Peer-mediated Interventions for Pupils with ASD in Mainstream Schools; a Tool to Promote Social Inclusion

A thesis submitted to The University of Manchester for the Degree of Doctor in Educational and Child Psychology in the faculty of Education

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Peer-mediated Interventions for Pupils with ASD in Mainstream Schools; a Tool to Promote Social Inclusion

Abstract

There is increasing interest in the role of peers in facilitating the social interaction of pupils with ASD through Peer-mediated Interventions (PMI). A systematic literature review was conducted to provide an overview of methods used to evaluate the impact of PMI and provide examples of innovative practice. Four databases were searched. Following application of inclusion and exclusion criteria and coding of studies, 10 were included in the final review. The review found that measuring the outcome of PMI at the level of target pupils has been a focus, with less attention given to exploring experiences of participants; impact on peers and implementation of PMI within an educational context.

An innovative PMI was implemented within a mainstream primary school to promote the social inclusion of a Year 3 male pupil with ASD, with his class and five peers. Key elements of the PMI included development of the programme with school staff, whole class awareness raising and a small group peer network. The intervention was evaluated through structured playground observations of pupil-peer interaction, interviews with the target pupil and school staff and a peer focus group. Findings indicated that this small-scale PMI had a positive impact at the level of the target pupil and peers. Key factors facilitating the implementation of this intervention within a school context were also identified.

A structured dissemination strategy that involved consultation activities with key stakeholders explored the refinement of an ecologically valid and feasible model for delivery in mainstream schools. Future considerations in developing the intervention framework include; refining elements of the programme based on feedback from key stakeholders and trialling the delivery of the intervention by school staff trained in the programme. Implications for Educational Psychologists (EPs) in the development and delivery of the intervention are discussed.

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April 2016
Declaration

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Finally I would like to thank my academic tutor, Caroline Bond for her ongoing support, expertise, encouragement and perseverance- not to mention the endless cups of coffee and tea, without her this thesis would not have been possible.

Thank you for joining me on this journey - to you all I am eternally grateful.
Paper One

‘How have target pupil, peer and school level outcomes related to Peer-Mediated Interventions for pupils with ASD been evaluated?’

Prepared for in accordance with author guidelines for submission to the European Journal of Special Needs Education (Appendix 1).

Word Count: 7466 (including references)
Abstract

There is increasing interest in the role of peers in facilitating the social interaction skills of pupils with ASD through Peer-mediated Interventions (PMI). Several reviews provide promising evidence for the effectiveness of this approach; however, there has been limited consideration of the range of outcome foci and methods used to evaluate PMI. The purpose of the current review is to provide an overview of methods used to evaluate the impact of PMI and illuminate key examples of innovative practice. Database and web searches were conducted between July and August 2015 to identify PMI studies published between 2000 and 2015. 10 Studies met criteria for inclusion.

The review found that although measuring the outcome of PMI at the level of target pupils has been a focus, less attention has been given to exploring the experiences of participants; the impact on peers and the extent to which PMI can truly be implemented within an educational context. Implications for future methods of evaluating PMI are discussed.

Keywords: Peer-mediated interventions, PMI, autism spectrum disorder, ASD, social skills
How have target pupil, peer and school level outcomes related to Peer-Mediated Interventions for pupils with ASD been evaluated?

Introduction

The characteristics of Autism Spectrum Disorders (ASDs) centre around two core impairments, persistent deficits in social communication and interaction and restricted repetitive patterns of behaviour (American Psychiatric Association, 2013). Children with ASD experience inherent difficulties understanding social situations and participating appropriately in interactions and therefore have significant challenges in navigating the social world around them. Current statistics show ASD affects approximately 1% of children in the United Kingdom (UK).

Inclusive policies have lead to a greater proportion of pupils with ASD being educated in mainstream settings (Keen & Ward, 2004). Recent statistics reflect this increase with figures showing that in the UK approximately 71% of pupils with ASD attend mainstream educational placements (Department for Education, 2013). In the UK, this reflects changes in policy as indicated in the Warnock report (1978) however, Warnock (2005) has since questioned whether this approach meets the needs of all children with ASD. This perspective is reinforced by Jordan (2008) who describes the problems with the contrasting ways of responding to autism in education from the highly specialist and frequently strictly segregated approach to the explicitly included. Jordan (2005) argues that there is no single approach that can meet the needs of children with ASD, and advocates that the best teaching irrespective of setting arises from a flexible and empathetic approach where understanding of ASD is key in beginning to meet children’s needs.

While mainstream integration can bring potential benefits in providing academic and social opportunities, there are concerns about the quality of social experiences for children with ASD in these settings (Humphrey & Lewis, 2008). Pupils with ASD are more likely to experience bullying and receive less social support than their peers in mainstream settings (Cappadocia, Weiss & Pepler 2012). Similarly,
rejection and reduced acceptance are experienced more frequently (Chamberlain, Kasari & Rotheram-Fuller, 2007). These experiences can negatively impact emotional wellbeing, educational attainment (Ambitious about Autism, 2013) and later life experiences of individuals with ASD (Storch et al., 2012).

Given the nature of the impairments implicit in ASD, it is not surprising that successful inclusion does not arise from mere physical integration of pupils with ASD in mainstream settings (Hunt & Goetz, 1997) and considerable efforts must be made to promote peer relations and facilitate positive social outcomes (Locke, Ishijima, Kasari & London, 2010). The Reciprocal Effects Peer Interaction Model (Humphrey & Symes, 2011) identifies the need for interventions within schools to facilitate social interaction between pupils with ASD and their peers. It illustrates how the social difficulties of children with ASD can be compounded by a lack of peer awareness and understanding, resulting in reduced quality and frequency of pupil-peer interactions, limited social networks and increased bullying and rejection. It highlights the importance of developing understanding within the peer group to promote positive peer attitudes which can facilitate greater social support (Ochs, Kremer-Sadlik, Solomon & Sirota, 2001).

Peer-mediated interventions

Peer-mediated interventions have been used extensively in education with interventions such as peer tutoring being used to support learning of key learning and thinking skills. These approaches have also been applied to social aspects of learning such as positive behaviour (Sanchez, Miltenberger, Kincaid, & Cho Blair, 2015) and social skills, which is particularly relevant to pupils with ASD (Styler & Fitzgerald, 2016). Campbell and Barger (2014) argue that peer education alone is unlikely to produce significant changes in peers’ interactions with pupils with ASD and advocate directive approaches such as peer-mediated interventions (PMI). Traditionally PMI are rooted in behavioural principles (Odom & Strain, 1984) and social learning theory (Bandura, 1977) and involve teaching typically developing children to engage with children with ASD to promote the use of desired communicative and social behaviours (Odom et al., 2003). Odom & Strain (1984) have classified PMI into three distinct types; proximity, prompting and reinforcing and peer initiation. Proximity PMI refer to interventions where socially
Competent peers are placed in close proximity with pupils to model appropriate social behaviours, but peers are not trained in strategies to increase interaction with pupils. In comparison, both prompting and reinforcing and initiation PMI incorporate teaching peers skills to either prompt and reinforce a specific response or behaviour from a pupil or initiate interactions with pupils (Watkins et al., 2015). In these interventions, the adult plays a peripheral role in the peer-pupil interaction and promotes the interaction by prompting the peer rather than the pupil. In a recent review, Watkins et al., (2015) identified that initiation and prompting and reinforcing used separately or in combination resulted in more successful maintenance and generalisation of social skills than proximity PMI. These findings are not surprising given that a feature of ASD is that pupils often fail to naturally observe and imitate the behaviour of their typically developing peers (Myles, Simpson, Ormsbee & Erikson, 1993).

Other PMI such as peer networks tend to include a combination of adult instruction and peer-mediation and typically incorporate the child with ASD in the intervention/training, thereby providing child assistance in addition to peer training. Peer network interventions with a social support or problem solving basis, such as Circle of Friends (Frederickson & Turner, 2003) have a greater emphasis on social inclusion. Reviews show promising evidence for PMI in improving social interactions between pupils with ASD and their peers (Chan et al., 2009; Watkins et al, 2015; Zhang & Wheeler, 2011). Benefits of PMI for children with ASD include; increased duration of interactions with peers, and greater frequency and appropriateness of social initiations and responses (Chan et al., 2009; Zhang & Wheeler, 2011).

The naturalistic emphasis of PMI also offers advantages in comparison to adult-mediated approaches as it is more effective (Kasari, Rotheram-Fuller, Locke & Gulsrud, 2012), generalisation does not need to be planned for (Rogers, 2000), and peers as ‘intervention agents’ reduces the demands on school staff (Chan et al., 2009). Peers may benefit from increased confidence, greater understanding of diversity, academic and social gains and satisfaction in helping others (Jones, 2007; Kamps et al., 1998). However ethical concerns with regards to the responsibility placed on peer participants and exposure to challenging behaviours have also been raised (Parsons et al., 2009).
Despite its growing evidence base, little attention has been directed to examining the range of methods and foci in PMI evaluations. Reviews within the field of autism more generally have highlighted that intervention evaluations (Bond et al., 2016) and research goals (Pellicano, Dinsmore and Charman, 2014) have often neglected to include the views of those with ASD. However, eliciting participant’s views is crucial for interventions which are meaningful to need. Kasari and Smith (2013) also highlight that studies conducted in clinical settings may fail to recognise the importance of contextual factors within schools. Consequently, ‘buy in’ of interventions by schools can be low due to a failure in measuring the acceptability and applicability of interventions within the school context. A meta-analysis of social skills interventions for pupils with ASD (Bellini, Peters, Benner & Hopf, 2007) found that for interventions to be effective they need to occur in the child’s natural setting such as the school environment. To date PMI evaluations have not explored the mechanisms by which PMI operate in schools; at the level of the pupil, peers and school context. Schools are complex systems and interventions need to be integrated as part of the whole system for support and learning of all pupils rather than focusing solely on impact for the target pupil. The current review adopts a critical realist approach and aims to investigate these broader contextual factors and mechanisms in order to support schools to make informed decisions about the interventions they select (Fleming, Hurley & The Goth, 2015).

The current review aims to bridge the research gap by answering the following literature review question (LRQ):

‘How have researchers evaluated target pupil, peer and school level outcomes of peer-mediated social interaction interventions for children and young people with ASD in mainstream school settings?’

The review focuses on both the impact of the intervention and qualitative perceptions across three levels of outcomes, the target pupil, peers and school context.
**Review Process**

A systematic search strategy was employed and adhered to the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) (Moher, Liberati, Tetzlaff & Altman, 2009). Please refer to Figure 1 for an outline of the PRISMA process for this review. Between July and August 2015 systematic searches were completed in the following databases; Applied Social Science Index and Abstracts (ASSIA), Psych Info, Education Resources Information Centre (ERIC) and the British Index of Education. These databases were selected as previous research has indicated that these sources have the greatest capture of research in this field (Bond et al., 2016). Ethos and Google Scholar and an ancestry search of recent reviews identified any additional studies. Peer reviewed studies and doctoral dissertations published in the English language between 2000 and 2015 were included. Search terms (table 1) focused on 8 key areas; autism, peer-mediated interventions, peer networks, training, modelling, mentoring, tutoring and social skills interventions. There were 7 key search combinations that included autism and a defined peer activity, for example, ‘autism and peer-mediated interventions’, ‘autism and peer modelling’. Search terms were required to be present in the abstracts of the studies. This process generated 1771 hits. After accounting for duplicates, abstracts were then subjected to a screening process by the first author with regular discussion of criteria with the second author.

**Table 1: Key Search Term Categories and Related Terms**

<table>
<thead>
<tr>
<th>Key Search Term</th>
<th>Related Terms</th>
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<tbody>
<tr>
<td>Autism AND</td>
<td>ASD, Autism spectrum disorder, ASC, Aspergers</td>
</tr>
<tr>
<td>Peer-mediated intervention</td>
<td>Peer mediated intervention/s, peer mediated programmes, peer mediation, peer mediators, peer interventions</td>
</tr>
<tr>
<td>Peer network</td>
<td>Peer support, peer group, peer buddy/buddies</td>
</tr>
<tr>
<td>Peer training</td>
<td>Peer trainers</td>
</tr>
<tr>
<td>Peer modelling</td>
<td>Peer models</td>
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<tr>
<td>Peer mentoring</td>
<td>Peer mentors</td>
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</table>
In order for studies to be included in any further analysis all pre-defined inclusion criteria had to be met. These were; empirical studies about a PMI which involved one or more pupils with a diagnosis of ASD and active involvement of one or more typically developing peers aged 5-18 years in mainstream education. Typically developing peers were sought as the research was designed to focus on PMIs that were more ecologically valid in relation to the social context of
mainstream schools and enabled pupils with ASD to work with typically developing role models. Studies needed to go beyond proximity PMI and involve active peer support, training or problem solving. Outcome measures needed to be quantitative or qualitative and focus on social skills; social inclusion or perceptions of the intervention. Conversely a study was not included in the review if it met any of the exclusion criteria outlined in table 2 below.

### Table 2: Exclusion Criteria

<table>
<thead>
<tr>
<th>Number</th>
<th>Exclusion Criterion</th>
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<tbody>
<tr>
<td>1.</td>
<td>Study did not include primary data</td>
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<td>2.</td>
<td>Target pupil did not have a diagnosis of ASD/PDD NOS, and no evidence that they would meet the criteria through completion of a recognised diagnostic tool, e.g., CARS, ABC.</td>
</tr>
<tr>
<td>3.</td>
<td>Participants younger than 5 years or older than 18 years.</td>
</tr>
<tr>
<td>4.</td>
<td>Participants did not access a mainstream educational setting.</td>
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</tbody>
</table>
| 5.     | PMI did not include an active peer support or training component (peers played too limited role in the intervention). This excluded:  
   a) Peers as recipients of social initiations without any training  
   b) Peers were placed in an orchestrated setting to enhance peer interaction but no adult direction/training was given.  
   c) Target children observe peers perform particular behaviours without any interaction between the two (e.g., video modelling of peers without any active peer-pupil interaction) |
| 6.     | No quantifiable quantitative or qualitative outcome measures |
| 7.     | Outcome measures did not include measures of social skills, social interaction, social inclusion or participant’s perceptions of the intervention. |
As it was not possible to access full texts for 6 unpublished studies only those where full texts were accessible and provided evidence of meeting each criterion were included in further analysis. In total 39 studies met all elements of the inclusion criteria. The studies that failed to meet the inclusion criteria were mainly excluded due to one or more of the following; the study was not conducted in a school setting, did not include appropriate outcome measures or an ‘active’ peer support or training component.

_Evaluative Frameworks_

All studies that met the inclusion criteria were coded using two frameworks that measured the methodological quality and breadth of outcome measures employed.

The evaluative framework utilised to measure the methodological quality of quantitative and qualitative studies was as described in Woods, Bond, Humphrey, Symes and Green (2011) and has been used in a number of previous reviews (Bond et al., in press). As described in table 3 (appendix 2) quantitative studies (framework A1) could score a maximum score of 7. Studies were then categorised as low (scoring 0-2), medium (3-5) or high (6-7) quality research. As shown in table 4 (appendix 3) qualitative studies (framework A2) could score a maximum score of 12. Studies were then categorised as low (scoring 0-3), medium (4-8) or high (9-12) quality research. Studies that included both quantitative and qualitative methodology were ‘dual coded’ and awarded the higher rating should a disparity in scores be present.

A second framework (framework B) shown in table 5 (appendix 4) was developed to measure the methodological appropriateness of the breadth of outcome measures used to evaluate the impact of the intervention. This was devised by the authors and evaluated a broad range of possible outcome measures at three distinct
levels; the target pupil, peer and school context with a maximum of 2 points available at each level. Studies that scored 0-2 were classified as having a narrow range of outcome measures, 2.5-4 a moderate and 5-6 a wide range.

The first author coded all of the papers and met regularly with the second author to ensure consistency of the coding process. To be included in the review a study needed to score at least 4 for quality (Weight of Evidence A) in quantitative studies; 6 in qualitative studies and 2.5 for Weight of Evidence B (WoE B) to ensure that studies addressed both dimensions. Although 2.5 was essentially a low threshold, it was felt this would provide a realistic overview of the range of methods used to date and ensured that studies were not excluded if their focus was exploring impact across just two levels as these could make a useful contribution to the review.

Overview and Appraisal of the Included Studies

After coding, 10 studies were deemed eligible for inclusion in the review (see table 6 for descriptive summary). In total, 29 studies were discounted as they did not score within the required ranges for methodological quality and evaluative methods. Of the excluded studies 14 focused solely on outcomes at the level of the target pupil.

