion or referral into the study.

Once all the assessments had been completed; the results were shared with the parents in the SKIP feedback form (~~Supplementary available from the author's on request~~). Parents were encouraged to share the feedback with the school and any other services deemed important that may be working with the child (~~multiple~~ copies were provided as per parents' requests).

Data analysis

The sample was grouped by diagnosis and difficulties using the DAWBA and SDQ ~~impact supplement~~ in order to explore the extent to which psychopathology was recognised. The SDQ impact supplement asks 'has s/he got difficulty in one or more of the following areas: emotions, concentration, behaviour or being able to get on with other people'; possible responses are on a four point Likert scale; no, yes: minor difficulties, yes: definite difficulties or yes: severe difficulties. ~~A binary variable was derived, t~~The child was recorded as having no difficulty if the parent and teacher

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3 had report *no* or *yes: minor difficulties* or as having a difficulty if both had reported *yes: definite* or
4 *yes: severe*. Children were split into four groups using the **is binary** recognition variable and the
5 presence / absence of psychiatric disorder according to the DAWBA. A “no disorder” group, those
6 children who had no clinical diagnosis and neither the parent or teacher had reported any difficulty. A
7 “sub-clinical” group included children who had no DAWBA diagnosis but the parent and teacher did
8 report there was a difficulty. An “unrecognised” group in which children had a DAWBA diagnosis
9 but neither parent nor the teacher had reported a difficulty and a “recognised” group, who had both a
10 DAWBA diagnosis and a parent or teacher reported difficulty.
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13 Population norms were sought for as many measures as possible, because of concerns the size and
14 selection of the control sample. Descriptive **summaries-statistics** were examined to seek systematic
15 differences between the cases and the control group, and population norms where available. Fisher's
16 Exact tests was used to examine the significance of associations between categorical variables. The
17 Wilcoxon Rank-Sum test was used to assess the significance of differences between cases and
18 controls for continuous variables, given its improved efficiency compared to the t-test for non-normal
19 distributions.
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22 Multivariable logistic regression models were fitted to explore combined effects of explanatory
23 factors on case-control status. Following initial screening of unadjusted models the following
24 variables were considered for inclusion in multivariable models: psychopathology, communication,
25 sensory differences and emotional literacy. These variables were selected due to clinical
26 consideration.
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28
29 The results will be presented in three sections that discuss psychopathology, development and lastly
30 attainment.
31

32 All analysis was conducted in STATA version 13.0 (StataCorp, 2013).
33

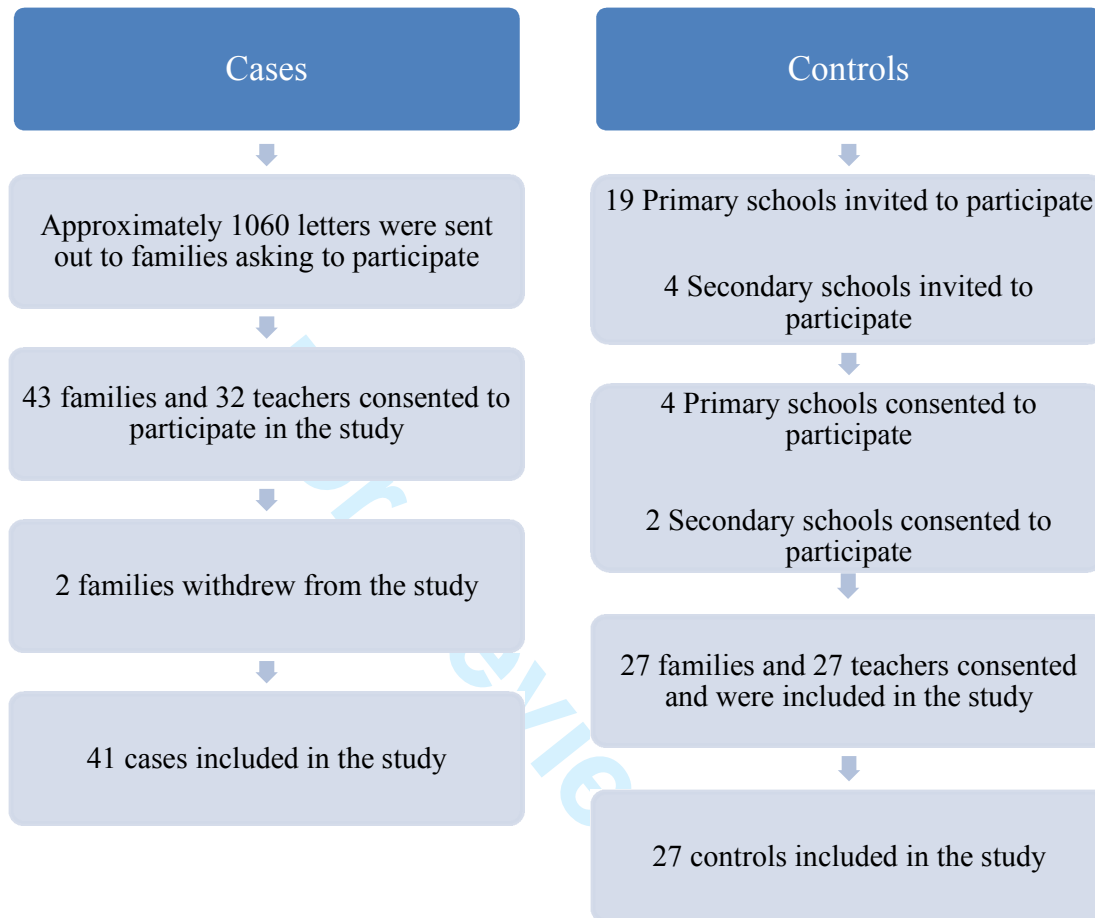
34 Results

35 Sample

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37 A total of 70 families were recruited, of whom 43 were cases and 27 controls (**Figure 1**~~Figure 1~~). With
38 parental consent, 54 teachers completed assessments (cases n=32 (74%), controls n=27 (100%)).
39

40 **Subsequently** ~~Two~~ two of the cases withdrew from the study and three parents opted to not involve the
41 school in the study. The majority of missing data in the case group was accounted for by teacher non-
42 response. All teacher and child assessments for the control group were completed.
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Figure 1 - Flow diagram of recruitment for both cases and controls



As expected, the majority of the sample were boys, and there were only five children from year seven (Table 1). Cases and controls did not differ in terms of age, gender, ethnicity or general health, which suggests some success in the selection process. The cases had attended more schools and received more support within the school compared to the control group, as would be expected for a group of children experiencing difficulties in coping with school. All except two of the cases had experienced an exclusion from school with just over half of them experiencing three or more exclusions ($n=22$, 56.4%). The cases experienced more psychological distress within their families compared to the control families. Parents of the cases gave significantly less affirmation (mean 10.6, SD 1.5) compared to parents of the controls (mean 11.5, SD 1.0) and had a higher mean for coercive parenting (discipline subscale) but no difference was found for the implementation of rules and boundaries (Table 1).

>>>>INSERT TABLE 1 ABOUT HERE

Psychopathology

Table 2, shows the mean scores and percentages for psychopathology among the cases, controls and normative group. Clear differences are apparent between the cases and controls and also in

comparison between the cases and normative samples. Children's mean SDQ total difficulty scores from both the parent and teacher showed cases to score more than two standard deviations higher than the population norm and significant differences were shown between the cases and controls (parent: $z = -6.007$, $p < 0.001$; teacher: $z = -6.463$). This was consistent across all subscales of the SDQ, with the exception of parent reported peer problems.