Summary of Included Studies: Context

The 10 studies are from papers dated 2004 to 2014 and include three doctoral dissertations. Nine studies originated in the United States and one in the United Kingdom (Whitaker, 2004). Six studies took place in primary school settings and four in secondary schools. Of the studies in primary settings five took place in mainstream schools with specialist classes (Kamps et al., 2014; Laushley, Heflin, Shippen, Alberto & Fredrick, 2009; McFadden, 2012; Simpson, 2013; Whitaker, 2004) and one took place in a mainstream school with no additional Special Education Needs (SEN) provision (Mason et al., 2014). All of the secondary school studies took place in mainstream settings. The specified age of the target pupil, peer and school context with a maximum of 2 points available at each level. Studies that scored 0-2 were classified as having a narrow range of outcome measures, 2.5-4 a moderate and 5-6 a wide range.

The age groups described in primary school studies are 4-11 years, which broadly corresponds to elementary school internationally. The age group for secondary school studies covers 11-18 year olds and broadly corresponds to middle and high school.
pupils and peers ranged from 5 to 18 years and in all but one study the peer participants were similar in age to the target pupils.

Seven studies employed quantitative methodology and included social validity measures and three used mixed methodology (Hughes et al., 2013a; Simpson, 2013; Whitaker, 2004). The majority of the studies were single case experimental (SCE) designs with the exception of one which employed an action research design (Whitaker, 2004). SCE designs are typically used with individuals or small groups of participants, in which participants act as their own control and include combinations of baseline, intervention and reversal phases (Bond et al., 2016). The PMIs ranged from interventions that involved solely a peer training element (Hughes et al., 2013a; 2013b; Whitaker, 2004) to those that included discrete elements of peer training and target pupil instruction (Reilly et al., 2014) or those where both peers and target pupils were involved in a social skills group or training intervention (Kamps et al., 2014; Laushley et al., 2009; Mason et al., 2014). Several studies included a combination of these elements (Leinart, 2013; McFadden, 2012; Simpson, 2013). PMIs included a class wide pupil-peer buddy reading intervention, a peer-mediated recess intervention and social skills groups.

The facilitator of the intervention in most cases was someone from the research team, although in four studies school staff who had received prior training from the researchers implemented the PMI (Kamps et al., 2014; Mason et al., 2014; McFadden, 2012; Whitaker, 2004). All the studies included in the review showed promising evidence of the effectiveness of PMI in facilitating the social interaction of pupils with ASD and their peers.

The following section aims to capture the range of evaluative measures employed to ascertain the impact and perception of the intervention at three distinct levels; the target pupil, peers and school context.
<table>
<thead>
<tr>
<th>Study</th>
<th>School &amp; Country</th>
<th>Study design</th>
<th>Target pupils (TP)</th>
<th>Peers</th>
<th>PMI</th>
<th>Facilitator</th>
<th>Outcome measures</th>
<th>Findings</th>
<th>Assessment Framework A</th>
<th>Assessment Framework B</th>
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<td>Kamps et al. (2014)</td>
<td>Elementary USA (G &amp; Sp)</td>
<td>SCE</td>
<td>4</td>
<td>6-7 years</td>
<td>Peer network: direct instruction, scripted practice and prompted peer-mediated free play.</td>
<td>School staff</td>
<td>Obs: Researcher designed TP and peer schedule. Teacher satisfaction questionnaire.</td>
<td>Significant changes in total communication acts for all TP during intervention and generalisation. Peer initiations and responses increased. Teacher questionnaire: intervention feasible; improvements in TP interactions with trained and untrained peer.</td>
<td>5.5</td>
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<tr>
<td>Lashley et al. (2009)</td>
<td>2 Elementary schools USA (G &amp; Sp)</td>
<td>SCE</td>
<td>4</td>
<td>6-10 years</td>
<td>Social Skills group: Visual problem solving (concept mastery routine-CMR) and role play with group feedback.</td>
<td>Researcher</td>
<td>Obs: Researcher designed TP schedule. Sociometric measures: peer-naming scale and nominations. Peer and TP asked following intervention about experience. Teacher Questionnaire: outcomes and acceptability &amp; feasibility.</td>
<td>Social skills improved from baseline to intervention, generalisation across settings, maintained at follow up. Sociometric: peer nominations increased for all TPs and some reciprocal relationships Peer and TP reported enjoyment and would participate again. Questionnaire: CMR effective for teaching social skills, observed changes in social skills, fit into school schedule.</td>
<td>5.5</td>
<td>3</td>
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<tr>
<td>Mason et al. (2014)</td>
<td>Elementary USA</td>
<td>SCE</td>
<td>3</td>
<td>6-8 years</td>
<td>Peer network recess intervention: TP and peer skills training before recess and prompting to peers during play.</td>
<td>School staff (Researcher for one TP).</td>
<td>Obs: Researcher designed TP schedule. Recess Implementer Survey</td>
<td>Immediate increase in communicative acts for TPs. Positive changes in pupil-peer interactions, Peers more inclusive and</td>
<td>5.5</td>
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<tr>
<td>Author</td>
<td>Methodology</td>
<td>Setting</td>
<td>Design</td>
<td>Age</td>
<td>Setting</td>
<td>Main Intervention</td>
<td>Methodology</td>
<td>Findings</td>
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<td>McNamara</td>
<td>SCE</td>
<td>2 Elementary</td>
<td>4</td>
<td>6-8</td>
<td>Class</td>
<td>Peer network recess intervention: Direct instruction, prompting, peer</td>
<td>Implementer and</td>
<td>Increased social behaviours between peers and TP.</td>
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<td></td>
<td>(G &amp; Sp)</td>
<td>schools USA</td>
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<td>prompting, token systems, group contingencies, and reinforcement.</td>
<td>teacher survey.</td>
<td>Positive views of external support, outcomes, and future implementation.</td>
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<td>Peer fatigue and desire for inclusion of a greater variety of peers.</td>
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<td>Simpson</td>
<td>SCE</td>
<td>Elementary</td>
<td>4</td>
<td>5-8</td>
<td>Class</td>
<td>Class-wide Reading Buddies intervention: ASD class awareness and buddy</td>
<td>Observer designed TP</td>
<td>3 TPs increased mean interactions with peers. Peer interactions increased</td>
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<td>(G &amp; Sp)</td>
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<td>for all but 1 TP.</td>
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<td>Peer survey pre/ post &amp;</td>
<td>Peers high positive perception of TPs.</td>
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<td>Mixed methods</td>
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<td>interviews post intervention.</td>
<td>interviews post</td>
<td>Positive perceptions of interactions and intervention.</td>
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<td>intervention.</td>
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<td>Whitaker</td>
<td>Action research</td>
<td>Primary, UK</td>
<td>10</td>
<td>6-7</td>
<td>10-11</td>
<td>Explanation, modelling and role play of interaction skills. Peers prompted</td>
<td>Researcher &amp; school</td>
<td>Rise in shared play from average 42% to 66%, significant increase in</td>
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<td>during play with TP.</td>
<td>staff</td>
<td>frequency of requests made by TPs.</td>
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<td>Mixed methods</td>
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<td>Semi-structured</td>
<td>Peer interviews: enthusiastic re participation, some initial anxiety re TP</td>
<td>3 (A1)</td>
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<td>Interviews with peers &amp;</td>
<td>engaging exposure to challenging behaviour affected confidence of one peer</td>
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<td>parents.</td>
<td>Parent interviews: positive benefits re diversity awareness and tolerance.</td>
<td>9.5 (A2)</td>
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</table>
## Descriptive studies of secondary-aged children

<table>
<thead>
<tr>
<th>Study</th>
<th>School &amp; Country</th>
<th>Study design</th>
<th>Target pupils (TP)</th>
<th>Peers</th>
<th>PMI</th>
<th>Facilitator</th>
<th>Outcome measures</th>
<th>Findings</th>
<th>Assessment Framework A</th>
<th>Assessment Framework B</th>
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<tbody>
<tr>
<td>Hughes et al., (2013a)</td>
<td>High school USA</td>
<td>SCE Mixed methods</td>
<td>3 16-17 years</td>
<td>3</td>
<td>Researcher trained peers to interact with TP based on interests.</td>
<td>Researcher</td>
<td>Obs: Researcher designed TP &amp; peer schedule. Peers set daily goals for frequency of TP interaction. Researchers compared with classmates interaction rates. Social goals: TP asked about social goals pre/post. Peers rated enjoyment and similarity of interactions to those with friends. Interviews with peers and teachers about effectiveness and acceptability.</td>
<td>Poor and TP initiations increased variably across TP. Duration similar to normative sample. TP responded positively to talking to new friend. Peers enjoyed interactions, and similar to those with friends. Poor interviews: identified increased empathy and successes. Challenges, fitting in time to interact in class. Teacher interviews: Positive effects on TP and peers. Worked within classes, would like to extend.</td>
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<tr>
<td>Hughes et al., (2013b)</td>
<td>High school USA</td>
<td>SCE</td>
<td>6 16-18 years</td>
<td>1 trainer</td>
<td>Peer trainer taught TPs to use communication book.</td>
<td>Researcher</td>
<td>Obs: Researcher designed TP &amp; peer schedule. Ratings of TP affect and peers, quality and reciprocity of interaction and conversational topics.</td>
<td>% of TP initiations &amp; peers responses increased. Poor initiations and TP responses increased, maintained at follow up. Affect approached high during book use for all but one TP. Partner affect and quality generally high, reciprocity-conversations amongst most TP and peers.</td>
<td>4.5</td>
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<td>Study</td>
<td>Setting</td>
<td>Age Range</td>
<td>Peer Count</td>
<td>TRP Count</td>
<td>Description</td>
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<td>Reilly et al. (2014)</td>
<td>High school USA</td>
<td>16-18 years</td>
<td>3</td>
<td>11</td>
<td>Peer-promoted peer trainers to verbally prompt TP if they failed to ask a novel question (NQ) and praise when successful. Researcher prompted peer trainers to prompt/praise pupils.</td>
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<td>Social goals: TP asked about social goals pre/post</td>
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<td>Partner &amp; TP questionnaire following interactions.</td>
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<td></td>
<td>Post intervention partner questionnaire (peers who had 3 or more interactions with TP).</td>
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<td>All TPs had more friends, identified partners as friends and book helped them talk to peers.</td>
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<td>TP &amp; Partner questionnaire: TP mostly enjoyed interactions, peers generally viewed interactions as favourable.</td>
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<tr>
<td>Le Maint (2013) Thesis</td>
<td>Middle school USA</td>
<td>11-13 years</td>
<td>3</td>
<td>4</td>
<td>TP previously received SCI (social competence programme). Practice and generalization of</td>
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<td>Researcher</td>
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<td>Obs: Researcher designed TP schedule.</td>
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<td>SRQ &amp; BRIEF teacher</td>
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<td>Increases in appropriate interactions, (greater increase in responses).</td>
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<td>Improvement for all three TPs on executive</td>
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<td>years</td>
<td>years</td>
<td>social skills from SCI to natural setting through peer initiation training, networking, visual prompting, performance feedback, and Delis-Kaplan Executive Functioning System subtests (researcher) pre and post. Consumer evaluation questionnaire: pupils, TP parents and school staff.</td>
<td>functioning tasks student performance measure, but only for one TP on teacher report (BRIEF). High consumer acceptability from TP, peers, parents and school staff.</td>
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**SCE:** Single case experimental design  
**Obs:** Observation  
**CP:** Communication Partner  
**G & Sp:** General and Special Education
Outcome measures employed at the level of the Target Pupil

Impact:

All studies incorporated researcher designed observational measures of pupil-peer social interaction to ascertain the impact of the intervention on the target pupils’ social interaction skills. The majority recorded discrete social interaction behaviours such as the number of appropriate initiations and responses made by the target pupil towards the peer participants. Two studies also measured qualitative aspects of pupil-peer interaction, such as affect, reciprocity and quality (Hughes et al., 2013b; Reilly et al., 2014). Most studies conducted observations in more than one setting, (Hughes et al., 2013b; Kamps et al., 2014; Laushley et al., 2009; Mason et al., 2014; McFadden, 2012; Reilly et al., 2014). Surprisingly only two incorporated the use of follow up observations (Hughes et al., 2013b; Laushley et al., 2009).

One study (Laushley et al., 2009) used sociometric measures to ascertain changes of the social status and inclusion of the target pupil by peers’ pre and post intervention. Leinart (2013) also asked teachers and parents to complete the Social Responsiveness Scale and Social Skills Checklist to assess any change in the quality of the target pupil’s social skills. This study also included standardised executive function measures to assess changes in cognitive flexibility and problem solving.

Social validity questionnaires included likert and/or open ended questions and asked school staff and occasionally parents about the impact of the intervention on the pupil (Kamps et al., 2014; Laushley et al., 2009; Leinart, 2013; Mason et al., 2014; McFadden, 2012). Only one study completed a more in depth evaluation of the impact on target pupils through semi-structured interviews with school staff (Hughes et al., 2013a).

Interestingly, some studies asked the peer participants about the impact of the intervention on the target pupils. One study ascertained peer views through semi-structured interviews, (Whitaker, 2004). Seeking the peers’ views about the impact of the intervention on the target pupils was more prevalent in the secondary aged studies. These studies (Hughes et al, 2013; 2013b; Reilly et al., 2014) contained a short likert questionnaire that incorporated questions about any changes in communication and
interaction skills of target pupils following the intervention and were completed by peers that had experienced a number of interactions with the pupil.

Perception/Experience:

In comparison to the presence of measurements to record behavioural changes in target pupils, very few studies sought the target pupils’ views of their experience or perception of the intervention. One primary school study (Laushley et al., 2009) attempted to elicit the target pupils’ views by asking whether they enjoyed the intervention and would participate again. In three secondary school studies (Hughes et al., 2013b; Leinart, 2013; Reilly et al., 2014), pupils were asked to rate aspects such as their interactions with peers and enjoyment of the interaction.

All of the secondary aged studies conducted by Hughes and colleagues (Hughes et al., 2013a; 2013b; Reilly et al., 2014) attempted to elicit the target pupils views about their social goals by researchers asking them a series of open ended questions pre and post intervention. Pre intervention questions included whether they would like to have more friends at school and post intervention questions included whether they felt they had made more friends and, whether the communication book helped them talk to their friends. Visual aids and signing were used to support the communication of pupils that had limited language.

Outcome Measures employed at the Level of the Peers

Impact:

Some primary and secondary studies measured change in the peers’ interaction behaviours with target pupils pre and post intervention through the same observation schedule used to record target pupil behaviours; mainly documenting initiations and responses (Hughes et al., 2013a; 2013b; Kamps et al., 2014; McFadden, 2012; Reilly et al., 2014; Simpson, 2013). Whitaker (2004) is the only study to provide descriptive changes in peer behaviour towards target pupils which highlights the potential for researching this broader range of outcomes.

Some of the social validity measures completed by school staff and parents of peers incorporated questions about the impact of the PMI on peer participants, however the extent of this information is variable across papers, (Kamps et al., 2014; Leinart,
In one no data regarding peers is presented despite stating that this information was gathered (Kamps et al., 2014) and overall, the information gained does not include sufficient depth and consideration to draw meaningful conclusions.

Two studies gained more detailed information through semi-structured interviews. Whitaker (2004) conducted telephone interviews with the parents of peers about the benefits and drawbacks of their child’s participation. In one secondary study (Hughes et al., 2013a) teaching staff were interviewed post intervention about the impact on peer participants, however limited information was presented regarding this.

Perception/Experience:

Interestingly, across both primary and secondary school studies, peers were asked more frequently about their experience of the intervention than the target pupils. However, the extent to which peer voice was elicited was variable. In one primary study (Laushley et al., 2009), peer participants were simply asked whether they enjoyed participating in the intervention and would want to in the future. In another primary study (Simpson, 2013) peers completed a likert questionnaire and interview about their feelings about engaging with the target pupils. Whitaker (2004) elicited perceptions in most depth by conducting semi-structured interviews with peer tutors to explore the benefits and challenges experienced.

All of the secondary aged studies included some measure of peer perception or experience of the PMI. Peers completed likert questionnaires about aspects of interacting with the target pupil, (Hughes et al., 2013a; 2013b; Reilly et al., 2014) and in several of these studies peers that had more frequent interactions with the target pupils completed an additional questionnaire that included questions about communicating with the target pupil including whether the communication book facilitated interaction (Hughes et al., 2013b; Reilly et al., 2014). In one study (Leinart, 2013) peers completed a short likert questionnaire about their experience of the PMI. Only Hughes et al., (2013) conducted interviews with peers, which provided valuable information about the peers’ experiences of interacting with the target pupils and perceived benefits and challenges.

Outcome Measures at the Level of the School Context
Across the studies, very little information was sought regarding the acceptability, and applicability of the PMI within the educational context. Of the primary aged studies, four elicited some information with regards to the feasibility and/or acceptability of the PMI through the use of questionnaires. Most consisted of likert questions (Kamps et al., 2014; McFadden, 2012) with one study (Mason et al., 2014) using questionnaires that incorporated several open ended questions. One study (Laushley et al., 2009) did not state the format of the social validity questionnaire.

Fewer secondary studies elicited views of school staff regarding the feasibility and acceptability of the PMI. Leinart (2013) included a questionnaire item that asked whether school staff would recommend the PMI for other pupils. Only one study (Hughes et al., 2013a) interviewed teachers about the applicability of the intervention and future considerations.

Discussion

The findings from this review indicate that PMI studies have mainly addressed impact at the level of the target pupil through observations by teachers and researchers and likert questionnaires completed by typically developing peers. More in depth methods of evaluating impact on target pupils through interviews with key stakeholders, including participating peers were only present in a two studies (Hughes et al., 2013a; Whitaker, 2004). In addition to this, observational measures of pupil-peer social interaction have tended to focus on discrete behaviours with only two studies (Hughes et al., 2013b; Reilly et al., 2014) measuring qualitative changes. Many argue that an emphasis on quantitative measures fails to provide meaningful outcomes (Kasari & Smith, 2013) as it neglects to account for the idiosyncracy and complexity in the interactions of children with ASD (DiSalvo & Oswald, 2002). Broader investigation of impact over time only took place in two studies (Hughes et al., 2013b; Laushley et al., 2009) and impact on peer participants was only explored in detail in two studies (Hughes, et al, 2013a; Whitaker, 2004).

In order to identify whether interventions work for a particular population, participants’ views and experiences need to be ascertained to inform the future development of such interventions (Kasari & Smith, 2013; Pellicano, Dinsmore & Charman, 2014). Hughes et al., (2013a, 2013b) provide some examples of how secondary school pupil views can be elicited however, in most cases target
participant’s experiences are not explored in sufficient depth, and play only a small part of the larger evaluative structures employed. Primary-aged target pupils are less frequently asked about their experiences than peers which is likely to be due to peers’ ability to communicate more readily. The communication difficulties of individuals with ASD may limit access to comprehensive data about interventions (Losh & Gordon, 2014) and pupils with ASD may have great difficulty reflecting on personal experiences and past events, (Millward, Powell, Messer & Jordan, 2000). Effective methods of ascertaining pupil voice need to be developed in order to represent the views of the participants’ central to the process. Nind, (2008) advocates the use of cue cards and open narratives when interviewing children with ASD rather than traditional question and answer formats.

In most studies information sought regarding the acceptability and applicability of PMI in school settings was mainly captured through staff completing likert questionnaires. This method promotes socially desirable responses, particularly if the intervention has been carried out by the researcher rather than school based facilitators (Robson, 2011). Although SCE models of research provide objective measures that can be helpful in indicating whether an intervention may work at the target pupil level, such methods need to be combined with broader measures of how interventions may work when delivered in collaboration with staff in real world settings (Fishman et al., 2013). Campbell et al., (2000) advocate the use of mixed method approaches and argue that controlled trials should be supplemented with more qualitative methods such as interviews, questionnaires and focus groups in order to establish utility of interventions and identify implementation factors within real life settings. The implementation, design and development of PMI interventions with key stakeholders (Fishman et al., 2013; Pellicano, Dinsmore & Charman, 2014) would contribute to the development of research in this field.

Previous reviews have not included theses in the literature scope. However, the comprehensiveness of these reports was an informative addition to the current review, overcoming some of the limitations of journal articles such as the stringent requirement to report findings within specified parameters, which may result in narrower foci.
There are several limitations of the current review that warrant consideration. A number of good quality studies that included comprehensive examples of measurement of the impact of the intervention on target pupils were excluded as they did not score within the required band for breadth of outcomes. However, given the strength of existing evidence at this level the current review aimed to explore the wider range of potential PMI outcomes.

Clearly a dilemma within the research field, particularly within published research is selecting appropriate evaluative methods to illustrate the degree of change an intervention may have. To date PMI studies have made a useful contribution by focusing on quantitative behavioural changes in the social skills of pupils with ASD and their peers. However, in order to understand acceptability of these interventions the experiences of participants and adaptability to school contexts and individual needs (Kasari & Smith, 2013) requires further research.

**Conclusion**

Despite the limitations discussed, this review provides an initial insight into the breadth of methods used to evaluate PMI at the level of the target pupils, peers and school context and highlights some examples of innovative approaches. It is hoped that the methods reported will provide a framework to enable researchers to move this research into schools and consider how to evaluate process and outcomes in a meaningful way.

**References**


Paper Two

‘A Peer-Mediated ASD intervention; the views and experiences of pupils, peers and school staff’

Prepared in accordance with author guidelines for submission to the European Journal of Special Needs Education (Appendix 1)

Word Count: 7445 (including references)
Abstract

There has been increasing interest in the role peers can play in promoting social inclusion for pupils with Autism Spectrum Disorders (ASD) in mainstream schools. Reviews have shown promising evidence for the use of Peer-Mediated Interventions (PMI) to facilitate pupil-peer relationships.

In the current study an innovative PMI was implemented in a mainstream primary school to promote the social inclusion of a Year 3 male pupil with ASD. The PMI was developed and delivered in collaboration with school staff and included two whole class awareness raising sessions and six small group peer network sessions. The intervention included the delivery of descriptive, explanatory and directive information messages. Data collection focused on pupil and staff perspectives and included; interviews with the target pupil and school staff and a peer focus group to gain an understanding of key participants’ experiences. Structured playground observations of pupil-peer interaction were also undertaken at baseline, post intervention and follow up.

Findings indicate that this small-scale PMI had a positive impact at the level of the target pupil and peers. An increase in appropriate initiations and responses by peers and the pupil were apparent. Increased peer acceptance, understanding of the pupil’s needs and skills to interact with the pupil were reported. The data showed positive changes in the target pupil’s turn taking, emotional regulation, empathy and greater enjoyment in working within a group. Potential drawbacks raised included the ‘exclusive’ nature of the peer network group, ‘feelings of exclusion’ of the wider class and wider school staff’s knowledge of the intervention. Additional drawbacks included limited generalisation of the skills learnt within the network outside of the sessions and transference of skills to pupils within the wider class. Key factors facilitating the implementation of this intervention within a school context were also identified and future implications are presented.

Keywords: Peer-mediated intervention (PMI), autism spectrum disorder (ASD), social skills
A Peer-Mediated ASD intervention; the views and experiences of pupils, peers and school staff

Introduction

The number of children with Autism Spectrum Disorder (ASD) attending mainstream schools has increased considerably in many countries. In the United Kingdom (UK) approximately 71% of pupils diagnosed with ASD attend mainstream settings (Department for Education, DfE, 2013) and there is often the assumption that because many pupils with ASD may be academically able they should manage in a mainstream school (Moore, 2007). Whilst they may cope academically their challenges socially can lead to difficulties in forming and maintaining relationships. Peer victimisation can be a concern for pupils with ASD and their parents (Kennedy, 2013) and has been linked to anxiety, depression and loneliness in children with ASD (Storch et al., 2012). Despite the challenges of developing social relationships, many children with ASD express a desire to have friendships (Kasari, Locke, Gulsrud & Rotheram-Fuller, 2011). Friendships have also been identified as having the potential to reduce loneliness (Lasgaard, Nielson, Erikson & Goossens, 2010) and improve resiliency in individuals with ASD (Humphrey & Lewis, 2008).

Theoretical models such as the Reciprocal Effects Peer Interaction Model (REPM) illustrate how the social difficulties of children with ASD can be compounded by a lack of peer awareness and understanding, resulting in reduced quality and frequency of pupil-peer interactions, limited social networks and increased bullying and social rejection (Humphrey & Symes, 2011). The model highlights the importance of developing understanding within the peer group to promote positive peer attitudes alongside teaching social skills to pupils with ASD. Similarly, Campbell and Barger (2014) propose a lack of understanding may contribute to peers’ isolating and rejecting pupils with ASD due to potential misinterpretations of behaviour. The underlying premise of the REPM stems from attribution theory (Weiner, 1986), where providing information about a pupil’s needs is assumed to help peers understand that the pupil’s difficulties lie outside their control which can potentially increase empathy and inclusion.

Experimental studies have explored how different information messages can promote positive peer attitudes and behaviours towards pupils with ASD. In one study
(Campbell, Ferguson, Herzinger, Jackson & Marino, 2004) a combination of descriptive (highlights similarities between pupil and peers) and explanatory information (causal information about a pupil’s needs) improved peers’ attitudes and behavioural intentions towards a child with ASD portrayed in a video. Providing explanatory information to children aged 7-10 years resulted in more positive attitudes towards a child with ASD portrayed in a video than for children aged 11. Additionally explanatory information improved behavioural intentions across ages although gender differences were noted with girls showing improved academic behavioural intentions. Drawing on attribution theory Campbell et al., (2004) propose explanatory information was particularly useful in improving younger children’s attitudes by altering their perception that the child with ASD was responsible for their atypical behaviour. The findings highlight the impact of providing peers with different information messages and suggest age and gender may be important factors to consider when identifying suitable peer education resources. However, further research is needed to identify whether altered attitudes and intentions generalise to everyday situations and are maintained over time.

Other research has shown that when peers are fully informed of a pupil’s diagnosis they engage in greater social support (Boutant & Bryant, 2005; Ochs, Kremer-Sadlik, Solomon & Sirota 2001). One study showed positive inclusion was more prominent where families and schools worked together to create a class-wide dialogue about ASD compared to schools where it was minimally or never acknowledged (Ochs, Kremer-Sadlik, Solomon & Sirota, 2001). This study seems to fit an explanatory model of raising awareness amongst the peer group. Ochs, Kremer-Sadlik, Solomon and Sirota, (2001) identify peers as ‘agents of positive inclusion’ who can play an important role in providing positive social experiences for children with ASD, arguing they are better placed than school staff to facilitate this. Findings from studies using the Circle of Friends approach have shown the whole class session, where peers are encouraged to talk about what they find difficult and value about the pupil with ASD has been particularly effective in promoting positive peer attitudes and behaviour (Frederickson, Warren & Turner, 2005; Gus, 2000; Whittaker, Barratt, Joy, Potter & Thomas, 1998). Circle of Friends may include some explanatory information messages but this is not made explicit and further limitations of this approach include
lack of direct modelling of skills and opportunities to generalise group skills to the wider class.

Although peer awareness is important this may not be sufficient to change peers’ interactions with pupils with ASD (Campbell & Barger, 2014). Peer-mediated interventions (PMI) can enhance awareness raising by incorporating the delivery of directive information messages such as teaching peers key strategies about how to interact effectively with pupils with ASD. There is some evidence demonstrating the success of PMI on the social interaction of pupils with ASD (Chan et al., 2009; Watkins et al., 2015; Zhang & Wheeler, 2011).

Kasari, Rotheram-Fuller, Locke & Gulsrud, (2012) taught peers specific skills such as engaging in interaction and conflict resolution and this was found to be more effective than a child-assisted intervention (teaching the pupil with ASD social skills) and resulted in positive effects on the ASD pupil’s social networks, social skills and isolation during playtime. Another peer training intervention focusing on outside play found an increase in peer initiations and pupil initiations and responses, with untrained peers also showing increased initiations (Owen-DeShryver, Carr, Cale & Blakeley Smith, 2008). Studies where peers have been taught key skills to engage with pupils with ASD using Pivotal Response Training (PRT) show some success but have failed to evaluate long term impacts (Harper, Symon & Frea, 2008).

Campbell and Barger (2014) argue interventions need to include all three information messages; descriptive, explanatory and directive to be effective. In a pilot study conducted by the lead author (Ezzamel, 2014) a combination of all three messages were evident within Resource Provision practice to promote peer understanding and positive pupil-peer interactions. Similarly, a recent study (Ranson & Byrne, 2014) found that an anti-stigma peer intervention containing descriptive, explanatory and directive information messages positively influenced the knowledge, attitudes and to a lesser extent behavioural intentions of peers towards adolescent females with high-functioning autism.

There remains a gap in the development of interventions that incorporate all three types of information messages. Some have focused on training peers to engage with pupils with ASD (directive information) but not provided understanding (explanatory information) alongside this (Kasari, Rotheram-Fuller, Locke & Gulsrud, 2012). This
seems to be predominantly the case in PMI that have a more behavioural approach (e.g., PRT), but focusing mainly on directive information does not fully address the development of peer understanding in the REPIM model. Peers may have questions about pupils that could be worthwhile exploring and open communication to address peers’ thoughts and feelings is an integral part of developing peer acceptance, as indicated in a pilot study by the lead author and in Circle of Friends interventions (Gus, 2000).

Few evaluations of PMI have incorporated the views of pupils with ASD and peers (Bond et al., 2016). To date attempts to elicit the views of pupils and peers in PMI studies have tended to be secondary to more objective measures of pupil-peer interaction change (Ezzamel & Bond, in press). Most studies have used short likert questionnaires to explore pupil and peer views. In a recent systematic review (Ezzamel & Bond, in press) only one primary school study interviewed peer participants (Whitaker, 2004). Other studies have highlighted the benefits (Jones, 2007; Kamps et al., 1998) and challenges (Parsons et al., 2009) for peer participants. Some of the challenges raised include ethical issues about disclosure of individual diagnoses and using peers as interventionists (Parsons et al., 2009). The views of pupils with ASD are rarely sought. It is paramount that the views and experiences of participants are ascertained to inform the development of such interventions.

Although unstructured times of the day are often challenging for pupils with ASD few PMI studies have focused on important social opportunities such as the playground (Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2011). A further gap in the PMI research also relates to implementation in schools although researchers are recognising the need to explore how interventions can be assimilated and accommodated within practice (Kasari & Smith, 2013).

This independent piece of research aims to evaluate the use of a peer network intervention incorporating all three information messages (explanatory, descriptive and directive) to promote the social inclusion of pupils with ASD in a primary mainstream setting and to explore whether this provides greater opportunities for successful pupil-peer interaction on the school playground. It also aims to address how skills learnt in a network based intervention can be filtered back into the wider peer network, through the use of a weekly debrief by network members. It is hoped
this will lead to the development of a wider support network and greater impact of the intervention.

The study will address the following research questions:

RQ1: *How does a pupil with ASD and their peers perceive participating in a peer network intervention?*

RQ2: *What is the impact of the intervention on the target pupil and peer participants?*

RQ3: *How do school staff perceive the implementation of the intervention and what are the implications for its future development?*

**Methodology**

A mixed methods approach was adopted in order to evaluate the impact and perceptions of participation in an innovative peer network intervention. The evaluation focused on both the process of developing the intervention as well as the outcomes and experiences for participants (Stufflebeam, 2000). Although exploration of the impact on the social interaction opportunities for the pupils was valuable (outcomes), due to the early development of the intervention, gaining an understanding of the context and the mechanisms (processes) that enable the intervention to work within the school was also vital (Pawson & Tilley, 1997). There were three levels of evaluation, the pupil, peers and school context.

**Sampling and Participant Recruitment**

An ethics application (appendix 42) was made to the University Ethics Committee for which ethical approval was granted (appendix 43). At a later stage minor amendments to the project were requested (appendices 44 & 45) which were subsequently agreed upon. The participating school were provided with an information sheet (appendix 6) about the study and the pre-defined inclusion criteria were required to be met (appendix 7). The study took place in a mainstream primary school located in the North West of England which had a high proportion of children with SEN; approximately 5.5%. The pupil with a diagnosis of ASD, (Max) was in Year 3 and aged 8 years. Max did not have a statement of Special Educational Needs and spent the whole school day in the classroom with his mainstream peers. Max had not
previously accessed a peer network intervention and there were no other social skills interventions in place during the course of the study.

Liaison with the school and parent took place about the content of the intervention to ensure it was tailored appropriately to Max and the school context. The Social Skills Improvement System (Gresham & Elliott, 2008) questionnaire was completed by Max’s teacher to ensure he met the inclusion criteria for participation in the study. An information sheet (appendix 8) was provided to Max’s parent who gave written consent for Max to participate (appendix 9). A child friendly information sheet (appendix 10) and consent form (appendix 11) were made available to Max. Max’s class teacher (CT) and the classroom Teaching Assistant (TA) were provided with an information sheet (appendix 12) and completed a consent form (appendix 13). Parents of the peers in Max’s class were given an information sheet (appendix 14) and opt in form (appendix 15). Consent was given for 18 peers to participate.

**Description of the Intervention**

The intervention consisted of 2 whole class awareness raising sessions and 6 small group peer network sessions. A brief description of the intervention can be found in table 2. A Special Educational Needs Coordinator (SENCo) from a Resource Provision Primary School contributed to the development of some of the activities described. The awareness raising sessions were delivered to 18 pupils by the researcher and class teacher. The sessions (appendices 16 &17) included descriptive, explanatory and directive information. Max was present during the first session, and gave permission for the researcher and teacher to discuss his strengths and difficulties with his class during the second session. As Max was unaware of his own diagnosis it was agreed that it would not be appropriate or ethical to use the label Autism to describe his needs

Five peers, two females and three males, aged 7-8 years were selected to be part of the peer network from a pool of 17 volunteers. Criteria for peer selection included regular attendance, good social and communication skills, participation in the class sessions and teacher recommendation. Information collected from a sociogramme (Leung & Silberling, 2006) was also used to inform the selection process. At this stage the parents of the peers were provided with an information sheet (appendix 18) and consent form (appendix 19). The participating peers were given a child friendly
information sheet (appendix 20) and consent form (appendix 21) to complete. The primary researcher and TA facilitated the network sessions, with the researcher taking a lead. Max and the peers involved in the network sessions were taught a range of core play skills from the pivotal response training (PRT) framework (Harper, Symon, & Frea, 2008). The skills taught to peers were tailored to Max’s needs and were taught through the use of social problem solving visual stories, role play and modelling. An example of a peer network session can be found in appendix 23. The sessions took place in a large classroom within the school. The playground and indoor hall were used to practice key skills. Each week ‘News Reporters’ from the group shared with the class strategies they had learned and key visuals. The network members delivered an assembly about the intervention after the final session.