The impact of psychopathology reported by parents (Table 2) was much higher among cases than the controls (mean impact score for cases = 6.7, SD 2.6; mean for controls = 0.2, SD 0.8; $z = -12.3$ $p < 0.001$) and normative data (mean = 0.5, 1.5; $z = -25.2$ $p < 0.001$). Similarly, teachers reported significantly higher levels of impact among cases than controls (mean for cases = 4.6, SD 1.5; mean for controls = 0.04, SD 0.2; $z = -16.0$ $p < 0.001$) and normative data (mean = 0.4, 0.9; $z = -23.2$ $p < 0.001$). Both parents and teachers of the cases experienced high levels of burden, although 20% of parents had reported 'no/only a little' burden, which may indicate the school-based nature of these children's difficulties.

>>>>INSERT TABLE 2 ABOUT HERE

Cases had higher percentages of disorder across all the categories (see Tables 2 and 3); ~~with~~ almost all cases ~~having had~~ a diagnosis of any behavioural disorder ($n = 367$, 90.0%) ~~and but~~ half had an emotional disorder ($n = 20$, 50%, Table 3). ~~Cases had over five times the prevalence of oppositional defiant disorder (ODD) and more than 25 times the prevalence of conduct disorder than children of a comparable age in the general population. The percentage of cases with a diagnosis of oppositional defiant disorder (ODD) was 13 times what would be expected within the school age population, with five times 50 times the prevalence of conduct disorder. A quarter of the cases had comorbid diagnoses. The majority of the cases ($n = 309/40$) and none of the controls had a comorbid diagnoses. Three quarters ($n = 30$) had two or more comorbid diagnoses compared with 20% in the general population. A fifth of the cases ($n = 9$, 22%) compared with fewer than half a per cent 2% of the school age children within the general population} had been reported to ever experience deliberate self harm have experienced deliberate self-harm at some point during their lives (Table 2).~~

>>>>INSERT TABLE 3 ABOUT HERE

~~The impact of psychopathology reported by parents was much higher among cases than the controls (mean impact score for cases = 6.7, standard deviation 2.6; mean for controls = 0.2, SD 0.8; $z = -12.3$ $p < 0.001$) and normative data (mean = 0.5, 1.5; $z = -25.2$ $p < 0.001$). Similarly, teachers reported significantly higher levels of impact among cases than controls (mean for cases = 4.6, SD 1.5; mean for controls = 0.04, SD 0.2; $z = -16.0$ $p < 0.001$) and normative data (mean = 0.4, 0.9; $z = -23.2$ $p < 0.001$). Both parents and teachers of the cases experienced high levels of burden, although 20% of parents had reported 'no/only a little' burden, which may indicate the school-based nature of these children's difficulties.~~

Development

The sensory profile of the cases was atypical, with over half two thirds of them categorised as having 'definite' difficulties, compared to only one in the control group (Table 4). Similarly, the mean overall total communication scores among the cases were below the 10th percentile whereas controls had significantly higher levels of communication. Interestingly, the receptive vocabulary of cases and controls receptive vocabulary did not differ. Parents of the cases reported over half of them to have a learning difficulty compared to none of the controls; this however may could reflect a recruitment bias of children with additional problems whose parents wished to access assessment via the study. The

total emotional literacy scores from all three informants (parent, child and teacher) were almost two standard deviations below the population mean among cases while the control group scored consistently higher than the population mean, suggesting that the cases struggled to read, understand and regulate their emotions (Table 4).

>>>> INSERT TABLE 4 ABOUT HERE

Attainment

Table 5, shows the differences between the cases and controls in terms of their attainment and ability. The majority of the control group were performing at levels appropriate for their age across subscales of the BAS, while cases performed less well on all but picture similarities. Cases and controls did not differ in performance on the Ravens Coloured Progressive Matrices; however the range of scores was much greater among the cases, which suggests that a larger sample may have better detected-detected differences, and implies that more children scored at both extremes of the distribution among the cases.

>>>>INSERT TABLE 5 ABOUT HERE

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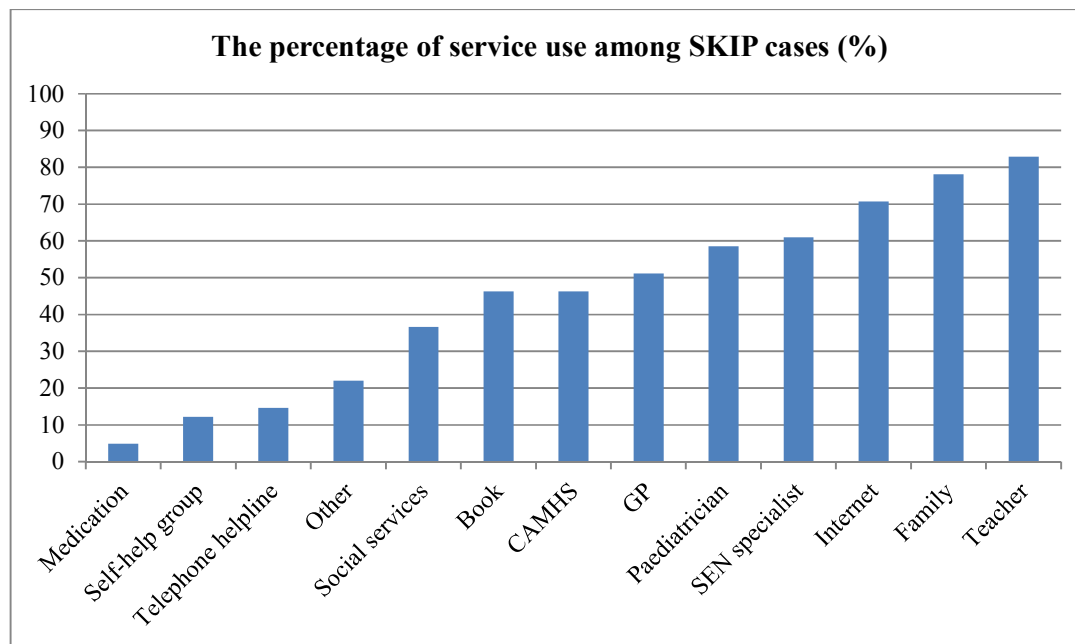
A model was developed to explore whether if the child was a case or a control was associated with the child's psychopathology and / or the presence / absence of psychiatric disorder (Table 6). Initial unadjusted logistic regression models showed that psychopathology, communication, sensory processing and emotional literacy were statistically significant predictors of group membership, but that age, gender and ethnicity were not. The second model included all four variables (SDQ, CCC2, SSP and ELS), but only the SDQ remained significant suggesting that the child's psychopathology and behaviour was the most significant driver of whether a child was a case or control (Table 6).

Recognition and support of difficulties

Of the 40 cases who had completed the SDQ and DAWBA, nearly two thirds were reported to have 'definite' or 'severe' problems with emotions, behaviour or paying attention by both the parent and teacher (n=25, 62.5%) (Table 7). More children had difficulties reported only by the teacher (n=8, 20%) compared to the parents (n=4, 10%), which may be related to differences in reporting how the child functions in different environments, and / or the perceptions of these key adults about how the child functions. The remaining children had unrecognised difficulties (n=2) or were in the subclinical group (n=1). One parent did not complete the SDQ. Disagreement about the presence/absence of difficulties might complicate home and school relationships. Most families of children who were cases had made contact with services (n= 39, 90.7%); the mean number of services consulted for the cases was five and the range 0 to 9. Teachers were most commonly consulted professional (n=34, 82.9%, Figure 2), and 36.596% (n=15) of cases had a learning difficulty as reported by the parent, none of the controls had a reported learning difficulty (Table 4). Given that these children were at risk of exclusion from their schools and nearly all met criteria for psychiatric disorder, it is perhaps surprising that the level of contact with specialist services, particularly in education and mental health is not higher than indicated in Figure 2Figure 2.

>>>>INSERT TABLE 7 ABOUT HERE

Figure 2- Percentage of service use among the cases of the SKIP sample



Discussion

The SKIP study aimed to explore the levels of psychopathology, development and attainment among children who were at risk of or had been excluded from school ~~within Devon in the Southwest of England~~. Through a systematic assessment, the study highlighted the complex and overlapping pattern of difficulties across ~~multiple these~~ functional domains ~~faeed- experienced~~ by this group of children compared to our control group and ~~to~~ normative data. ~~As we predicted, The study found t~~ There ~~to be~~ ~~was~~ a high level of recognition of difficulty by parents and teachers, but ~~given the severity of the children's needs,~~ the proportion of cases in contact with services was surprisingly low. The findings reflect the challenges for families, schools and services to both *identify* and *support* the needs of this vulnerable group. Parental psychological distress was evident among the cases families and studies have shown potentially tractable links between parental and child mental health (Schepman et al., 2011). Of particular concern within this study was the high proportion of children reported to have deliberately self-harmed, which ~~would~~ was unexpected ~~in among~~ such a young ~~group of children~~ and ~~that parental report consistently under-estimates self harm compared to self report—these all illustrate that our estimates are enormous and emphasise that being excluded from school should be a red flag to indicate the need for mental health assessment~~

~~Two recent systematic reviews also identified associations between children who had been excluded from school and psychiatric disorder~~. Our findings ~~also~~ reflect similar results from earlier studies of children excluded from primary school in England in the 1990's (Hayden, 1997, Hayden and Dunne, 2001, Hayden and Lawrence, 1995, Parsons et al., 2001) and those conducted more recently in the US (Bowman-Perrott et al., 2011). A case control study of 26 children identified to have persistent disruptive behaviour found the majority of them to have social communication impairment that had not previously been identified (Donno et al., 2010). The SKIP study extended these findings further

by the inclusion of a ~~larger number~~ broader range of assessments on a larger group of children and their families.

The majority of the SKIP cases were boys, in line with government statistics (Department for Education, 2015b) with nearly all of them reaching research diagnostic criteria for conduct or oppositional defiant disorder. Improving behaviour in the classroom is an ongoing focus of recent policy (Department for Education, 2014a, Great Britain, 2011). A survey conducted by the OECD found 30% of effective teaching time was lost due to poor behaviour in schools (Department for Education, 2012). This study indicates the importance that school staff are trained and supported to manage and understand the challenging behaviour ~~presented that they will inevitably be required to~~ handle. Interestingly, we found that there were less extensive differences between the cases and controls with regards to their levels of attainment, suggesting that poor mental health was more influential than poor attainment ~~among the ability of children who struggled in their ability~~ to function in school. The range of scores for the cases was much greater, ~~which which~~ suggests a spectrum of ability that did not ~~entirely~~ cluster towards the lower ability range as might have been expected. Our sample of cases included children who were attaining above average for their age and might therefore be expected to thrive within school.

Nearly all the cases had emotional and behavioural needs recognised by both the teacher and parent and both informants reported a great deal of impact and burden. As previously reported (Ford et al., 2007), teachers were the most consulted source of support by parents in the SKIP study. Similarly, ~~a~~ nearly two thirds of the cases had sought support from specialist educational sources. Given the severity and prevalence of psychiatric disorder (97.1%) detected, the proportion in contact with child and adolescent mental health services is surprisingly low (46.3%) but exceeds the 25% reported in previous epidemiological studies (Ford et al., 2007). ~~Considering all of the cases were having severe difficulties within the school environment you would we might expected a higher percentage of to be in contact with special education practitioners service contact. The however the low proportion of contacts with educational professionals our findings that some children faced the possible rupture of their primary school placement without such input could reflect~~ ld be a reflection of a serious lack of resources to respond effectively and promptly. The costs of specialist provision are high and early identification and remediation may actually cost less in the longer term, and finances from schools to access further support.

Strengths and Limitations of the study

The SKIP study benefitted from the breadth and ~~thoroughness or robustness~~ of the assessments used with the child, family and school. ~~Well-validated, reliable measures were used in order to provide comparable findings that were relevant to identify a range of factors that may be impacting the child's ability to cope at school.~~ The SKIP study encouraged a joint understanding of the child's strengths and needs from both a health and educational perspective, ~~and~~ It enabled the sharing of assessments through the development of the feedback form (Supplementary available from the author's on request) ~~which we hoped supported and facilitated joint working of parents and schools across Devon to support access to support. This study contributes to further understanding of primary school children who have been excluded from school, by also including those children in the first year of secondary school we were able to capture the transition from a primary to secondary setting that may have brought difficulties to light, although the numbers were small.~~

A number of limitations need to be considered when considering these findings. Difficulties with recruitment were anticipated when working with hard to reach populations at a particularly vulnerable time (Curtis, 2004, Macnab, 2007). ~~-~~ Although all families who ~~were at risk of~~ experienced an

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3 exclusion from school, ~~or were at risk,~~ were invited to take part in the study, ~~the actual participants~~
4 ~~we~~ are likely to be families who ~~were particularly concerned about their child and wished were more~~
5 ~~predisposed to undergo~~ ~~to access~~ assessments ~~and to want to understand their child's difficulties~~ ~~ing~~. A
6 very small proportion of children who had experienced exclusion from school were recruited, given
7 the number of letters that were dispatched to families of excluded children, ~~which limited the extent of~~
8 ~~the analysis that we could undertake as well introducing the threat of selection bias~~. ~~Although we~~
9 ~~achieved a larger number of cases than the only other similar study (Donno et al, 2010); we studied a~~
10 ~~much broader range of outcomes; and while interpreting our findings; it is worthwhile remembering~~
11 ~~that at a level of $p=0.05$, one in twenty tests is likely to be significant by chance alone~~. ~~This is to be~~
12 ~~expected~~ ~~was anticipated~~ when working with hard to reach populations at a particularly vulnerable
13 ~~time~~. The demographic profile of the children included in the SKIP sample were not completely
14 reflective of national data, (Department for Education, 2015b); although the majority of the cases
15 were boys and ~~over~~ a third of them had learning difficulties the majority of the cases were from a
16 white British ethnicity and two thirds ~~were in the middle to upper levels of the index of multiple~~
17 ~~deprivation, which is reflective of more well-off areas lived in more affluent areas~~ ~~neighbourhoods~~
18 ~~(middle to upper levels of the index multiple deprivation)~~. This could be a reflection of the area the
19 study was located as well as the types of families that were willing to participate. ~~Our sample size was~~
20 ~~constrained by these difficulties in recruitment into the study of these often vulnerable families at a~~
21 ~~particularly stressful time in their lives. We, therefore, lacked power to do anything other than a~~
22 ~~descriptive analysis~~. ~~Although we achieved a larger number of cases than the only other similar study~~
23 ~~(Donno et al, 2010); we studied a much broader range of outcomes; and while interpreting our~~
24 ~~findings; it is worthwhile remembering that at a level of $p=0.05$, one in twenty tests is likely to be~~
25 ~~significant by chance alone~~.