**Table 2: Description of the Intervention**

<table>
<thead>
<tr>
<th>Session</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Class Awareness Raising 1</td>
<td>What makes us similar and different to each other.</td>
</tr>
<tr>
<td>‘Learning about ourselves and others around us’</td>
<td>The brain, what might cause visible and hidden disabilities.</td>
</tr>
<tr>
<td></td>
<td>Experiential activities: what it might be like to have difficulties talking, understanding others, thinking differently, sensory differences.</td>
</tr>
<tr>
<td>Whole Class Awareness Raising 2</td>
<td>Exploring the strengths and difficulties of the focus pupil.</td>
</tr>
<tr>
<td></td>
<td>Problem solving strategies to help target pupil as a class.</td>
</tr>
<tr>
<td>Peer Network 1</td>
<td>Introduction to the group, purpose of group. Group name and rules devised.</td>
</tr>
<tr>
<td></td>
<td>Group members given, ‘How to be a great friend’ resource booklet (Pierce &amp; Schreibman, 2007).</td>
</tr>
<tr>
<td>Peer Network 2</td>
<td>Skill 1: Gaining attention of others and paying attention</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Peer Network 3</td>
<td>Skill 2: Helping our friends join in by giving them choices</td>
</tr>
<tr>
<td>Peer Network 4</td>
<td>Skill 3: Helping our friends understand us and helping them talk to us</td>
</tr>
<tr>
<td>Peer Network 5</td>
<td>Skill 4: Praising others</td>
</tr>
<tr>
<td></td>
<td>Skill 5: Winning and losing</td>
</tr>
<tr>
<td>Peer Network 6</td>
<td>Skill 6: Conflict resolution and group debrief.</td>
</tr>
</tbody>
</table>

**Data Gathering Methods**

Data gathering methods included playground observations, staff and pupil interviews and a peer focus group. A time-interval behaviour coding system (appendix 24) was administered by the researcher to measure the social interaction between the pupil and network peers in the playground on two separate trials of 15 minutes on three occasions; at baseline, post intervention and follow up (4 weeks post intervention). The schedule was adapted from the Playground Observation of Pupil-Peer Engagement (Kasari, Rotheram-Fuller & Locke, 2005) with the addition of discrete categories for types of initiation made by peers e.g., peer asks the target pupil to join a game and the pupil responds yes or no, verbally or non verbally. The schedule was piloted to ensure the researcher was adept at scoring and to allow for refinement of coding categories. A semi-structured interview (appendix 25) was conducted with Max post intervention to ascertain his experience of participating in the intervention. A social story (appendix 26) was provided to ensure Max was prepared appropriately for this session and visual supports (appendices 27 & 28) were used to structure the interview. A focus group (appendix 29) with the peer network members was conducted one week after the last group session to ascertain peers’ perspectives about the impact of the intervention using a child friendly format (Colucci 2007; Morgan, Gibbs, Maxwell & Britten, 2002). Semi-structured interviews with the class teacher (appendix 30) and TA (appendix 31) were conducted at follow up to ascertain the impact and applicability of the intervention within the school context.
**Data Analysis**

The interview and focus group data was analysed through the use of Braun & Clarke’s (2006) six phase model of thematic analysis and Nvivo (QSR, 2012). This allowed the researcher to identify emerging themes at the semantic level. The staff interviews, focus group and pupil interview were coded separately. The data from the peer focus group was merged with the pupil interview in order to answer RQ1 and 2. To address RQ3 the data from the staff interviews was drawn upon. A process of inductive and deductive analysis was used to code the data (Fereday & Muir-Cochrane, 2006), as although the researcher did not use pre-existing code categories, they had some idea of potential themes that may arise due to reading around the topic. An independent researcher coded a transcript sample, and a level of 87% inter-rater agreement was calculated. An example of the process of identifying codes, subthemes and main organising themes is provided in appendix 32. The observational data were coded and totals for each interaction category were calculated for each observation and combined to create an average score for each category at each time point.

**Findings**

The three research questions will now be addressed in turn. The main themes will be described and supported by key quotes from the interviews and focus group.

**RQ1: How does a pupil with ASD and their peers perceive participating in a peer network intervention?**

For RQ1 there were 5 main organising themes as shown in figure 1 below.
1. Enjoyment

All pupils enjoyed participating in the group; the peers and Max rated it 10/10 on a visual rating scale during the focus group and pupil interview.

2. Perceived Benefits (covered in RQ2)

3. Perceived Knowledge and Skills Gained

Peers in the group expressed that they had got to know each other and gained knowledge about how to understand others generally and help people who are unhappy on the playground;

‘I think this has helped me how to be a good friend..and how to get other peoples’ attention’.

Max shared that helping each other and getting to know one another was a good thing about the group;

‘helping our friends know each other..getting to know each other...’

Pupils also reported helping Max, particularly on the playground playing football. They also acknowledged the support of others within the group;
‘We’ve been helping him like calm down...and say it doesn’t matter.. it’s just a game.’

4. Perceived challenges

Although some of the members found being in a new group and learning new skills a challenge this became easier over time;

‘It was hard to learn the skills with all the skills that we had to learn..but now we’ve got into the skills and we know what to do when someone’s upset..and yourself’s upset.’

Peers commented that they faced challenges when trying to practice the skills outside of the group sessions;

‘I think it was easier in the classroom because there’s not loads of people running around’.

5. Future Ideas

Pupils commented that it would be good to continue to run the group beyond the six sessions, include more children and use other venues around the school. They identified that this approach could potentially have a wider impact across the school

‘to understand other people like if other people had disabilities..like Max we could get to know them better to see how we could help them...with their issues.’

RQ 2: What is the impact of the intervention for the target pupil and peer participants?

The data from the playground observations is presented in Table 7 and 8 below. It must be noted that on one observation one peer was absent.
**Target Pupil (TP) Initiations and Peer Responses:**

**Table 7: Target Pupil Initiation and Peer Response**

<table>
<thead>
<tr>
<th>Data Point</th>
<th>Total Number TP Initiations and Peer Non Response</th>
<th>Total Number TP Initiations and Peer Responded</th>
<th>Total Number of Random TP Initiations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 1 (a)</td>
<td>28</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Time 1 (b)</td>
<td>29</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Time 1 average (Baseline)</strong></td>
<td><strong>28.5</strong></td>
<td><strong>8.5</strong></td>
<td><strong>9.5</strong></td>
</tr>
<tr>
<td>Time 2 (a)</td>
<td>6</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Time 2 (b)</td>
<td>12</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td><strong>Time 2 average (Post Intervention)</strong></td>
<td><strong>9</strong></td>
<td><strong>18</strong></td>
<td><strong>4</strong></td>
</tr>
<tr>
<td>Time 3 (a)</td>
<td>8</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Time 3 (b)</td>
<td>4</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td><strong>Time 3 average (Follow Up)</strong></td>
<td><strong>6</strong></td>
<td><strong>16.5</strong></td>
<td><strong>0.5</strong></td>
</tr>
</tbody>
</table>

The findings (table 7) indicate that the number of times in which peers failed to respond to Max’s initiation attempts (missed opportunities) decreased markedly across the three time points particularly between time 1 and time 2; whereas the number of occasions where the peers responded appropriately to Max’s initiations increased considerably. This suggests that the peers became more adept to responding to Max’s initiations as a result of the intervention. It may also reflect Max’s improved ability to gain the peers’ attention when making initiations towards them. Also worthy of note is that Max’s random initiations (verbal statements not directed to anyone) decreased considerably during the three time points. This may be illustrative of Max’s increased skills in initiating interaction with his peers.
Peer Initiation and Target Pupil Response:

Table 8: Peer Initiation and Target Pupil Response

<table>
<thead>
<tr>
<th>Data Point</th>
<th>Number of Times Peer Initiated and TP Non Response</th>
<th>Number of times Peer Initiated and TP Responded appropriately</th>
<th>Total Number of Peer Initiations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 1 (a)</td>
<td>6</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Time 1 (b)</td>
<td>4</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td><strong>Time 1 average (Baseline)</strong></td>
<td><strong>5</strong></td>
<td><strong>15.5</strong></td>
<td><strong>20.5</strong></td>
</tr>
<tr>
<td>Time 2 (a)</td>
<td>3</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Time 2 (b)</td>
<td>2</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td><strong>Time 2 average (Post Intervention)</strong></td>
<td><strong>2.5</strong></td>
<td><strong>21</strong></td>
<td><strong>23.5</strong></td>
</tr>
<tr>
<td>Time 3 (a)</td>
<td>3</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Time 3 (b)</td>
<td>0</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td><strong>Time 3 average (Follow Up)</strong></td>
<td><strong>1.5</strong></td>
<td><strong>24.5</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

The findings shown in table 8 indicate that the number of times the peer initiated and Max did not respond decreased across the three time points; whereas the instances where peers initiated and Max responded appropriately increased considerably. This suggests that the peers were perhaps more skilled in their initiations towards Max as a result of the intervention and Max was more skilled in responding to their efforts. The total number of initiations made by the peers also increased noticeably across the time points.

To address research question 2, data from the staff and pupil interviews and peer focus group were also drawn upon. There were 4 main themes as depicted in figure 2.
1. Target Pupil Factors

Staff noted Max’s increased ability and confidence to initiate play and better participation in group activities,

‘When I’ve been on duty I’ve noticed that he has started to develop an ability to play collaboratively with other children. he’s now a lot more confident in approaching other children...and he can play successfully with other children (CT)

Staff also reported that Max’s understanding and enjoyment of social relationships and empathy had also developed;

‘Treating most of them as friends now as oppose to rivals maybe..you know..he sort of enjoys gathering in a group now (TA).

‘.. he’s a bit more sensitive to other people’s needs...as oppose to his own needs’. (CT)

Peers noted that Max’s behaviour had improved;

‘I think it’s helped him to calm down ...if he loses or is out of the game..he’s better with his anger...he goes off nice and calm’.
‘It’s helped him how to take turns..coz..sometimes I see him when he’s playing with the boys and they’re playing tig...when..someone else is on he doesn’t like it’.

Max expressed that the group had helped him;

‘Yeah...it helped me..yeah it helped me..’

Max shared that it had helped him with the following;

‘let me think..about football..having a shoot and being in goal.I don’t know..’

‘Pray..we don’t hurt anyone..we don’t fight..amen’.

‘It helped me with the choice card and the wait card.’

2. Peer Network and Pupil Factors

There were some positive factors reported that were similar for Max and the peer network volunteers.

Staff reported that Max and the peers had developed new skills and extended their friendships;

‘I think they have enjoyed all of it and enjoyed learning the different skills and understanding each other as well..and getting to know each other because they’re not necessarily children that would have played together anyway’ (TA).

3. Peer Network Factors

Although the network peers were reported to be already quite socially skilled they developed their understanding and acceptance of Max, and their skills to interact with him;

‘I think that they ...communicate with him better you know, they talk in simple terms and they you don’t try and confuse him.’ (CT).

‘The other children have developed a bit more of an understanding... they’ve also accepted him..so I don’t think they see him as anything but Max...he’s just Max to them..’ (TA).
Peers identified a number of social and emotional regulation benefits;

‘The group has helped me pay attention when people have been talking to me and when I’m talking to them I tell them to pay attention to me and they listen to me’.

‘The group has helped me to share coz I never used to share with my brother before.’

Staff reported however that the group was quite exclusive and therefore the benefits did not translate to the wider peer group;

‘It’s almost like an exclusive group it’s like our thing.. so I don’t think it’s spread into the wider class if you like.’ (CT).

4. Wider Peer Group Factors

Staff felt that possible perceived exclusivity of the intervention had resulted in the wider peer group losing interest over time and reduced transference of skills,

‘I think those first sessions everyone was sort of like oh great..we’re going to play games..but then obviously they had to choose a smaller group and maybe a few of them felt a bit excluded...whereas if we could find a way to sort of include everyone I think that would be a good way to support Max or anyone with that condition generally’ (CT).

RQ3: How do school staff perceive the implementation of the intervention and what are the implications for its future development?

There were 3 main themes illustrated in Figure 3.
1. Generalisation and transference

Although staff provided examples of the pupils’ use of the skills outside of the group sessions, not all skills generalised beyond the group sessions and greater opportunities and support to practice the skills outside of the group sessions were needed;

‘More opportunity to use those strategies and maybe letting other people know around the school so other teachers and TA’s..they can really reinforce what’s been said....I think that would be good if there’s a consistency across all the staff..(CT).

2. Intrinsic school factors

Although staff reported that they enjoyed being involved in the planning and delivery of the intervention and seeing the pupils acquire new skills, they reported several barriers that affected the implementation of the project including logistical factors, competing priorities and communication;

‘If I had had more information I could have reminded them..don’t forgot to take your cards out or if you are finding things difficult you need to do this or that or follow these steps.. ’ (CT).

‘...filter it out to other classes as well..through the lunchtime organisers and the other teachers.’(CT)
It was reported that a whole school approach would be beneficial;

‘It would be good to roll out more of a whole school agenda ..and not be afraid to talk about it..I think some schools might be like..oo we can’t because he has that sort of a label we can’t talk about it but it’s important to understand why people are how they are and maybe then they are more accepting of other people ..with autism..’ (CT).

3. Future Considerations

A number of considerations for developing the intervention were suggested including altering the time frame and involving the wider peer group;

‘maybe make the group bigger..for them..so they could involve other children as well...’ (TA).

The staff identified the whole class sessions as providing an opportunity for the children to share their feelings and views about Max in an open and non-judgemental manner;

‘I think the activity with the lego they enjoyed but they also understood the difficulties of communicating.. and they enjoyed..talking about the brain and how that worked and how that effects you know your physical body.’ (CT).

‘Max gave consent and the children were quite grown up and respectful..I think ..it was good for them to allow themselves to say what they thought. (CT).

Staff reported some conflicts about the use of terminology;

‘We talked about things that people may find difficult but we didn’t address that they might find it difficult because they have autism...personally I think maybe we should just tell people about it... I wouldn’t name children ...but I’m just saying that an understanding of the different conditions that are out there would not be a bad thing’(CT).

Staff stated that a manualised package that could be tailored to the needs of different children would be helpful but in order to tailor it to the child they would need further experience and training;
‘...it’s not that I couldn’t do it...I don’t know if I could tailor it to meet the needs of the children or the specific child’. (TA)

Discussion

The findings from this study indicate promising outcomes of a PMI at the level of the pupil, peers and school in the context of one mainstream primary school.

At the level of the target pupil, the data show positive changes in Max’s social skills; initiations and responses, turn taking, and greater enjoyment in working within a group. Increased ability to regulate his emotions with the support of his peers and an increased sense of empathy were also reported. These findings resonate with previous research indicating positive outcomes on the target pupil’s ability to initiate and respond more effectively to peers (Chan et al., 2009; Watkins et al., 2015; Zhang & Wheeler, 2011), however prior research is limited in its exploration of benefits beyond behavioural measures of change due to a bias towards quantitative methodology.

Although attempts were made to elicit Max’s views, the information obtained was limited despite the use of ASD friendly strategies to prepare him for the interview session and structure the interview process. This raises questions around what may be the most effective and ethical way to seek the views of children and young people with ASD. Losh and Gordon (2014) state that the communication difficulties of individuals with ASD may limit access to comprehensive data about interventions, which is likely to have been the case in this study. In addition Max may have had some difficulty reflecting on his experience of the intervention as research suggests that recalling personal events can be a challenge for individuals with ASD (Millward, Powell, Messer & Jordan, 2000).

Positive outcomes for peers included enjoying the group and broader benefits such as getting to know each other and learning new skills. Although the terminology ASD was not used due to the ethical implications of this it was still reported that peers gained increasing understanding and acceptance of Max’s needs and therefore made more effort to include him. Some of these findings resonate with prior PMI studies which have found increased peer confidence, greater understanding of diversity, academic and social gains and satisfaction in helping others (Jones, 2007; Kamps et al., 1998). Interestingly, in one study (Whitaker, 2004) increased tolerance for peers...
and siblings was reported by parents as a result of participation in a PMI. This links to
the current study where increased peer understanding and acceptance of the target
pupils’ needs was reported by school staff and several peers reported that they were
better at sharing with their siblings following participation in the group sessions.