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31 The control group were ~~also~~ atypical to the normative data on some of the measures, performing
32 better than average compared to the cases and the normative group; however they were not more
33 privileged to the cases in terms of neighbourhood deprivation. -These ~~potential~~ selection biases might
34 inflate differences between the cases and control groups ~~which and~~ were addressed by the
35 presentation of ~~population-based normative~~ ~~normative~~ data where possible. Missing teacher data for
36 the cases may also have meant that diagnoses of ADHD or conduct disorder were underestimated, ~~as~~
37 ~~m~~-Multiple sources of information facilitates the most accurate estimate of ~~these~~ diagnosis (Meltzer
38 et al., 2000), ~~particularly for diagnoses such as ADHD which is made more robust by identification~~
39 ~~of the child's difficulties within the school environment as well as the parent report~~.

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44 The measures and assessments selected for the study were based on guidance from literature and our
45 steering group, which consisted of a number of educational and clinical professionals; however future
46 research may benefit exploring other measures. As with all psychometric tests, there are difficulties in
47 the consistency of reporting and the impact that events will have on how the child, parent and teacher
48 completes the measure. Many of the measures relied on self-report data which could lead to concerns
49 about the accuracy of the information provided. Most of the measures ~~measured~~ ~~focused on~~ the child
50 or young persons 'typical' behaviour, or the behaviour over the last few months; however, for the
51 parents whose children were very distressed this may have been difficult to quantify and they may
52 have been reporting on isolated incidents of distress. This, ~~therefore~~, may mean the results were
53 fluctuations due to distress and / or social desirability; but these influences would work in different
54 directions. The selection of validated measures; and sensitive timing and conduct of data collection
55 aimed to minimise the impact of these potential biases.

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3 While we had data on services accessed, we had no data on ~~the any actual type of~~ intervention
4 ~~offered. (if any) provided for these children.~~ Service contact does not necessarily imply that needs are
5 accurately assessed or supported. However, we were keen to keep the level of burden on our
6 participants as low possible and focused our attention on getting detailed descriptions of the child's
7 mental health status, developmental level and attainment. Similarly, we do not have detailed
8 information about how parents and teachers' understood children's difficulties only that they thought
9 that the child did or did not have a difficulty. Both could be useful ~~ly explored in depth more fully~~
10 in future studies, as how people understand difficulties is likely to influence what and how support is
11 sought, and it would be important to understand schools and families experiences of the effectiveness
12 of interventions in this complex and vulnerable group.
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15 **Future research**

16 ~~Future work is required could also develop and evaluate the implementation of standardised~~
17 ~~assessments in response to a child who risks future exclusion from school. However, assessment~~
18 ~~would need to be combined with effective intervention to improve outcomes. Khan and colleagues~~
19 ~~(2015) reported there to be a wealth of interventions related to clinically diagnosable mental health~~
20 ~~conditions for children that are effective at improving outcomes related to their social, emotional,~~
21 ~~learning, communication and peer relations. The ~~and it is balancing between these costs of~~~~
22 ~~intervention against future gains in specialist input and provision ~~that~~ requires formal economic~~
23 ~~evaluation ~~attention to support by~~ commissioning decisioners.~~
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27 ~~Further longitudinal studies could explore the predictors and developmental, scholastic and mental~~
28 ~~health trajectories of children who are later excluded from school in more detail. Although this study~~
29 ~~was able to capture the impact of the exclusion on the parents and teachers in terms of quantitative~~
30 ~~findings, it would be of interest to conduct further qualitative research to gather these experiences, and~~
31 ~~to include measures of the school context. Few such studies have reported the views and experiences~~
32 ~~of primary school age children and their parents.~~
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35 **Implications for practice**

36 This paper is timely in identifying the complex difficulties faced by children excluded from school,
37 particularly in light of the recent changes in ~~Special Educational Needs and Disability (SEND)~~ and a
38 focus on the mental health and well-being of children (Department for Education and Department of
39 Health, 2014, CMO, 2014). ~~Most of the children were recognised by parents and / or teachers to have~~
40 ~~having~~ poor mental health, which suggests a failure to provide adequate support, whereas the current
41 policy focus aspires to early identification and *prevention rather than remediation* (Taggart et al.,
42 2006); ~~(Department for Education and Department of Health, 2014).~~
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45 ~~The notion of early identification of difficulty for children who are struggling is acknowledged~~
46 ~~throughout literature and policy (Department for Education and Department of Health, 2014, Kim-~~
47 ~~Cohen et al., 2003, Taggart et al., 2006). The previous SEN code of conduct (Department for~~
48 ~~Education and Skills, 2001) placed a clear focus on the priority of early identification of need~~
49 ~~(Taggart et al., 2006), which continues to be a priority in the most recent version of the code of~~
50 ~~conduct (Department for Education and Department of Health, 2014). This is based on the concept~~
51 ~~that those children who are identified earlier will receive support that will aid their development and~~
52 ~~ability to access the curriculum, supporting the notion of *prevention rather than remediation* (Taggart~~
53 ~~et al., 2006).~~
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56 ~~Many of the needs were recognised by parents and teachers within the group suggesting that there~~
57 ~~are possible gaps in the provision, support and resources available for these children those working~~
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3 with children who are struggling at school. The SKIP study clearly identified a group of children who
4 have a number of vulnerabilities but the child's behaviour seem key to their difficulties in school. This
5 is maybe unsurprising as this is the main reason given by headteachers to exclude a pupil (Department
6 for Education, 2014b).
7

8 The promotion of the emotional mental health and well-being of pupils is emphasised actively in the
9 literature and through current policy drives (Department for Education, 2014a, Kidger et al., 2012,
10 Weare and Markham, 2005, DeSocio and Hootman, 2004). A recent government initiative to improve
11 the knowledge and confidence with mental health issues among those working within children in any
12 capacity includes the MindEd website, which is a cost-free resource covering a wide range of topics
13 related to children's mental health (MindEd, 2014). Schools are thought to be well placed to identify
14 and potentially support the mental health needs of the children they teach (Department for Education,
15 2014a, NICE, 2008) and recent initiatives to improve joint working between schools and child mental
16 health services are hoping to harness links further between education and children's mental health
17 (Department for Education, 2015a). Although often if a child is struggling within school the initial
18 thought may be to implement support around the child's education, this study has shown that this
19 might not be the most helpful response. Recent policy changes have replaced statements of
20 educational needs with education, health and care plans (Great Britain, 2014), which enables a
21 broader approach to thinking about where the child's needs children's needs that can
22 explicitly include mental health may lie. There are, however, limits to the level of input
23 provided within the school environment, and teachers have reported feeling uncomfortable about
24 devoting scarce funds to manage such what are perceived by some an "non-educational" needs of
25 their pupils (Gowers, 2004). A recent government initiative to improve the knowledge and
26 confidence with mental health issues among those working within schools has been recently launched
27 by the introduction of the MindEd website (MindEd, 2014).
28