Despite these positive outcomes, one concern raised by staff and evident in the peer
focus group was the sense of ‘exclusivity’ of the group and potential ‘feelings of
exclusion’ of the wider class even though efforts were made to include them in the
project. It may have been the case that such opportunities for the group to feedback to
the wider class may have resulted in an unintended effect of exclusivity. Previous
research has indicated that lack of involvement of the wider class is a potential barrier
in the design of the traditional Circle of Friends intervention (Barrett & Randall 2004).
Few studies have sought to involve the whole class in PMI. Barrett and Randall
(2004) offer one generic Circle of Friends model where several ‘circles’ are formed in
a class around two or more isolated children. Barrett & Randall (2004) found that the
inclusion of the wider group led to the opportunity to deal with issues in the circle on
a whole-class basis and greater training effects for staff members as the class teacher
and other key personnel were involved. Despite these factors, Barrett and Randell
(2004) state that this model is still limited in its overall effectiveness for the children
involved which may be because these models are not ASD specific and do not
address all aspects of the REPIM model.

Although some examples of the pupil and peers transferring the strategies from the
group into the classroom and playground were evident, generalisation was somewhat
limited. School staff felt that the impact would be greater if the intervention was
adopted as a whole school approach to increase consistency among staff and enable
other children to benefit. Hebron and Humphrey (2013) argue that to ensure
successful long term outcomes interventions should be assimilated within a whole
school approach designed to facilitate the social inclusion of pupils more generally,
rather than focusing on a single programme.

This is one of the only PMI studies that sought to involve key stakeholders in the
design and delivery of the intervention, enhancing its ecological validity (Pellicano,
Dinsmore & Charman 2014). A limitation of the present study is that no quantitative
measure of attitudinal change in the network peers or wider class were collected. This
would be an interesting addition in future replications of this intervention. In addition to this the weight of the data collected from the playground observations could have been strengthened by inter-rater checks and the inclusion of three data points per time point rather than two, and a longer follow up period (Ezzamel & Bond, in press). Further replication is also needed with other children with ASD and schools.

This current intervention is theoretically based (Campbell & Barger, 2014; Humphrey & Symes, 2011) and draws upon developmental and behavioural approaches to maximise impact as advocated in recent research (Ingersoll, 2010; Stahmer, 2014). Tailoring interventions for children with ASD is important due to their lack of homogeneity (Kasari & Smith, 2013) but this can be a challenge for staff who lack expertise in ASD. It is hoped this small scale study will contribute to the development of a PMI framework that can be easily implemented within schools in order to support the social inclusion of pupils with ASD.

References


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Paper Three

‘The Dissemination of Evidence to Professional Practice’

Word Count: 5494 (excluding references)
Section A: Overview of the concepts of evidence-based practice and practice-based research

Definitions of Evidence-Based Practice and Practice-based Research

There is ongoing debate within educational psychology around what constitutes evidence-based practice (EBP), the distinction between EBP and practice-based research, and the implementation of research and interventions within educational contexts. EBP advocates that decisions about approaches and methods adopted by practitioners should be based upon systematic knowledge of intervention outcomes rather than unsubstantiated judgement (Cottrell, 2002). This approach aims to provide clarity around the benefits and drawbacks of interventions to enable practitioners to identify suitable interventions for children and young people (Dunsmuir, Brown, Iyadurai & Monsen, 2009). In the United States (US) adherence to EBP is mandatory and Randomised-Controlled Trials (RCTs) are often advocated as a ‘gold standard’ approach to conducting research (Slavin, 2002) (figure 1). Although not mandatory in the United Kingdom (UK), EBP is becoming increasingly advocated in government initiatives to ensure accountability (Durbin & Nelson, 2014).

![Figure 1: Traditional Hierarchy of Research Design](image)

Within the field of programme development the principles of the traditional hierarchy are reflected in models that advocate the use of controlled implementation and RCT’s as the first step, before involving stakeholders in implementing interventions and wider contextual factors are considered.
(Greenberg, Domitrovich, Graczyk & Zins, 2005). In contrast to EBP and the traditional 'scientist-practitioner’ model, practice-based research involves the safe trialling of innovative techniques within a natural setting to build up an inclusive research evidence base (Barkham, Hardy & Mellor-Clark, 2010). It advocates that the transition of research to practice should be a shared responsibility between researchers, trainers and practitioners from the start (Kratochwill & Shernoff, 2004).

In the field of education Lendrum and Humphrey (2012) advocate that a flexible, ‘bottom-up approach’ to intervention research is favoured in the UK in comparison to other countries such as the US. It has been argued that the traditional research model is not suited to complexities within real-world contexts (Campbell et al., 2000; Fishman, Penuel, Allen, Cheng & Sabelli, 2013) and that research should focus on setting characteristics from the start (Weisz, Chu & Polo, 2004). Campbell et al., (2000) argue that controlled trials should be supplemented with qualitative methods such as interviews and focus groups in order to establish utility of interventions and implementation factors. Similarly, Fishman et al., (2013) argue that it is imperative that stakeholders contribute to developing understanding of how interventions can be successfully assimilated in the contexts which they are designed for. Authors such as Biesta, (2007) and Olson, (2004) have raised similar concerns about research design and stakeholder participation in relation to education research. Additionally, Horner et al., (2005) provide support for the use of single subject research in special education. This is especially pertinent in the field of autism research where the application of RCTs is often not appropriate given the heterogeneity of this population and ethical issues.

**What factors impact on the translation of research into practice?**

The integration of research to practice has been widely debated within the literature. There have been longstanding concerns that EBPs are not being introduced in schools (Kratochwill & Shernoff, 2004; Odom, Brantlinger, Gersten, Horner, Thompson & Harris, 2005) and this is also reflected in the special education literature (Gersten & Smith-Jones, 2001). Durlak and DuPre (2008) state that information about effective interventions fails to reach many
communities for a number of reasons relating to communities, providers, innovations, aspects of the prevention delivery system (organizational functioning) and the prevention support system (training and technical assistance).

When teachers select interventions for pupils with special educational needs, they rarely base their decisions on the evidence base within the academic literature (Burns & Ysseldyke, 2008; Kretlow & Helf, 2013) and prefer informal sources of information over research when selecting instructional methodologies (Landrum, Cook, Tankersely & Fitzgerald, 2002). This has also been identified within the autism field (Hess, Morrier, Heflin & Ivey, 2008; Simpson, Mundschenk & Heflin, 2011) and has led to calls to train teachers in evaluation to maximise their use of EBP (Simonson, Fairbanks, Briesch, Myers & Sugai, 2008). However, Lendrum and Humphrey (2012) state that due to the ever-increasing numbers of new interventions school staff often suffer from ‘initiative overload’ which results in a lack of confidence and investment in the uptake of new initiatives that may be perceived to be ‘short lived’.

Within the field of autism research Simpson, Mundschenk and Heflin (2011) state that many service providers seem to lack an understanding of EBP and instead resort to an assortment of interventions, based on the belief that a multitude of possible interventions increases chances for success or may rely on a novel or untested method they have read or heard about but do not fully understand. Consequently, Simpson, Mundschenk and Heflin (2011) emphasise that appropriate training in ASD is needed for mainstream teachers and there should be systems within schools to provide sustained support to teachers to inform decisions around selecting interventions. Practitioner-based guides (Fleming, Hurley & The Goth, 2015) are an accessible support for practitioners and parents selecting interventions for individuals with ASD.

Additionally, there is evidence that other professionals working with school staff may not assign enough weight to the concept of EBP. Within the profession of Educational Psychology (EP) findings from a small scale study of pre-doctoral EPs suggests that EPs are ambivalent about the scientific basis of their work and the contribution of peer reviewed research to their practice and they regard the
utility or social value of their professional practice as more important than its congruence with a recognised evidence base (Burnham, 2013). Similarly, a US survey, (Bramlett, Murphy, Johnson, Wallingsford and Hall, 2002), of 370 members of the National Association of School Psychologists (NASP), reported that 83% of respondents relied upon ‘personal experiences’ to inform their practice. This raises concern and suggests that many School Psychologists and EPs rely on personal experiences rather than EBP to inform their practice. Lilienfeld, Ammarati and David (2012) highlight the danger of cognitive mistakes for school psychologists in the adoption of pseudoscientific practices and call for psychologists to embrace scientific thinking tools as safeguards against cognitive errors that can contribute to belief in pseudoscientific techniques (Lilienfeld, 2010). Perceived weaknesses of EBP such as trialling of interventions in artificial contexts, challenges in the generalisation of research findings into practice settings (Kratochwill & Stoiber, 2002) and the efficacy of interventions in real world settings (Kratochwill & Shernoff, 2004) may contribute to its underutilisation by EPs and school staff.

A recent review of interventions in the field of autism showed that only 59% of included ASD interventions were implemented by school staff with the remainder delivered by researchers (Bond, et al., 2016). This indicates a potential lack of involvement of school staff and consideration of contextual factors when conducting school based ASD research. Kasari and Smith (2013) propose that, in addition to a strong evidence base, interventions must have community partner buy-in to the treatment and input into its design and implementation. Concern about stakeholder involvement in ASD intervention research has also been expressed by Parsons et al., (2013) and Zhang and Wheeler, (2011).

Pellicano, Dinsmore and Charman, (2014) argue that research goals have neglected to account for the views of individuals representative of the population studied and argue that research priorities must be meaningful to participant need. With changes in legislation advocating increasing acknowledgement of pupil voice (DfE, 2014) this should be central in evaluating the impact of such interventions. Kasari and Smith (2013) advocate practice-based approaches as a way of addressing some of these limitations in the autism field.
Bridging the gap between research and practice

A number of theoretical models have been devised to bridge the gap between research and practice both within the education field and more specifically within autism intervention research. Kitson, Harvey and McCormack (1998) argue that successful implementation of research into practice is a function of the interplay of three core elements; the level and nature of the evidence, the context or environment into which the research is to be placed, and the method or way in which the process is facilitated. In a more recent review of research in the field, Durlak and DuPre, (2008) have devised a multi-level/ecological framework to promote effective implementation that takes account of 23 contextual factors, including variables related to; communities, providers and innovations, aspects of the prevention delivery system (organisational functioning) and the prevention support system (training and technical assistance). Lendrum and Humphrey (2012) state that reviews in other research fields such as education have identified similar factors; providing support for this model.

Lendrum and Humphrey (2012) argue that a greater emphasis is needed in exploring implementation factors in school intervention research and report that most school based interventions do not pass through the process of examining the study of implementation at the efficacy, effectiveness and dissemination stage due to factors such as time and financial costs. Lendrum and Humphrey (2012) and Durlak (1998) argue that the study of implementation is vital from the early stages to pinpoint the barriers and facilitators of implementing a programme in a ‘real world’ setting, draw conclusions about the effectiveness of intervention programmes and determine the extent to which they may be adapted by implementers to facilitate change. However, Lendrum and Humphrey (2012) point out that the study of implementation does not sit well with policy makers who may want immediate answers about whether an intervention works. In contrast to the large scale universal prevention programmes at the focus of Lendrum and Humphrey’s (2012) work, Magyar and Pandolfi (2012) highlight the unique challenges children and young people with ASD present to schools due to the wide variability in clinical symptoms and high rates of emotional and behavioural disorders (EBD) which require individualised intervention planning.
It is likely that the implementation of individualised programmes of support requires further exploration.

Within the autism field the gap between research knowledge and the applicability of research in real world settings has grown despite the increase in prevalence and sophistication in autism research (Reichow, Volkmar & Cichetti, 2008). Dingfelder and Mandell (2011) state that EBPs are rarely adopted or successfully implemented in education and the traditional ‘pipeline’ model is unrealistic in assuming progression from efficacy to uptake. Dingfelder and Mandell (2011) advocate the application of ‘diffusion of innovation theory’ for autism research; that contextual factors are critical to the adoption and continued committed use of an intervention and the decision to use an intervention is not an immediate act but a process consisting of four stages; dissemination, adoption, implementation and maintenance. This model advocates a collaborative approach between key stakeholders; families, teachers, clinicians and administrators in developing a research agenda to foster large scale use of effective treatments (Lord et al., 2005), and proposes that in order for efficacious interventions to be successfully implemented the community context must be considered explicitly throughout all phases of research. Dingfelder and Mandell (2011) propose that this will ensure children with autism receive the best interventions that research has to offer. This will also support understanding of the tailoring of EPB to the context and needs of the individual (Maygar & Pandolfi, 2012).

Section B: A review of current literature in relation to the effective dissemination of research and notions of research impact

Addressing barriers in the dissemination and transfer of research-based knowledge into routine practice is high on the agenda both in the UK and internationally. However, across disciplines there is a lack of consensus about what dissemination is and the most effective practices associated with this.

Wilson, Petticrew, Calnan and Nazareth (2010) define dissemination as;

‘a planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and health service audiences in
ways that will facilitate research uptake in decision-making processes and practice’ (p2).

A recent systematic literature review (Wilson, Petticrew, Calnan & Nazareth, 2010) across a range of disciplines found that there are a number of theoretically-informed frameworks available to researchers that can help guide dissemination planning and activity. The three most prevalent approaches used in the practice of dissemination were persuasive communication, diffusion of innovations theory and social marketing. Wilson, Petticrew, Calnan and Nazareth, (2010) state that given the emphasis on facilitating the transfer of knowledge into routine practice, funders should consider encouraging researchers to adopt a theoretically-informed approach to their research dissemination.

The practice of dissemination is a contentious topic in the field of autism research for a variety of reasons. Despite the rise in the prevalence of autism (Matson & Kozlowski, 2011) and the exponential increase in research studies in the field (Matson & LoVullo, 2009) there has been limited research around how findings should be disseminated (Yudell et al., 2013). This is perhaps surprising given the status of autism research and misconceptions and high profile discourses that have been present in the public domain (Silberman, 2015).

Yudell et al., (2013) define the risks associated with the communication of ASD medical research as ‘risk communication’ and discuss the impact such risks may lead to including misinterpretation. For educational interventions issues with regards to ‘risk communication’ are similar but are primarily concerned with enabling informed decision making around interventions and ensuring realistic expectations.

Tabor and Cho, (2007) found that studies reporting genetic findings in ASD tended to make causal claims using inconsistent criteria, sometimes when such claims are not warranted. Yudell et al., (2013) state that such misleading claims can have magnified downstream effects even if unintentional and subtle. For example, in 2009, the BBC produced a story with two misleading unsubstantiated claims following the publication of a paper by Wang et al., (2009) about genetic factors in autism. Even more controversial, was the dissemination of information in relation to the MMR debate which led to a significant proportion of parents
refusing to let their infants receive the immunisation (Baker, 2008). Similarly, in the area of ASD education research, there have been concerns about the adoption of interventions based on unsubstantiated claims. Lovaas (1987) made claims about the effectiveness of Applied Behavioural Analysis (ABA), however these claims were based on findings from methodologically weak studies (Ospina et al., 2008). Poor communication around the efficacy of educational approaches such as ABA, is likely to influence parental expectations of the impact or success such interventions may have. This clearly has ethical implications.

Yudell et al., (2013) argue that even further increasing the stakes of autism ‘risk communication’ is that families affected by ASD remain desperate for answers in light of the absence of a comprehensive biological profile of the disorder. Mistakes in risk communication made by scientists, press officers, or other media professionals may have greater impact than they would in other contexts because the audience in question may ‘latch’ onto information about medical risks or ‘promising’ educational interventions more strongly than in other contexts. Findings from one survey (Rhoades, Scarpa & Salley, 2007) indicate that parents are increasingly turning to the internet to access information about autism. Given the history of autism research the way stakeholders communicate findings about ASD has huge implications for public health, biomedical ethics and those affected by ASD (Yudell, et al., 2013). The method in which research findings are presented can impact the interpretation of the information. Professionals desire to have quantitative info, but others have difficulties understanding such information and there is disagreement about what kinds of quantitative information are most understandable (Condit & Shen, 2011; Gigerenzer, Hertwig, van de Broek, Fasolo & Katsikopoulos, 2005). Additionally qualitative descriptors can lead to a variety of interpretations (Yudell et al., 2013).

To better understand issues in autism dissemination Yudell et al, (2013) conducted workshops with key stakeholders in the autism community. As a result, they proposed four priority areas when considering dissemination; the role of clinicians and other providers in disseminating and translating findings; the role of researchers and the media in balancing the communication of scientific advances and continuing uncertainty; the importance of tailoring risk communication for autism to different communities and populations and role of
advocacy organisations, and the dissemination of research to participants. Recommendations (Yudell et al., 2013) include; training for researchers and organisations about risk communication and communicating scientific uncertainty, improving access of information to families through a vetted centralised resource, using communication styles that are family friendly, culturally sensitive and ‘meet families where they are’ in terms of their level of concern. Further recommendations include; training autism scientists to work competently with the media, training for graduates in risk communication, and grant awards including funding for dissemination. Yudell et al., (2013) recognise the role of advocacy agencies and argue that risk information should be presented on stakeholder and advocacy websites in an accurate and clear manner that conveys respect for parents of children with ASD and adults with ASD as the ultimate decision makers. Addressing such recommendations is likely to be time-consuming, resource-intensive and logistically and ethically complex. However, without rigorous attention to risk communication, Yudell et al (2013) state that the benefits of research may lead to poor risk communication and subsequent misunderstandings and that not attending to this would be ‘irresponsible’ given the history of autism.