29 The findings of this study illustrate the complex needs of this group of children, that they are not just
30 naughty children. The Department for Education (2012) stated, 'disruptive behaviour may indicate
31 unmet need, so it is essential to explore reasons behind'. While our findings clearly identified a
32 number of vulnerabilities among the cases, the child's behaviour seem key to their difficulties in
33 school, which is unsurprising as this is the main reason given by headteachers to exclude a pupil
34 (Department for Education, 2014b). Teachers need support in the management of disruptive
35 behaviour at all levels as a matter of urgency. By taking a different perspective to
36 these Comprehensive assessment of children's difficulties mental health, development and attainment
37 it may provide opportunities to think differently about the way these children are disciplined and
38 supported. There is a recognised need to be cautious in terms of the adverse effects of labelling and
39 the appropriateness of diagnosis at such a young age, in terms of stigmatisation and separation. These
40 is Issues around stigma and labelling relate as much as to how the information from such assessments
41 is or is not shared and used shared and applied as to the assignment of the labels themselves (Shah and
42 Mountain, 2007). It should also be remembered that, while exclusion from school also carries stigma.
43 Some children will require specialist provision, but surely it is preferable for all concerned if this
44 occurs as planned transition for the child's benefit, rather than as a result of the rupture of a school
45 placement. However, by careful and accurate assessment and understanding of the needs of these
46 children we may be able to offer timely support to improve the trajectory of their schooling, which
47 will have impacts on later outcomes. These assessments have implications for those working with the
48 child and their families. The failure to conduct systematic broad-based assessments is that can mean
49 that particular types of difficulties may be missed, and may not respond to the non-specific
50 psychological interventions that then tend to be offered. Issues around stigma and labelling relate as
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~~much as to how the information from such assessments is or is not shared and used as to the assignment of labels (Shah and Mountain, 2007), while exclusion from school also carries stigma.~~ We should be careful not to deprive families and children of information that could support their access to resources. Ours findings illustrate the complex needs of this group of children, and emphasise that they are not just *naughty* children; ~~t~~The risk of the breakdown of a primary school placement should trigger systematic and comprehensive assessment for tractable difficulties that may respond to remediation.

Future research

~~The reduction in disruptive behaviour is a focus of recent policy drives in England (Great Britain, 2011) and was discussed within the previous CMO report (CMO, 2013). Longitudinal studies have also shown conduct disorders to predict all mental health problems in adulthood (Kim-Cohen et al., 2003), which reiterates the importance of focused interventions on behavioural outcomes and the need for early recognition of these potential needs. The present study has highlighted the importance of not only implementing effective interventions for children presenting with behavioural difficulties in school, but also identifying these difficulties before they reach the threshold of exclusion. Future work is required to develop and evaluate the implementation and use of such a battery of assessments that could be shared with parents, schools and services. The feedback form developed for this study profiles these assessments in an accessible and understandable manner for both parents and schools, and could be used as part of the identification process for special educational needs or other mental health and well-being difficulties. However, without the provision of effective support, the feedback form recognising the child's strengths and needs would be helpful but have limited scope for producing meaningful change. Khan and colleagues, (2015) reported there to be a wealth of interventions related to clinically diagnosable mental health conditions for children that are effective at improving outcomes related to their social, emotional, learning, communication and peer relations for children, and it is balancing these costs against future gains that requires attention by commissioners.~~

~~Given As identified in previous research, that there is a lack of current research that explores the association of exclusion from school and mental health health. Further longitudinal studies would be beneficial in order to explore the trajectories of children excluded from school in more detail. Although this study was able to capture the impact of the exclusion on the parents and teachers in terms of quantitative findings, it would be of interest to conduct further qualitative research to gather these experiences, and to include measures of the school context.~~

Conclusion

This study has shown that children, who struggle to cope in primary school to the extent that they are excluded from school, often have ~~significant clinical~~impairing levels of psychopathology, developmental ~~delay~~ and learning difficulties. Worryingly, the study found a number of children who had experienced very low mood at a comparatively young age or even self-harmed, and given the severity of the difficulties found it is surprising that not all children had accessed services. Disruptive behaviour was almost universal, emphasising the need for effective management and training for staff and families to understand and support~~deal with~~ children who are challenging to work with~~displaying challenging behaviour and distress~~. The current study underlines the importance of situating and seeing the child within their context and thoroughly understanding all of their difficulties~~needs~~ in order to support~~help~~ them engage in education and fulfil their potential. A systematic assessment as

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3 presented in this study may enable an improved identification of the child's needs and strengths, and
4 if coupled with appropriate support; could lead to positive-improved outcomes for children, their
5 families and schools. There is a wealth of evidence that outlines the potential adverse outcomes
6 associated with exclusion from school; by understanding and addressing the needs further through
7 joint working we will potentially divert vulnerable children onto positive trajectories for the future.
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Parker, C. (2015)

Tables- Supporting Kids, avoiding Problems (SKIP) study

Table 1- General characteristics of the SKIP sample

Characteristic	N	Cases	Controls	P- value ¹
Gender, n (%)				
Males	65	41 (95.4)	24 (88.9)	0.37
Females	5	2 (4.6)	3 (11.1)	
Age (years)				
Mean (SD)	70	8.7 (2.1)	8.2 (2.2)	0.32
Range		5-12	5-12	
Ethnicity, n (%)				
White	59	37 (90.2)	22 (88.0)	1.00
BME	7	4 (9.8)	3 (12.0)	
Index of Multiple Deprivations (IMD), n (%)				
0-20%	11	3 (7.0)	8 (29.6)	0.015
20-40%	16	12 (27.9)	4 (14.8)	
40-60%	19	16 (37.2)	3 (11.1)	
60-80%	16	8 (18.6)	8 (29.6)	
80-100%	8	4 (9.3)	4 (14.8)	
General health, n (%)				
Good	66	41 (100.0)	25 (100.0)	
Poor	0	0 (0.0)	0 (0.0)	
Number of schools attended, n (%)				
1	32	17 (41.5)	15 (60.0)	0.04
2	21	12 (29.3)	9 (36.0)	
3+	13	12 (29.2)	1 (4.0)	
Type of school, n (%)				
Mainstream	36	12 (29.3)	24 (96.0)	<0.001
Mainstream (with support)	19	18 (43.9)	1 (4.0)	
Special unit (mainstream)	3	3 (7.3)	0 (0.0)	
Special School	1	1 (2.4)	0 (0.0)	
Other	7	7 (17.1)	0 (0.0)	
Exclusion from school, n (%)				
Yes	39	39 (90.7)	0.0 (0.0)	<0.001
At risk	2	2 (4.7)	0.0 (0.0)	
No	27	2 (4.7)	25 (100.0) ²	
Number of times excluded from school, n (%)				
1-2	17	17 (43.6)	0 (0.0)	
3-4	11	11 (28.2)	0 (0.0)	
5+	11	11 (28.2)	0 (0.0)	
Ever been permanently excluded, n (%)				
Yes	5	5 (12.8)	0 (0.0)	
No	34	34 (87.2)	0 (0.0)	
Family life questionnaire, Mean, (SD)				
Affirmation	66	10.6 (1.5)	11.5 (1.0)	0.001
Discipline	66	5.5 (1.8)	3.9 (1.5)	<0.001
Rules	66	5.0 (1.2)	4.9 (0.9)	0.58
Special allowances	66	5.1 (1.8)	4.0 (1.6)	0.01
Number of life events, n (%)				
0-1	38	20 (48.8)	18 (72.0)	0.08

¹ Fisher exact test of the association between group (case or control) and categorical exposures and Wilcoxon Rank-Sum test for differences in means for continuous variables

² Two control parents did not complete the DAWBA for this information

Parker, C. (2015)