Section C: A summary of the policy/practice/research development and implications from the research at; the research site, organisational level, professional level

The following section will begin with a short description of the current context for children with ASD as a background to the rationale of the research, prior to exploring the implications of the research study at the research site, organisational and professional level.

National Context

There is accumulating evidence that children and young people with ASD are more likely to be subjected to bullying by their peers in mainstream school settings (Carter, 2009; Humphrey & Symes, 2010, Wainscot, Naylor, Sutcliffe, Tantam & Williams, 2009). Over a decade ago organisations including the National Autistic Society (NAS) stated that promoting social inclusion for pupils with ASD should be a high priority in UK schools;
'Schools should develop and expand the range of services and approaches designed to facilitate the social inclusion of children with ASD including Circle of Friends and buddy clubs’


Developing such interventions is clearly still high on the political agenda. This year the NAS have released awareness raising resources for schools to develop understanding amongst the peer group and thus promote social inclusion.

Limitations of current models of support for children with ASD also strengthen the case for peer support with researchers arguing that the continued presence of paraprofessionals is likely to stigmatize children with ASD (Giangreco, 2010) reduce opportunities for peer interactions (Carter, Sisco, Brown, Brickham & Al-Khabbaz, 2008), and increase dependence (Werts, Zigmond, & Leeper, 2001).

The Research Site

The current intervention was well received by the school and positive outcomes were reported both for the target pupil and participating peers. Although some examples of the pupil and peers transferring the strategies from the group into the classroom and playground environment were evident, generalisation was though somewhat limited. School staff felt that the impact would be greater if the intervention was adopted as a whole school approach to increase consistency among staff and enable other children to benefit from the framework.

This emphasises the importance of capacity building at a whole school level and suggests that initial autism awareness raising activities alongside providing information about the intervention for all staff, including teachers, teaching assistants and lunch time organisers may have strengthened the impact of the intervention (Morewood, Humphrey & Symes, 2011). This would have enabled the pupil’s new class teacher to continue the intervention, which she and some of the peers were keen to do at six month follow up.

Another drawback was the issue of the ‘exclusivity’ of the group and potential ‘feelings of exclusion’ of the wider class. This raises questions about how the wider peer group could be further included in this study and future interventions (Barrett & Randall, 2004; Mason et al., 2014). At the site level the research could
have been strengthened by; a longer follow up period (Bond et al., 2016); the inclusion of sociometric tools to quantify any attitudinal change in peers and involving other stakeholders, such as parents in the intervention and evaluation. These strategies may have promoted generalisation, strengthened the findings and provided valuable information for the refinement of the intervention for future use.

Organisational Level

The introduction of the Equality Act (2006) placed a new obligation on schools to play a role in promoting equality for disabled people. However it is unclear how schools are promoting disability awareness or more specifically autism awareness. Beckett (2009) argues that there is likely to be variability and that a detailed examination of teaching practices relating to disability awareness is needed. Additionally, Duncan and Bingham, (2011) state there needs to be a distinction between raising awareness of general disabilities and hidden disabilities in schools. Schools may therefore require detailed guidance around how to introduce awareness raising strategies and this should potentially be reflected in current policy.

Hebron and Humphrey (2013) argue that to ensure successful long term outcomes interventions should be assimilated within a whole school approach designed to facilitate the social inclusion of pupils more generally, rather than focusing on a single programme. Bond and Hebron (2016), suggest Bronfenbrenner’s bio-ecosystemic theory is a useful framework for considering how strategies at different levels within school systems can combine to support pupils with ASD most effectively. Wider school factors such as whole school ASD awareness (Morewood, Humphrey & Symes, 2011), positive school ethos, senior management support and effective communication (Humphrey & Lewis, 2008) provide a supportive context for more specialist support and strategies such as formalised peer support (Morewood, Humphrey & Symes 2011).

In the current study, the absence of a strong champion within the school to oversee the intervention could have impacted on the strength of the outcomes (Durlak & Dupre 2008; Morewood, Humphrey & Symes, 2011). Such an approach would also counter factors within schools such as change of class
teacher, and wider staff knowledge. Evidently, there needs to be a balance between the implementation of whole school ASD strategies and those at a group and individual level, to effectively support the needs of children with ASD in mainstream schools. Employing a systemic framework such as the Bronfenbrenner model may have led to a greater consideration of contextual factors.

**Professional Level**

The five core functions of the EP role have been identified as; consultation, assessment, intervention, research and training at the individual, group and organisational level (SEED, 2002). Although, statutory duties have traditionally dominated the EP role, the importance for EP’s to be involved in broader work other than statutory work is outlined in a recommendation by Farrell et al., (2006);

> ‘they should take advantage of the trend in the reduction of statutory work to expand and develop their activities in different areas where their skills and knowledge can be used to greater effect, e.g. in group and individual therapy, staff training, research and in systems work with organisations’

(Farrell et al., 2006, p.106).

The current study has particularly addressed two main functions of the EP role; a group based intervention and a unique contribution to the area of autism intervention research. Furthermore, this research has addressed an important gap by gaining the views of key stakeholders in research interventions to inform how such interventions can be assimilated into existing school practice. Additionally the research has emphasised the value of qualitative methodology, a much neglected method in previous ASD PMI studies.

Further development and refinement of the PMI framework may lead to an evidence-based resource that can be accessed by schools and traded as an EPS ‘product’. With trading becoming more prevalent in EP services such a package may fit well with this current climate and offer EPs a more creative way to work with schools. The potential contribution of the EP in developing the social inclusion of pupils with ASD has been acknowledged by researchers;
'School psychologists may be able to play an important role, specifically they may be able to provide training and advice to schools on how to promote peer acceptance of pupils with ASD'.

(Symes & Humphrey, 2010, p.491).

Although it is hoped that schools will be able to deliver the intervention mainly without external support, it is evident that they will require advice to tailor the intervention to specific children, due to the heterogeneity of children with ASD. This is likely to provide an opportunity for EPs to engage in training and consultation with school staff to facilitate this.

**Section D: A strategy for promoting and evaluating the dissemination and impact of the research**

**Dissemination Consultation**

A strategy for promoting and evaluating the dissemination and impact of the research findings is shown in figure 2 below. Due to the early stages of the development of the intervention the strategy adopted focused on the dissemination of the outcomes of the study and a range of consultation activities to refine the intervention based on the views/needs of stakeholders at different levels within the system/community context.

The consultation process outlined below was based on elements from two models; the adapted diffusion of innovation theory (Dingfelder & Mandell, 2011) and Fishman et al., (2013). Considerations from Yudell et al (2013) were also incorporated in the strategy. The strategy highlights the interactive process of research development, as advocated by Fishman et al (2013). Each of the four key strands of the dissemination consultation will now be discussed in turn and included; activities at the research site, local, regional and national level. The strategies detailed included both written and oral forms of ‘risk communication’.
The first stage of consultation took place at the research site. Here information was provided to the participating school regarding the outcomes of the intervention for the pupil and peer participants. Information about key implementation factors were also provided. Different formats of dissemination were offered to the school and the Head Teacher identified a strategy from a selection. This consisted of a written report about the aim, process and outcomes of the study (appendix 33). To provide opportunities for questions and further informal feedback about the project the researcher met with school staff six months following the end of the study. Although it was hoped that this would provide the researcher with an opportunity to discuss the findings with several key staff members this was not possible due to logistical factors. However, the researcher met with the pupils’ class teacher and briefly with the new class teacher.
This process highlighted the importance of communicating the research at a whole school level, as the new class teacher was aware of the project and the pupils had requested the group continue but the teacher was unsure of how to set up the intervention. This could have been avoided if the project had been introduced at a whole school level and if there had been a ‘lead champion’ identified within the school (Morewood, Humphrey & Symes, 2011).

Local Level

Following dissemination about the findings of the pilot at the research site the researcher facilitated several consultation activities to gain information from key stakeholders at local and regional levels. At the local level this mainly focused on dissemination of the study’s findings with teams within the organisation (workplace), and included a presentation at an EP CPD event (appendix 34) and other planned workshops with several services within the organisation including therapeutic and inclusion based teams. A questionnaire about the intervention, based on the factors included in Dingfelder and Mandell (2011) was provided to the EPs at the CPD session to gain feedback about the project to aid further refinement and development of the package (appendix 35). This feedback (appendix 36) indicated that EPs were not aware of any similar interventions except for Circle of Friends, buddy systems and Lego Therapy. Ways to support effective implementation included; whole school ASD training, training around the intervention and EP support including follow up consultations. Advice on tailoring the programme to support the needs of different children and managing sensitive issues were other considerations. Developing the programme to make it applicable to children with other SEN and different age groups were suggestions. EPs felt they would need further training around delivering the intervention to ensure successful dissemination. Skilling up a Resource Provision as a ‘centre of excellence’ in the intervention was a recommendation.

Regional Level

A range of consultation activities were arranged at the regional level. The focus of this dissemination was to raise awareness of the need for peer education activities and support within schools in addition to providing information about the initial outcomes of the intervention. The importance of advocacy
organisations in the communication of autism research has been highlighted in previous research (Yudell et al., 2013), therefore opportunities to disseminate initial findings to regional advocacy organisations for children and families affected by autism was sought. These activities included a newsletter article for the North West National Autistic Society (appendix 37), and contribution to a feature page in a local Autism magazine for parents and professionals.

Additional key dissemination and consultation activities at the regional level included a blog (appendix 38) released during school autism awareness week and delivery of two workshops at a SENCo conference. As Dusenbury, Brannigan, Falco and Hansen (2003) advocate greater co-operation is needed between programme developers (who should be aware of the critical and non-essential components of interventions) and teachers (who have a greater knowledge of students, pedagogy and their own contexts) so that prescription and adaptability can be combined for maximum effectiveness. It was felt that consultation with SENCos as SEND leads was a key activity to support further development of the intervention.

The SENCo workshops (appendix 39) provided a valuable opportunity to discuss the project with key stakeholders and feedback about the intervention was sought via questionnaires based on the Dingfelder and Mandell (2011) model (appendix 40). Appendix 41 provides a summary of key comments provided by SENCos who attended the workshops. Key themes related to ensuring whole staff understanding, barriers and improvement suggestions. The workshop led to an opportunity to provide an autism awareness training session to lunch time organisers in one primary school during autism awareness week as the research identified that promoting awareness amongst all school staff and those that are present during the unstructured playtimes is key.

All SENCos stated that the intervention was relevant to school priorities. Additionally, 6 out of 10 of the completed forms indicated that the SENCo rated that they were very interested in trialling the intervention in their schools with a rating of 10/10 given. The other four scores lay between 7 and 8 and two of the SENCos that provided this feedback stated that the score would be higher if they had more information about the intervention and the school agreed to it being
introduced. The data indicates that the description of the intervention was well received, relevant and applicable to current priorities within schools (Kasari & Smith, 2013). This consultation also provided valuable information about how the intervention could be further refined to meet the needs of pupils, peers and the school context.

To gain feedback about the study from expert autism researchers within the field a brief workshop was delivered at an autism group workshop for academics at the university. This provided an opportunity to discuss previous PMI research and the methodology of the current study.

*National/International Level*

At the National/International level, the dissemination approach was less consultative and more directive, partly due to the format of the information presented. Both the systematic literature review and the empirical study were submitted to the European Special Educational Needs Journal. To date, the systematic review has been accepted for publication. This journal was chosen as much PMI research has taken place outside of the UK, and within other professions, therefore the authors felt it important to widen the audience capture across countries and disciplines. The journal is practitioner focused and aimed at both practitioners within the teaching profession and researchers. Additionally application to present the research findings at a national EP autism day has been made to provide an opportunity to consult professionals in the field at a national level.

It is hoped the consultation activities have provided a realistic and valuable insight into factors which will be key in developing the intervention for future use in schools. The researcher has sought to involve key stakeholders at all stages of the research process to ensure that the intervention will be targeted effectively to the needs of the pupils with ASD, peers and contextual factors within schools, an approach often neglected in PMI research. This research design challenges traditional research models in PMI and within the wider autism field and provides a novel contribution based on approaches designed to narrow the research to practice gap.
Evidently, the notions of evidence-based practice and practice-based research remain a topical discourse in Educational Psychology and wider disciplines. The importance of incorporating a theoretically driven and clearly structured dissemination strategy is key in ensuring research findings are appropriately distributed to facilitate the effective translation of research to practice.

References


Scottish Executive Education Department. (2002). *Review of provision of educational psychology services in Scotland.* Edinburgh: SEED.


Appendix 1: Author Guidelines for European Journal of Special Needs Education

European Journal of Special Needs Education

ISSN
0885-6257 (Print), 1469-591X (Online)

Publication Frequency
4 issues per year

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4. Publication charges
   o Submission fee
   o Page charges
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5. Reproduction of copyright material
6. Supplemental online material

Manuscript submission

Copyright and authors’ rights

Free article access

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Manuscript preparation

1. General guidelines

Manuscripts are accepted in English. British English spelling and punctuation are preferred. Please use single quotation marks, except where “a quotation is “within” a quotation”. Long quotations of 40 words or more should be indented without quotation marks. Citations of other work should be limited to those strictly necessary for the argument. Any quotations should be brief, and accompanied by precise references.

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Manuscripts should be compiled in the following order: title page (including Acknowledgements as well as Funding and grant-awarding bodies); abstract; keywords; main text; acknowledgements; references;
appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list).

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- Each manuscript should have 3 to 6 keywords.
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- Section headings should be concise.
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  - For single agency grants: "This work was supported by the [Funding Agency] under Grant [number xxxx]."
  - For multiple agency grants: "This work was supported by the [Funding Agency 1] under Grant [number xxxx]; [Funding Agency 2] under Grant [number xxxx]; and [Funding Agency 3] under Grant [number xxxx]."

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- Description of the Journal’s reference style.
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• Word templates are available for this journal. If you are not able to use the template via the links or if you have any other template queries, please contact authortemplate@tandf.co.uk.

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• Figure captions must be saved separately, as part of the file containing the complete text of the manuscript, and numbered correspondingly.
• The filename for a graphic should be descriptive of the graphic, e.g. Figure1, Figure2a.