2-5	28	21 (51.2)	7 (28.0)	
Family stresses (total)				
Mean (SD)	66	4.3 (3.5)	2.5 (2.0)	0.04
Parental mental health (EFQ)				
Mean (SD)	66	16 (7.5)	12.44 (6.3)	0.04
Family type, n (%)				
Traditional	36	18 (43.9)	18 (69.2)	0.19
Single parent	19	13 (31.7)	6 (23.1)	
Reconstituted	9	7 (17.1)	2 (7.7)	
Other	3	3 (7.3)	0 (0.0)	

Table 2- Mean scores and percentages for the psychopathology of the SKIP sample

Characteristic	N	Cases	Controls	P-value	Normative data (%)
Parental SDQ ¹ , Mean (SD)					
Total difficulties	66	22.3 (6.9)	6.6 (5.8)	<0.001	8.2 (5.8) ²
Emotional symptoms	66	4.6 (2.5)	2.1 (1.0)		1.8 (1.9)
Conduct problems	66	5.2 (2.2)	1.2 (1.6)		1.6 (1.7)
Hyperactivity/Inattention	66	8.0 (2.1)	2.3 (2.3)		3.4 (2.7)
Peer problems	66	4.5 (2.6)	1.0 (1.3)		1.3 (1.6)
Pro-social behaviour	66	6.0 (2.1)	8.9 (1.3)		8.8 (1.5)
Impact, Mean (SD)	66	6.7 (2.6)	0.2 (0.8)		<0.001
Teacher SDQ ^{1†} , Mean (SD)					
Total difficulties	59	22.3 (5.1)	3.9 (4.1)	<0.001	6.6 (5.9) ³
Emotional symptoms	59	4.2 (2.9)	0.8 (1.5)		1.6 (2.0)
Conduct problems	59	5.4 (1.8)	0.4 (0.8)		0.9 (1.6)
Hyperactivity/Inattention	59	8.4 (1.6)	1.8 (2.4)		2.9 (2.8)
Peer problems	59	4.3 (1.9)	0.9 (1.4)		1.2 (1.7)
Pro-social behaviour	59	3.9 (1.9)	8.5 (1.6)		7.7 (2.3)
Impact, Mean (SD)	59	4.6 (1.5)	0.04 (0.2)		<0.001
ARI					
Mean (SD)	47	8.5 (2.5)	1.7 (2.3)	<0.001	3.3 (3.4) ⁴
Range		3-12	0-10		0-11
Deliberate Self Harm, n (%)					
Recently					
Yes	7	7 (17.1)	0 (0.0)	0.039	
No	59	34 (82.9)	25 (100.0)		
Ever					
Yes	10	9 (22.0)	1 (4.0)	0.076	<2 % ⁵

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¹ Total difficulties score² From British Child and Adolescent Mental Health Survey 2004, (n=3918 aged 5-10 years) GREEN, H., MCGINNITY, A., MELTZER, H., FORD, T. & GOODMAN, R. 2005. Mental health of children and young people in Great Britain, 2004. London: Palgrave Macmillan.³ From British Child and Adolescent Mental Health Survey 2004, (n=3148, aged 5-10 years) *ibid*.⁴ Based on data from the UK sample (n=83; aged 5-18, includes both controls and patients) STRINGARIS, A., GOODMAN, R., FERDINANDO, S., RAZDAN, V., MUHRER, E., LEIBENLUFT, E. & BROTMAN, M. A. 2012. The Affective Reactivity Index: a concise irritability scale for clinical and research settings. *J Child Psychol Psychiatry*, 53, 1109-17.

Parker, C. (2015)

No	56	32 (78.0)	24 (96.0)		
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⁵ Data based on parent reports of children aged (5-16) GREEN, H., MCGINNITY, A., MELTZER, H., FORD, T. & GOODMAN, R. 2005. Mental health of children and young people in Great Britain, 2004. London: Palgrave Macmillan., 2% of children with no emotional disorder had ever self-harmed, increases to 14% of children with an emotional disorder, 16% for those with CD. The rates of self-harm in children under 11 years is negligible.

Table 3- Percentage of disorder among the SKIP sample

Characteristic	N	Cases	Controls	P-value	Normative data (%)
Any disorder, n (%)					
Yes	40	39 (97.5)	1 (4.17)	<0.001	7.7 ¹
Emotional disorder, n (%)					
No emotional disorder	44	20 (50.0)	24 (100.0)		
Any emotional	20	20 (50.0)	0 (0.0)	<0.001	2.4
- Separation anxiety		1 (2.5)	0 (0.0)	1.00 ⁵	0.6
- Specific phobia		0 (0.0)	0 (0.0)		0.7
- Social phobia		0 (0.0)	0 (0.0)		0.1
- Panic disorder		0 (0.0)	0 (0.0)		-
- Agoraphobia		0 (0.0)	0 (0.0)		-
- PTSD ²		0 (0.0)	0 (0.0)		0.0
- OCD ³		1 (2.5) ⁴	0 (0.0)	1.00 ⁵	0.2
- Generalised anxiety		1 (2.5)	0 (0.0)	1.00 ⁵	0.3
- Other anxiety		14 (35.0)	0 (0.0)	0.001 ⁵	0.7
- Depression		4 (10.0)	0 (0.0)	0.288 ⁵	0.2
Behavioural disorder, n (%)					
No behavioural disorder	27	4 (10.0)	23 (95.8)		-
Any behavioural	37	36 (90.0)	1 (4.2)	<0.001	4.9
- ODD ⁶		19 (47.5)	1 (4.17)	<0.001	3.5
- Conduct		10 (25.0)	0 (0.0)	0.010	0.9
- Other disruptive		8 (20.0)	0 (0.0)	0.021	0.5
ADHD, n (%)					
No ADHD	43	0 (0.0)	24 (0.0)		
Any ADHD ⁷	21	21 (52.5)	0 (0.0)	<0.001	1.6

¹ From British Child and Adolescent Mental Health Survey 2004, (n=3925, aged 5-10 years) *ibid*.

² Post-traumatic stress disorder

³ Obsessive compulsive disorder

⁴ Diagnosis is unsure

⁵ Fishers exact

⁶ Oppositional defiant disorder

⁷ Combined yes and unsure

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ASD ⁸ , n (%)					
No ASD	53	29 (72.5)	24 (100.0)	0.005	1.0
Disorder	11	11 (27.5)	0 (0.0)		
Tics, n (%)					
No Tics	62	38 (95.0)	24 (100.0)	1.00	<1.0
Disorder	2	2 (5.0)	0 (0.0)		
Co-morbidity, n (%)					
No disorder	34	1 (2.5)	23 (95.8)	<0.001	90.0
One	10	9 (22.5)	1 (4.2)		6.6
2+ disorders	30	30 (75.0)	0 (0.0)		2.9 ¹⁵

⁸ Autistic Spectrum Disorder

15 From Ford T, Goodman R & Meltzer H. (2003). The British Child and Adolescent Mental Health Survey 1999. *Journal of the American Academy of Child and Adolescent Psychiatry* 42, 1203-1211

Table 4- Developmental characteristics of the SKIP sample

Characteristic	N	Cases	Controls	P-value	Normative data
SSP (total), n (%)					
Typical	30	8 (19.5)	22 (84.6)	<0.001	≥ 1 SD below mean ¹
Probable	9	6 (14.6)	3 (11.5)		≥ 2 SD below mean
Definite	28	27 (65.9)	1 (3.9)		< 2 SD below mean
CCC2					
Mean GCC ² (SD)	67	50.3 (21.4)	84.7 (14.8)	<0.001	>55 ³
BPVS (standardised)					
Mean (SD)	67	102.6 (12.2)	106 (11.7)	0.200	100 ⁴
Range		76-128	84-132		
Learning difficulty, n (%)					
Yes	15	15 (36.6)	0 (0.0)	0.001	161 (2.0) ⁵
No	52	26 (63.4)	26 (100.0)		7768 (98.0)

¹ Based on North American population DUNN, W. 1999. Overview of the Short Sensory Profile (SSP). *Sensory Profile Manual*. San Antonio: Harcourt Assessment; The Psychological Corporation., children without disabilities (n=1,037, aged 3-10 years)

² General Communication Composite, a norm-referenced standard score BISHOP, D. V. M. 2003. *The Children's Communication Checklist: Second Edition CCC-2 Manual*, London, Harcourt Assessment; The Psychological Corporation.

³ Based on validation data from UK sample *ibid.* manual (n=20, aged 7-16 years), >55 equivalent of above the 10th percentile

⁴ Standardised norm- DUNN, L. M., DUNN, L. M., WHETTON, C. & BURLEY, J. 1997. *The British Picture Vocabulary Scale Manual: Second Edition*, London, GL Assessment. manual

⁵ Based on BCAMHS 2004 data, teacher and parent combined response (n =7929, aged 5-16 years) GREEN, H., MCGINNITY, A., MELTZER, H., FORD, T. & GOODMAN, R. 2005. Mental health of children and young people in Great Britain, 2004. London: Palgrave Macmillan.

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ELS	52	55.6 (9.7)	75.7 (8.3) 81.5	<0.001	73.2 (10.2) ⁶
Parent reported	51	64.3 (11.8) 41.0	(8.8) 68.8 (7.5)	<0.001	74.6 (9.6) ⁶
Child reported	44	(7.8)		<0.001	59.1 (12.1) ⁶
Teacher reported					

⁶ Based on data from FAUPEL, A. 2003. *Emotional Literacy: Assessment and Intervention User's Guide*, London, GL Assessment. (Parent: n=449, aged 7-15 years; Child: n=732, aged 7-11 years; Teacher: n=449, aged 7-15 years)

Table 5- Attainment characteristics of the SKIP sample

Characteristic	N	Cases	Controls	P-value	Normative data
Quantitative reasoning ¹					
Mean (SD)	51	42.4 (10.8)	50.5 (11.2)	0.012	50 ²
Picture similarities ^{1,4}					
Mean (SD)	14	55.3 (17.8)	45.3 (8.8)	0.44	50 ^{2,3}
Digits forward ¹⁺					
Mean (SD)	66	47.6 (9.7)	53.7 (7.2)	0.012	50 ^{2,3}
Digits backwards ¹⁺					
Mean (SD)	66	44.9 (10.2)	52.9 (10.2)	0.001	50 ^{2,3}
Number skills ¹⁺					
Mean (SD)	66	99.2 (17.9)	106.7 (11.2)	0.06	100 ³
Word reading ¹⁺					
Mean (SD)	66	94.9 (18.3)	105.5 (14.5)	0.008	100 ^{3,4}
Ravens (standardised)					
Mean (SD)	67	97 (21.3)	99.3 (13.1)	0.42	(100)
Range		60-135	80-130		Boys: 99.3 (15.2); Girls: 101.4 (15.7) ⁴

¹ A subscale of the British Ability Scales (BAS-III) ELLIOT, C. D. & SMITH, P. 2011. *BAS3 British Ability Scales: Technical Manual*, London, GL Assessment.

² Standardised t-score (50, sd ibid.)

³ Standardised s-score (100, sd ibid.)

⁴ Based on a sample of 83 children (Boys n=34; Girls n=49, aged 5-11 years) RAVEN, J. 2008. *Coloured Progressive Matrices and Crichton Vocabulary Scale Manual*, London, Pearson.

Table 6- Unadjusted and adjusted models exploring the impact of psychopathology, communication, sensory processing and emotional literacy by group

Exposure		N	Unadjusted	Adjusted
			OR ¹ (95% CI ²) P-value	OR ¹⁺ (95% CI ²⁺) P-value
Step One	SDQ ³	67	1.38 (1.19-1.60) <0.001	
	CCC ⁴	67	0.92 (0.88-0.95) <0.001	
	SSP ⁵	67	0.92 (0.89-0.96) <0.001	

¹ Odds Ratio

² Confidence Interval

³ SDQ

⁴ Children's Communication Checklist

⁵ Short Sensory Profile

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	ELS ⁶	67	0.81 (0.72-0.90) <0.001	
Step Two	SDQ ³³			1.80 (1.02-3.2) p=0.04
	CCC2 ⁴⁴			0.88 (0.76-1.01) p=0.08
	SSP ⁵⁵			1.10 (0.93-1.30) p=0.27
	ELS ⁶⁶			1.00 (0.84-1.19) p=0.99

⁶ Emotional Literacy Scale

Table 7 - Summary of the number of cases as categorised by recognition or not of their disorder/difficulty

Recognition (n=40 ¹)		Cases n (%)
No disorder or difficulty		1 (2.5)
Sub-clinical		0 (0.0)
Unrecognised disorder or difficulty		2 (5.0)
Recognised disorder	Identified by both the parent and teacher	25 (62.5)
	Identified by the Parent	4 (10.0)
	Identified by the Teacher	8 (20.0)

¹ 1 parent (case) did not complete the SDQ or DAWBA

References

- BISHOP, D. V. M. 2003. *The Children's Communication Checklist: Second Edition CCC-2 Manual*, London, Harcourt Assessment; The Psychological Corporation.
- DUNN, L. M., DUNN, L. M., WHETTON, C. & BURLEY, J. 1997. *The British Picture Vocabulary Scale Manual: Second Edition*, London, GL Assessment.
- DUNN, W. 1999. Overview of the Short Sensory Profile (SSP). *Sensory Profile Manual*. San Antonio: Harcourt Assessment; The Psychological Corporation.
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- FAUPEL, A. 2003. *Emotional Literacy: Assessment and Intervention User's Guide*, London, GL Assessment.
- GREEN, H., MCGINNITY, A., MELTZER, H., FORD, T. & GOODMAN, R. 2005. Mental health of children and young people in Great Britain, 2004. London: Palgrave Macmillan.
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- STRINGARIS, A., GOODMAN, R., FERDINANDO, S., RAZDAN, V., MUHRER, E., LEIBENLUFT, E. & BROTMAN, M. A. 2012. The Affective Reactivity Index: a concise irritability scale for clinical and research settings. *J Child Psychol Psychiatry*, 53, 1109-17.