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W5 1NX
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Last updated 28/03/2014
Appendix 2: Table 3-Review Framework for Quantitative Evaluation Research (A1)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of a randomised group design</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Focus on a specific, well-defined disorder or problem</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Comparison with treatment-as-usual, placebo, or less preferably, standard control</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Use of manuals and procedures for monitoring and fidelity checks</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Sample large enough to detect effect (from Cohen, 1992)</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Use of outcome measure(s) that has demonstrably good reliability and validity</td>
<td>2 1 0</td>
<td>(2 points if more than one measure used).</td>
</tr>
</tbody>
</table>

**Total**  
*Max 7*
References


Appendix 3: Table 4 - Review Framework for Qualitative Evaluation Research (A2)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness of the research design</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Clear sampling rationale</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Well executed data collection execution</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Analysis close to the data</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Emergent theory related to the problem</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of explicit reflexivity</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Comprehensiveness of documentation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Negative case analysis</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
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<tr>
<td>Clarity and coherence of the reporting</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of researcher-participant negotiation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Transferable conclusions</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of attention to ethical issues</td>
<td>1</td>
<td>0</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>Max 12</strong></td>
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</table>
Appendix 4: Table 5 - A Measure of the Breadth of Outcome Measures at Different Levels of Impact (B)

D.Ed.Ch.Psychol. 2014

Review framework for quantitative/qualitative evaluation research

Author(s):

Title:

Journal Reference:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1: Target Pupil</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Measure of impact of intervention on TP sought through e.g., observational data, questionnaires/interviews with school staff, parents, peers.</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>• <em>(1 point awarded if one appropriate outcome measure used)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• A measure of the pupils’ experience of participation in the intervention sought (from own viewpoint) (1 point)</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td><strong>Level 2: Peer group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Data collected on the impact of the intervention on the peer group (e.g., interviews with school staff, parents, observational data) (1 point)</td>
<td>1 0</td>
<td></td>
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110
- A measure of the peers’ experience of participation in the intervention sought (1 point)

**Level 3: Applicability of the intervention to the school/educational context**

- A measure of the applicability/feasibility and acceptability of the intervention sought by school staff e.g., through use of a questionnaire/survey (1 point)
- 2 points awarded if more detailed exploration of these factors undertaken (e.g., interviews)

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<th>2</th>
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<th>0</th>
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<td><strong>Total (Max = 6)</strong></td>
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## Appendix 5: Table 7 – Summary of Excluded Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Reasons for Exclusion</th>
</tr>
</thead>
</table>
| 1. Banda & Hart (2010) | Evaluated as including only a narrow range of outcome measures:  
  - Observational data on target pupil social interaction  
  - Short questionnaire re impact and feasibility of intervention completed by school staff |
| 2. Banda, Hart & Liu- Gitz (2010) | Evaluated as including only narrow range of outcome measures:  
  - Solely observational data on target pupil interaction skills |
| 4. Bauminger (2007) | Evaluated as including only a narrow range of outcome measures:  
  - Solely observational data of target pupil interaction skills |
| 5. Carter, Cushing, Clark & Kennedy, (2005) | Evaluated as including only a narrow range of outcome measures:  
  - Solely observational data on target pupil and peer social interaction skills |
| 6. Frederickson, Warren & Turner (2005) | Evaluated as including only a narrow range of outcome measures:  
  - Solely measures at level of target pupil including; different types of sociometric data. |
| 7. Ganz et al., (2012) | Evaluated as including only a narrow range of outcome measures:  
  - Solely observational data on target pupil and peer |
<table>
<thead>
<tr>
<th>Reference</th>
<th>Study Details</th>
</tr>
</thead>
</table>
| 8. Harper, Symon & Frea, (2008) | Evaluated as including only narrow range of outcome measures:  
- Solely observational data on target pupil interaction skills. |
| 9. Hundert, Rowe & Harrison (2014) | Evaluated as including only a narrow range of outcome measures:  
- Solely observational data of TP interaction with peers (only % of interactive play recorded) |
| 10. James (2011) Thesis | Evaluated as including only a narrow range of outcome measures:  
- Solely measures at level of target pupil: sociometric measures, pupil happiness, peer attributions of target pupil behaviour (attributions), adult perceptions of TP behaviour (SDQ). |
| 11. Jung, Sainato & Davis, (2008) | Evaluated as including only narrow range of outcome measures:  
- Observational data on target pupil interaction skills & limited information about acceptability via teachers viewing video clips of intervention. |
| 12. Kamps et al., (2002) Study 1 | Evaluated as including only narrow range of outcome measures:  
- Solely observational data on pupil & peer interaction skills. |
| 13. Kamps et al., (2002) Study 2 | Evaluated as including only narrow range of outcome measures:  
- Solely observational data on target pupil interaction skills. |
<table>
<thead>
<tr>
<th>Reference</th>
<th>Methodological Evaluation</th>
<th>Outcome Measures</th>
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<tbody>
<tr>
<td>Kamps et al., (2015)</td>
<td>Evaluated as including only narrow range of outcome measures:</td>
<td>Several outcome measures at level of target pupil; observational data of pupil interaction skills, language skills, teacher questionnaires about social competence, and communication but no attempt to evaluate measures at other levels of impact or perception.</td>
</tr>
<tr>
<td>Kasari, Rotheram-Fuller, Locke &amp; Gulsrud, (2012)</td>
<td>Evaluated as including only narrow range of outcome measures:</td>
<td>Only measures at levels of target pupil included; observational data on social skills, sociometric information, teacher social skills questionnaire.</td>
</tr>
<tr>
<td>Katz &amp; Girolmento (2013)</td>
<td>Evaluated as including only a narrow range of outcome measures:</td>
<td>Observational data of TP interaction skills, some measure of feasibility/acceptability and impact of intervention through questionnaire for staff but limited.</td>
</tr>
<tr>
<td>Krebs, McDaniel &amp; Neeley (2010)</td>
<td>Evaluated as low in methodological quality.</td>
<td>Evaluated as including only a narrow range of outcome measures: Solely observational data on pupil interaction skills collected.</td>
</tr>
<tr>
<td>Laushley &amp; Heflin (2000)</td>
<td>Evaluated as including only narrow range of outcome measures:</td>
<td>Observational data on pupil interaction, focus group with school staff around acceptability and feasibility of programme.</td>
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<tr>
<td>Study Reference</td>
<td>Evaluation Details</td>
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| Lee, Odom & Loftin (2007) | Evaluated as including only a narrow range of outcome measures:  
  - Observational data on pupil-peer interaction skills collected  
  - Some data regarding social validity (acceptability) but very limited information to interpret meaningfully. |
| Loftin, Odom & Lantz (2008) | Evaluated as including only narrow range of outcome measures:  
  - Solely observational data on target pupil interaction skills and impact on target pupil through social validity questionnaire. |
| Morrison, Kamps, Garcia & Parker, (2001) | Evaluated as including only narrow range of outcome measures:  
  - Solely observational data on pupil & peer interaction skills. |
| Orton (2011) Thesis | Evaluated as including only a narrow range of outcome measures:  
  - Solely observational data on target pupil interaction collected and vague categories e.g., positive/negative interaction |
| Owen-DeSchryver, Carr, Cale & Blakeley-Smith, (2008) | Evaluated as including only narrow range of outcome measures:  
  - Solely observational data on pupil & peer interaction skills. |
| Schlieder, Maldonado & Baltes (2014) | Evaluated as including only a narrow range of outcome measures:  
  - Interviews with parents of target pupil & COF facilitators about impact of participation in project on target pupil and peers, but limited themes presented |
(one theme from larger study).

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<td>25. Schimdt &amp; Stichter (2012)</td>
<td>Evaluated as including only a narrow range of outcome measures:</td>
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<td>26. Thiemann &amp; Goldstein (2001)</td>
<td>Evaluated as including only a narrow range of outcome measures:</td>
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<tr>
<td>27. Thiemann &amp; Goldstein (2004)</td>
<td>Evaluated as including only narrow range of outcome measures:</td>
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<td>28. Trembath, Balandin, Togher &amp; Stancliffe, (2009)</td>
<td>Evaluated as including only a narrow range of outcome measures:</td>
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<td>29. Trottier, Kamp &amp; Mirenda (2011)</td>
<td>Evaluated as including only a narrow range of outcome measures:</td>
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</table>

- Solely observational data on target pupil interaction collected
- Observational data on target pupil interaction collected
- Some measure of change in pupil and peer interaction through blind raters.
- Measures at levels of target pupil included; observational data, sociometric information, teacher interviews (limited information).
- Peer observational data
- Solely observational data on pupil interaction collected
- Observational data of pupil interaction
- Peer questionnaire-perceptions of study, enjoyment in participation, perception of effectiveness for the TP
‘Promoting social inclusion for pupils with autism within schools: a peer network intervention package’

Introduction:

My name is Nadia Ezzamel and I’m a Trainee Educational Psychologist. Your school is being invited to take part in this research project as part of the researcher’s Doctorate in Educational and Child Psychology.

Aims of the Intervention Package

Children with autism spectrum disorder (ASD) are increasingly likely to be educated within mainstream schools. However, research suggests that children with ASD are more likely to experience poorer social and academic outcomes than their peers in these settings.

There is an accumulating body of research highlighting the difficulties children with ASD experience within their peer groups, particularly in gaining acceptance and sustaining positive social relationships. Recent statistics show that children with ASD are more likely to experience bullying and receive less social support in mainstream settings than their peers. These experiences have been shown to have a negative impact on the emotional wellbeing, educational attainment and later life experiences of individuals with ASD.

Within current research it has been strongly suggested that developing peer understanding and awareness of ASD in schools is paramount in developing positive peer attitudes and behaviour to support the social inclusion of pupils with ASD.
This study aims to harness the power of the peer group in facilitating positive social inclusion for pupils with ASD through the delivery of an intervention package that will target raising awareness within the peer group and teaching a network group of peers key skills to enable them to interact effectively with pupils with ASD, with a particular focus on outside play. It will focus on outside play as children with ASD find unstructured times of the school day particularly difficult including playtime. It is hoped this intervention will lead to greater positive opportunities for pupils with ASD to interact with their peers. The researcher also aims to evaluate the applicability of the intervention within the school context.

What’s involved?

The Trainee Educational Psychologist will undertake the following:

- Observations of the target pupil and their peers at three different time points within the course of the project (pre intervention, post and at follow up).
- 2 whole class awareness raising sessions for the peers in the target pupil’s class, in joint collaboration/delivery with the teacher. Examples of topics the sessions would cover include similarities and differences among people, what it may be like to have difficulty talking to/playing with others, how we can help, and friendships. The target pupil may participate/be present in the whole class sessions if felt appropriate and if they show a preference to. The terminology used to describe the child’s needs will be dependent on parental preference and the child’s understanding of their own needs. For example, parents may prefer for the label ASD not to be used when discussing their child’s needs with staff and the peer group. In this case, alternative descriptions of the child’s needs will be used (e.g., difficulties talking to/playing with with others). The terminology and content of the sessions will be agreed collaboratively with parents and school staff prior to the sessions taking place.
- 6 peer network group sessions with 4-5 peers from the pupil’s class and the target pupil. The target pupil will not participate in the first part of the first session to give the researcher the opportunity to have an open discussion with the peers, gain any ideas and describe the purpose of the group in more detail. The target pupil will join the group for the second half of the first session.
- An individual interview with the target child following the intervention to gain their views about the intervention.
• A focus group with the network peers following the last network session to gain their perspectives of the impact of the intervention.
• Return visit to the school after half a school term to discuss the impact and applicability of the intervention with the class teacher and TA through individual interviews.

To be involved in the project:

In order to be involved in the project outlined above the Trainee Educational Psychologist would like to hear from a Primary School who are able to offer the following:

• An enthusiasm and interest in developing their inclusive practice and in creating better outcomes for pupils with ASD.
• A setting where there is a pupil with a diagnosis of ASD in years 3, 4 or 5. The pupil may have a Statement of Special Educational Needs and be supported by a named TA for at least part of the week. If the child does not have a Statement the school must be willing to release a member of staff (Teaching Assistant) who knows the pupil to attend and support the weekly group sessions. The pupil should have a good attendance record. The pupil may be experiencing difficulties socially within the peer group, but show some interest in interacting with peers.
• Release for the class teacher, and TA to liaise with the researcher and parents regarding the target pupils’ strengths and difficulties to ensure the content of the sessions and intervention is as effective as possible.
• A time slot within the class timetable for 2 whole class awareness raising sessions.
• Commitment to release of the target pupil and group network peers for 6 network sessions, once a week during the school day (30-45 minutes per session).
• The package will involve joint delivery of 2 awareness raising sessions by the researcher and the class teacher of the target pupil’s class.
• The named TA for the pupil/Classroom TA will be required to be present and support the researcher during the 5 group network sessions and for the individual interview with the target child if felt necessary.
• Release of TA & Class teacher for an individual interview at follow up, this can be arranged at a time convenient with the school.
• An identified coordinator from the senior leadership team who will liaise with the Trainee Educational Psychologist during the research process.

What is the duration of the research?
The intervention itself will take place over 8 weeks, however the total research process will last approximately 7/8 months. This will include time for planning and meeting with school and parents prior to the intervention taking place, data collection by the researcher before the intervention begins, after the intervention has taken place and 6 weeks after this at follow up.

I will be hoping to begin liaison with schools in November/December with a view to start the project in January/February 2015.

**Will the outcomes of the research be published?**
The research may be published in an academic journal or presented at an academic conference. The research will be submitted to the University of Manchester as part of my Doctorate in Educational and Child Psychology.

**Contact for further information**

If you have any further questions or are interested in participating in the research project please contact me by email at

nadia.ezzamel@oneeducation.co.uk or nadia.ezzamel@postgrad.manchester.ac.uk
Appendix 7: Table 1 – School and Pupil Inclusion criteria

**School & Pupil Inclusion Criteria**

<table>
<thead>
<tr>
<th>School Inclusion Criteria</th>
<th>Target Pupil Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A school that is keen on developing its inclusion/autism practice.</td>
<td>Year 3/4/5 pupil who has a diagnosis of ASD.</td>
</tr>
<tr>
<td>A school that can commit to longevity of intervention sessions lasting 8 weeks, together</td>
<td>Experiencing difficulty socially within the peer group but shows some interest in social interactions. Child shows a delay in social interaction skills as shown from profile shown the Social Skills Improvement System (SSIS) questionnaire completed by parents and class teacher (Gresham &amp; Elliott, 2008) once researcher has become involved.</td>
</tr>
<tr>
<td>with a planning period to jointly collaborate. Agreement for the researcher to conduct pre, post intervention and follow up measures over 7/8 month period of time.</td>
<td></td>
</tr>
<tr>
<td>School that has location to have group meetings.</td>
<td>The pupil has a very good attendance record and there are no plans for the pupil to move to another school or location.</td>
</tr>
<tr>
<td>School that can commit to pupils missing aspect of school day to come to sessions (e.g., assembly).</td>
<td>Able to give informed assent for whole class session, peer network and interview.</td>
</tr>
<tr>
<td>Class in which peer network has not already been implemented e.g., Circle of Friends</td>
<td>May have a statement of Special Educational Needs and receive an allocated amount of TA support. TA familiar to pupil will be required to be present during group sessions and to embed the intervention. If pupil does not have individual TA support, a TA that knows the pupil well e.g., Class room TA will be required to support the group sessions.</td>
</tr>
<tr>
<td>School that can provide an identified person within the school to liaise with about the research project.</td>
<td>The pupil has a sufficient level of receptive language in order to be able to give informed assent, and a reasonable level of expressive language that can be supported where necessary with the use of visual support.</td>
</tr>
<tr>
<td>School that can commit to the joint delivery of the whole class sessions by the class teacher and TA can be made available for all group sessions.</td>
<td>Has not already been part of a Circle of Friends/peer network intervention.</td>
</tr>
<tr>
<td></td>
<td>The pupil may or may not engage in some level of challenging behaviours. A profile of the child’s internalising and externalising behaviours will be ascertained from completion of the SSIS (Gresham &amp; Elliott, 2008).</td>
</tr>
</tbody>
</table>
If the pupil is experiencing a period of high anxiety/distress, engaging in potentially risky challenging behaviours or receiving input from CAMHS they will not be included in the study.

Parental consent for intervention and consent to talk about pupils needs even if not using terminology ASD but describing e.g., social communication.
Appendix 8: Information Letter for Parent

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with Autism Spectrum Disorders (ASD) in mainstream primary schools’

Information for Parents

Your child’s school have shown an interest in participating in a research project run by a Trainee Educational Psychologist as part of her Doctorate in Educational and Child Psychology. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Who will conduct the research?

Nadia Ezzamel, Trainee Educational Psychologist

Manchester Institute of Education, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester, M13 9PL.

What is the aim of the research?

The aim of the research project is to evaluate the effectiveness of a peer network intervention to improve the social inclusion of pupils with Autism Spectrum Disorders (ASD) in mainstream primary schools. The intervention aims to develop peer awareness and understanding of ASD/children who may be having difficulty interacting & communicating and support peers to learn skills needed to interact successfully with these pupils. It is hoped the intervention will help peers to interact more positively with your child and provide more opportunities for your child to be involved in positive social interactions within school.

The intervention will involve 2 whole class awareness raising sessions about general inclusion, ASD/children that have difficulties interacting/communicating with others and friendships. The terminology ASD will not be used if you wish
for it not to be and alternative descriptions of the difficulties encountered by your child may be used (e.g., difficulties playing with others & communicating/talking) if discussing your child. There will be opportunities to discuss the content and terminology used within the sessions together with myself and school staff. If you are interested in your child participating I would also like to meet with yourself and school staff to discuss your child’s strengths and needs.

Following the whole class sessions 6 group sessions with 4-5 peers and your child will take place on a weekly basis with myself and a Teaching Assistant from the school. During these sessions the peers will be taught key skills to be able to interact effectively with your child, focusing specifically on playtime games. It may include practising some of these skills through activities on the playground during the group sessions.

I hope to gain an insight and understanding of any helpful factors/advantages of the intervention and the extent to which the intervention is applicable within the school context. This will be helpful in steps to further develop the intervention. Evaluation of the intervention will include conducting playground observations of your child with their peers during playtime before the intervention begins, after it has ended and 6 weeks following this. I am also interested in your child’s perspective about the intervention and would like to conduct a short interview with them following the intervention coming to an end. School staff and peers will also be interviewed to gain their views.

**What would my child be asked to do?**

- If they agree to take part, they will be prepared for the group sessions in advance using activities to help them understand e.g., social stories or timelines.
- The project will involve your child’s interactions being observed with their peers and school staff in the playground on 3 separate occasions. The interactions will be recorded on an observation schedule.
- A member of school staff will be asked to support your child to fill in a short daily rating of how much they enjoyed playing with their peers.
- Your child will not need to be present during the whole class awareness raising sessions unless you feel appropriate or if they show a preference to.
- Participation in 6 group network sessions with 4-5 peers from their class in which the researcher with the support of the TA will teach peers key skills to interact effectively with your child.
- Your child if possible and willing will be asked to participate in a short individual interview about their experience of the intervention. This interview will be audio recorded. A familiar member of school staff will be present for this if felt necessary.