Reviewer comments

The 'Supporting Kids, avoiding Problems' (SKIP) study, Relationships between school exclusion, psychopathology, development and attainment, a case control study

Reviewer comment	Author response
Reviewer one	
No recommendations	
Reviewer two	
<p>1) It is worth commenting briefly on why the official number of school exclusions is declining (page 2)</p>	<p>We have added to the paragraph which introduces the reasons for the possible misrepresentation of the official exclusion figures.</p> <p><i>'It is, however, likely that the decline in overall rate of exclusions presented by government statistics are misrepresentative for a number of reasons. Managed moves, where children are formally moved between schools to avoid exclusions are not included in statutory returns to government (Abdelnoor, 2007). More worryingly it has been suggested that pressures on schools to remain inclusive have led to higher levels of hidden exclusions; the Children's Commissioner for England reported there to be a number of illegal exclusions from school where for example, the headteacher would send pupils home to 'cool off' (Children's Commissioner, 2012, Children's Commissioner, 2013).'</i></p>
<p>2) It is worth justifying briefly the rationale for the predictions/hypotheses (particularly the one starting "in most cases" – page 3)</p>	<p>We have added to the paragraph linking the justification for the hypotheses.</p> <p><i>'Based on government statistics and literature regarding the potential vulnerabilities of this group we predicted that there would be higher levels of psychopathology, greater levels of developmental difficulties, and lower levels of attainment among the cases, but that most cases would have recognised needs and have accessed services for support.'</i></p>
<p>3) It is not clear where the control schools came from – Devon? Also, the meaning of "that reflected the gender age to the cases" (page 4, lines 10-11) is not clear.</p>	<p>We have added "within Devon" to the paragraph which discusses the recruitment of the control group.</p> <p>We hope this sentence is now clear; control schools were encouraged to select children of the same gender and similar in age to the cases.</p> <p><i>'Although we initially aimed to match control children to each case by age and gender, recruitment proved difficult and schools were therefore encouraged to select children of the</i></p>

	<i>same gender and age to the cases where possible.'</i>
<p>4) Numbers in text and tables need checking. In particular, the numbers in the second para on page 10 do not appear to align. For example, unless I am mistaken:</p> <ul style="list-style-type: none"> - It should be 36 not 37 - The % with ODD of 47.5 is not 13 times the normative rate (4.9%) or five times the rate of CD (25%) - It says a quarter of cases had a comorbid diagnoses but the table suggests 75% <p>Care is needed to ensure any changes are reflected in the discussion and conclusions.</p> <p>Page 10 line 38 says "over half of them" but it is 66% according to the table – better to say just over two thirds.</p>	<p>Thank you for highlighting these discrepancies we have been through the tables thoroughly and made the following changes:</p> <ul style="list-style-type: none"> - We have amended pg 10 line 12 to 36 - The % with ODD has been amended to five times what would be expected, with CD being almost twice as likely - The table did suggest 75%, we have double checked this and corrected the text <i>'The majority of the cases had a comorbid diagnoses; three quarters (n=30) had two or more comorbid diagnoses.'</i> - We have amended pg. 10 line 34 to state <i>'two thirds...'</i>
<p>5) Also, some of the figures in the paragraph refer to Table 2 e.g. % of ever self-harm (22% - worth putting in text, which currently says "a fifth"), which is a bit confusing unless the reader is directed back to Table 2.</p>	<p>We have directed the reader back to Table 2 and added the figures in the text for clarity.</p> <p><i>'A fifth of the cases (n= 9, 22%), compared with 2% of the general population have experienced deliberate self-harm at some point during their lives (Table 2).'</i></p>
<p>6) It is not clear where the figures in the following paragraph (starting "The impact...") come from. The same applies to the first part of the second para on page 11.</p>	<p>Thank you for highlighting this – we have added in orientation at the beginning of the paragraph.</p> <p>The first part of the second paragraph on page 11 did not initially have an associated table as we had described the data fully within the text, however we have now added an optional table (Table 7) if you feel that this would be beneficial to include.</p>
<p>7) On page 11, first para, it is worth reminding the reader at the beginning that the model is looking at predicting whether a child was a case or control (mentioned in the last section).</p>	<p>We have added a sentence to the opening of this paragraph to remind the reader of the purpose of the model.</p> <p><i>'A model was developed to explore whether the child was a case or a control was associated with the child's psychopathology and / or the presence / absence of psychiatric disorder (Table 6).'</i></p>
<p>8) Where it refers to the figures in Figure 2, is "most cases" (page 11, line 28) referring to parents/families in the cases group? Worth clarifying. Also, there does not appear to be any order to the services</p>	<p>We have added a sentence to clarify that 'most cases' is referring to families from the cases group,</p> <p><i>'Most families of children who were cases had</i></p>

<p>in Figure 2; I suggest ordering from least to highest unless another clear order can be used.</p>	<p><i>made contact with services (n=39 , 90.7%)'</i></p> <p>Figure 2 – we have re ordered from least to highest.</p>
<p>9) Some repetition e.g. sentence citing Parker and Whear reviews appears about 3 times (intro, page 12, and discussion).</p>	<p>We have removed the repetition of the reference.</p>
<p>10) Page 13, para 3: Numbers in text and Figure 2 don't appear to align e.g. "a third of cases...from specialist educational sources" but Fig 2 suggests in is about 60%. Later it says "the low proportion of" but I think this is also referring to education specialists (and low relative to what?).</p>	<p>Thank you for pointing this out, we have been through and double checked the numbers reported in this paragraph and made appropriate changes below.</p> <p><i>'Similarly, nearly two thirds of the cases had sought support from specialist educational sources.'</i></p> <p><i>'Considering all of the cases were having severe difficulties within the school environment you might expect a higher percentage of service contact, however the low proportion of contacts with educational professionals could be a reflection of a lack of resources and finances from schools to access further support.'</i></p>
<p>11) Page 14 line 11: does "middle to upper levels of deprivation" mean not so badly off (rather than upper meaning higher deprivation?) This needs clarifying.</p>	<p>We have clarified this sentence further to include the definition of what middle to upper levels include.</p> <p><i>'although the majority of the cases were boys and over a third of them had learning difficulties ,the majority of the cases were from a white British ethnicity and two thirds lived in more affluent neighbourhoods (middle to upper levels of the index of multiple deprivation).'</i></p>
<p>12) The Khan et al citation on page 16 (line 46) – effective at improving which outcomes?</p>	<p>The review focuses on discussing the outcomes of effective interventions for children and young people with clinically diagnosable mental health conditions.</p> <p>We have added a sentence to clarify this within the paper.</p> <p><i>'Khan and colleagues, (2015) reported there to be a wealth of interventions related to clinically diagnosable mental health conditions for children that are effective at improving outcomes related to their social, emotional, learning, communication and peer relations, and it is balancing these costs against future gains that requires attention by commissioners.'</i></p>
<p>13) The paper argues for more qualitative research on exclusion (p17) – I think it is worth acknowledging that several such</p>	<p>Thank you for this point, we recognise that there are several such studies in this area from the early 1990's particularly in relation to teachers and</p>

studies already exist.	young people there is less related work on parents or in relation to primary school children;, we have a paper in press on this topic
14) The discussion and conclusion sections together are 5 pages; some good editing could reduce this by a page or so to make it tighter without losing significant content.	We have been through the discussion and conclusion and made some edits so that is it now more concise.
15) Last sentence of article: "By understanding..." suggest adding "and addressing..."	Thank you we have added this to the final sentence.
16) The article needs a thorough proof-read as there is some odd punctuation (e.g. "Childhood psychopathology, places heavy burden..." – page 2 line 11 (no need for comma), "Parents details" on page 3 line 53 (should be Parents' OR The parent's) and some stray words e.g. Page 4 line 7 "Although we were initially aimed for ..." (delete "were").	Thank you, we have given the paper a thorough proof-read.
17) Table 5 – some of the numbers in the far right column should be superscript (e.g. 2 in 502, 2 in 1003)	We have amended this formatting issue within the Table and text.
18) Pages 26ff are interesting but not necessary.	We will make the SKIP feedback form available upon request from the author.
19) Article needs a good proofread	We have given the paper a thorough proofread.