**What happens to the data collected?**
The data from the observations schedule will be compared against the three time points to gain an indication of whether peers are interacting more frequently and effectively with your child as a result of the intervention. This data will be anonymised so that your child cannot be identified from it. The interview data will be transcribed by me. Following this I will analyse the data to identify key themes that are emerging. Another Trainee Educational Psychologist will assist with the analysis to improve reliability. The other trainee will only have access to anonymous transcripts. The findings from the data will be fed back to the schools that have participated and the Local Authority.

**How is confidentiality maintained?**

Confidentiality will be maintained throughout the research process and following completion of the project. The audio recording of your child’s interview and information from the playground observations will remain anonymous. The data/information audio recorded from the interview will be stored in a secure place away from unauthorised individuals. The audio recordings will be stored on an encrypted data stick to ensure security of the data. The data from the interview and observation schedule will be destroyed when it is no longer needed for research purposes and will be destroyed securely in accordance with the University’s data disposal procedures. All information given by participants will be anonymous and remain confidential unless any child protection issues were to arise. If this happens then the appropriate child protection procedures will be followed.

**What happens if I do not want my child to take part or if I change my mind?**

It is up to you whether or not you want your child to participate. If you do decide that your child should take part you will be given this information sheet to keep and be asked to sign a consent form. Your child will be asked if they want to participate and there is a child friendly information sheet and consent form that will be made available for this. If you decide you would like your child to take part you are still free to withdraw them at any time without giving a reason.

**What is the duration of the research?**

The intervention itself will take place over 8 weeks, however the total research process will last approximately 7 /8 months. This will include time for planning and meeting with school and yourself prior to the intervention taking place and data collection by the researcher before the intervention begins, after the intervention has taken place and 6 weeks after this at follow up.

**Where will the research be conducted?**
The intervention and playground observations will take place on the school premises at a pre-arranged date and time. The interviews will also take place at the premises of your child’s school, at a time convenient with the school.

**Will the outcomes of the research be published?**

The research may be published in an academic journal or presented at an academic conference. The research will be submitted to the University of Manchester as part of my Doctorate in Educational and Child Psychology. The key themes from the interviews will be included within my doctoral thesis. Quotes used to illustrate the key themes will be anonymised. The information your child provides will remain anonymous at all times. I will provide a written summary of the research to all those that participate in the study.

**Criminal Records Check**

The researcher and all adults involved in the research project have undergone a satisfactory criminal records check and can provide evidence of this if required.

**Contact for further information**

If you would like to talk to discuss the research project please feel free to contact myself by email on nadia.ezzamel@postgrad.manchester.ac.uk to set up a telephone conversation.

You may also want to contact my supervisor Dr. Caroline Bond at the University of Manchester. Her email address is caroline.bond@manchester.ac.uk. Alternatively you can contact Caroline Bond at the School of Education, University of Manchester, telephone: 0161 275 3511

**What if something goes wrong?**

If you would like to talk to someone for further advice about the research at any point please feel free to contact any of the people listed above.

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093

I really appreciate your consideration in participating in this project, thank you
Appendix 9: Parent Consent Form (Target Pupil)

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with Autism Spectrum Disorders in mainstream primary schools’

CONSENT FORM (Parents of Pupil)

If you are happy to allow your child to participate in the group sessions, be observed as part of this project and participate in a short individual interview please complete and I agree for my child to be part of a group peer network intervention sign the consent form below.

1. I confirm that I have read the attached information sheet on the above study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.

2. I understand that participation in the study is voluntary and that I am free to withdraw my child at any time without giving a reason.

3. I agree for my child’s strengths and needs to be discussed as part of the whole class awareness raising sessions

4. I agree for my child to be observed in the playground with their peers on 2 separate occasions at these time points: before the intervention starts, after it has ended and 6 weeks following this

5. agree for my child to participate in a short interview with the researcher
6. I understand that the interview with my child will be audio-recorded

7. I agree to the use of anonymous quotes made by my child in the write up of the research project and publication of the findings

8. I understand that any data collected will not be passed to other researchers

9. I agree that any data collected may be published in anonymous form in academic books or journals.

I agree for my child ________________ (full name) to take part in the above project

Parent’s Name  Signature  Date

__________________  _____________  ____________
Appendix 10: Pupil Information Sheet

My name is Nadia and I am studying at the University of Manchester. For part of my course I have to complete a project.

**The project**

I am interested in helping children at school who are having difficulty making friends and who may not be enjoying playtime.

I would like to help you enjoy playtime at your school more and help you make some new friends. I would like to help you play more games with your class mates at playtime.

If you like we can play some fun games with some children in your class in a small group so we can learn some new games to play outside together.

**What will we be doing in the group?**

We will meet every week for 6 weeks on ________ (day) in the ________ (location) with ________ (TA name).

We will play some fun games together. Sometime we will go outside to practice our games in the playground.
What else will we do?

I would like to talk to your class about what you are really good at in school and what you might find difficult. We can meet up at school to talk about what you would like me to tell them and you can talk to them too if you like.

This will help your class mates understand what you like to do and what you find difficult so they can help you enjoy school more.

Sometimes I might come back into school to watch you playing with your class mates at break time.

What will happen after the group has finished?

After the group sessions have finished I would like to talk to you about what you think has been good about the group and how I can make the group better.

I will need to record our conversation on a recorder so that I don’t forget the important things you tell me. I will make sure no one else hears the recording other than me. This will help me make the next group I run in a different school better.

What do I do next?

It is up to you whether you would like to take part and if you think the group might help you enjoy school more. If you say yes then change your mind that’s ok too.

Please tell your class teacher if you would like to take part.

Thank you for reading about my project
Nadia Ezzamel

University of Manchester
Appendix 11: Pupil Consent Form

The Peer Network Group

PUPIL CONSENT FORM

Please tick/circle below

- I understand why I am being asked to take part in the group and I have had the chance to ask questions

- I understand that the group leader may want to talk the children in my class about what I am really good at in school and what I find more difficult at school.

- I understand why the group leader will want to talk to me about what I think about the group when the group has come to an end.

- I understand that the talk with the group leader will be recorded so the things I say don’t get forgotten and I understand that only the group leader/researcher will listen to the recording.

- I understand that the group leader will sometimes come to see me playing at break time with my other class mates.

- I understand that taking part is my decision and I can change my mind at any time without giving a reason.
- I understand that my name won’t be used when the results of the project come out
- I agree to take part in the project

My name: .......................................................... ..........................................................

School: .......................................................... ..........................................................
Appendix 12: Staff Information Sheet (Teacher & TA)

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

Participant Information Sheet (Teacher & Teaching Assistant)

As the class teacher and TA supporting a pupil with ASD in Key Stage 2 you are being invited to take part in a research study towards my Doctorate in Educational and Child Psychology. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Who will conduct the research?

Nadia Ezzamel, Trainee Educational Psychologist

Manchester Institute of Education, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester, M13 9PL.

Title of the Research

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

What is the aim of the research?

The aim of the research project is to evaluate the effectiveness of a peer network intervention to improve the social inclusion of pupils with ASD in mainstream primary schools. The intervention aims to facilitate peer awareness and understanding of ASD and support peers to learn skills needed to interact successfully with pupils with ASD. The intervention will centre on a pupil with ASD within your class and will involve 2 whole class awareness raising sessions and 6 weekly peer network group sessions
where peers will be taught key skills to interact effectively with the pupil with ASD particularly on the playground. Through seeking the views of key staff members and pupils and peers involved, I also hope to gain an insight and understanding of any helpful factors/advantages of the intervention and the extent to which the intervention is applicable within the school context. This will be helpful in steps to further develop the intervention.

Why have I been chosen?

You have been asked to participate in the study as you are currently working with a pupil with ASD within the school.

What would I be asked to do if I took part?

The research project would require the Class teacher to be involved in the following:

- Initial liaison about the target child to ensure the researcher can gain a detailed picture of the child’s strengths and needs, this is likely to involve a meeting with the child’s parents.
- Joint development and delivery of the whole class awareness raising sessions as you will have a vast knowledge of the pupil in which the intervention is for.
- To allocate a daily opportunity (e.g., straight after break time) for a playground debrief once the peer network sessions have started to enable the peers and pupil involved in the network to discuss the strategies learnt within the group and practised in the playground and provide reinforcement for engagement in the strategies from the class teacher. This will enable the strategies targeted within the peer network to be fed back to the class and wider peer network.
- Following the intervention I would like to complete a semi-structured interview with you about the impact and applicability of the intervention within the school context. This interview will be audio recorded. I will arrange a time convenient with yourself and your school to conduct the interview. This will take approximately 45 minutes-1 hour depending on how much information you have to share.

The research project would involve TAs in the following:

- Initial liaison about the target child to ensure the researcher can gain a detailed picture of the child’s strengths and needs, this may involve attending a meeting with parents and the researcher.
- To be present for the 6 group network sessions and participate where possible with the support of the researcher. The sessions will last approximately 30-45 minutes.
- Support the pupil with ASD to access the group intervention
- Following the intervention I would like to complete a semi-structured interview with you about the impact and applicability of the intervention within the school context. This interview will be audio recorded. I will arrange a time convenient with yourself and your school to conduct an individual interview about the research topic. This will take approximately 45 minutes-1 hour depending on how much information you have to share.
- Be present during the interview between the researcher and the child with ASD if felt necessary.
What happens to the data collected?

After the interviews have been completed, they will be transcribed by me. I will then meet with you and give you a copy of the transcription to check the accuracy of your statements. Following this I will analyse the data to identify key themes that are emerging. Another Trainee Educational Psychologist will assist with the analysis to improve reliability. The other Trainee will only have access to anonymous transcripts. The observational data will be recorded on a schedule and anonymised. The findings from the data will be fed back to the schools that have participated and the Local Authority.

How is confidentiality maintained?

Confidentiality will be maintained throughout the research process and following completion of the project. The audio recording of your interview will be transcribed by me and the transcriptions will remain anonymous. The data/information audio recorded from the interview will be stored in a secure place away from unauthorised individuals. The audio recordings will be stored on an encrypted data stick to ensure security of the data. The data will be destroyed when it is no longer needed for research purposes and will be destroyed securely in accordance with the University’s data disposal procedures. All information given by participants will be anonymous and remain confidential.

What happens if I do not want to take part or if I change my mind?

Your participation in the research project is entirely voluntary. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason.

Will I be paid for participating in the research?

There will be no payment provided for participation in this research. I am very grateful for any time given to the research project by participants to help me gain a greater understanding of the type of interventions that may help promote the social inclusion of children with ASD within schools.

What is the duration of the research?

The intervention itself will take place over 8 weeks, however the total research process will last approximately 7 /8months. This will include time for planning and meeting with school and parents prior to the intervention taking place, data collection by the researcher before the intervention begins, after the intervention has taken place and 6 weeks after this at follow up.

Where will the research be conducted?

The interviews will take place at the premises of your school, at a time convenient with yourself. The intervention and playground observations will also take place on the school premises at a pre-arranged date and time.
Will the outcomes of the research be published?

The key themes from the interviews will be included within my doctoral thesis. Quotes used to illustrate the key themes will be anonymised. Publication of the research in journals or academic books may occur following completion of the thesis. The information you provide will remain anonymous at all times. I will provide a written summary of the research to all those that participate in the study.

Criminal Records Check

I can confirm I have undergone a satisfactory criminal records check and can provide evidence of this when visiting your school if required.

Contact for further information

If you would like to discuss this research project further please feel free to contact myself by email on nadia.ezzamel@postgrad.manchester.ac.uk to set up a telephone conversation.

You may also want to contact my supervisor Dr. Caroline Bond at the University of Manchester. Her email address is caroline.bond@manchester.ac.uk.

Alternatively you can contact Caroline Bond at the School of Education, University of Manchester.

Telephone: 0161 275 3511

What if something goes wrong?

If you would like to talk to someone for further advice about the research at any point please feel free to contact any of the people listed above.

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093

I really appreciate your consideration in participating in this project

Thank you
Appendix 13: Staff consent forms (Teacher & TA)

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

CONSENT FORM (Teacher & TA)

If you are happy to participate in delivery and evaluation of the intervention (interviews) please complete and sign the consent form below.

1. I confirm that I have read the attached information sheet on the above study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.

2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason.

3. I understand that the interviews will be audio-recorded

4. I agree to the use of anonymous quotes

5. I understand that any data collected will not be passed to other researchers

6. I agree that any data collected may be published in anonymous form in academic books or journals.

I agree to take part in the above project

Name of participant

Date

Signature

Please Initial Box
Appendix 14: Class Information Sheet

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

Your child’s school have shown an interest in participating in a research project designed to develop a supportive network to help a pupil within your child’s class who is experiencing difficulties interacting with others/making friends.

Who is running it?

The project will be carried out by myself, Nadia Ezzamel as part of my doctoral thesis in Educational and Child Psychology at the University of Manchester.

Aim

Research has shown that children who may be having difficulties making friends and interacting with others can be supported effectively by other children within their class (peers). Developing an understanding with peers about a pupil’s difficulties and teaching peers’ key skills to be able to interact effectively with them can be very effective in supporting a pupil who may feel isolated from their class.

What will my child have to do?

Two whole class sessions will take place, where myself and the class teacher will talk to the class and do some activities with the children to help them understand the difficulties pupil’s may face when they have difficulty communicating and playing with others. We will talk about ways we may be able to help children who are having difficulty making friends, communicating and playing with others.
At the end of the second session the children in the class will be asked to indicate on a sheet of paper whether they would like to volunteer to take part in a weekly group where they will learn new skills to help a pupil in their class that may be having difficulty making friends. Only 4 or 5 children will take part in the group which will consist of 6 weekly sessions during a time most convenient for the school. The group will be run by myself and a Teaching Assistant from your child’s school. Parents of the volunteers selected will then be contacted to ask for written permission for their child to participate in the group sessions. After the group sessions have ended the pupils involved in the group will take part in a group interview with myself to talk to me about their experiences of the group and what could be improved for future groups.

As part of the study the researcher will conduct several observations during playtime to see if the interactions between the pupil and their peers’ has improved over 3 time points; on two separate occasions before the whole class sessions, after the group has come to an end, and again 6 weeks following this. The data collected from these observations will be anonymous so that the children cannot be identified from it.

**Duration of the project**

The project will run from January until July 2015. The whole class sessions will take place in February.

**How is confidentiality maintained?**

All data collected will be treated as confidential unless any child protection issues were to arise. If this happens then the appropriate child protection procedures will be followed. All data collected in observation schedules will be anonymised and data will be stored on an encrypted memory stick and/or on a secure password protected hard drive.

**What happens if I do not want my child to take part or I change my mind?**

It is entirely up to you whether your child takes part.

If you decide that you would like you child to be part of the 2 whole class awareness raising sessions and give permission for the researcher to record your child’s interactions on the playground with the pupil (if they are interacting with the pupil) during the two initial playground observations (before the whole class sessions take place) please complete the opt-in form provided. Please return this form to your child’s class teacher, ______by Friday the 9th of January 2015.
If your child is selected following the 2 class sessions to be part of the weekly group sessions you will be sent another information sheet and asked to provide written consent.

If you decide that you do not want your child to take part in the whole class sessions or initial playground observations then please let______ know so arrangements can be made for them to do something else within school whilst the class sessions are taking place.

Please email me on nadia.ezzamel@oneeducation.co.uk if you have any questions about the project. Alternatively you can pass on any questions to _______ who can contact me.

If you decide to allow your child to take part but then change your mind, then you can opt out of the whole class sessions or initial observations at any point by contacting me by email or by telling your child’s class teacher _______. If this happens then any data relating to your child will be destroyed.

**Criminal Records Check**

I have had a full Criminal Records Check at the Enhanced Disclosure Level.

**What if something goes wrong?**

If you are concerned about the project or have concerns about your child then please contact the school’s special educational needs coordinator in the first instance. However, if you wish to make a formal complaint about the research project then please contact my supervisor at the University of Manchester, Dr. Caroline Bond at caroline.bond@manchester.ac.uk.

Many thanks for reading this information sheet

Nadia Ezzamel, University of Manchester
Appendix 15: Opt in form for Class Sessions

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

Opt-in form

I give permission for my child to participate in the two whole class awareness raising sessions that the researcher will be delivering with the class teacher.

I understand that as part of the initial stages of the project before the whole class sessions take place the researcher will be observing the interactions between the pupil (that the project is for) and their peers in the playground on two separate occasions.

I give permission for the researcher to record the interactions between my child and the pupil concerned if they are playing together in the playground during these two initial observations. I understand that the data recorded would be anonymous and my child would not be able to be identified from this.

Name of Child: ___________________________ (full name)

Class: ________________________________

Signed: ________________________________

Parent/guardian name _______________________

Date: _________________________________

Please return this form to your child’s class teacher __________ by Friday the 9th of January 2016
Appendix 16: Whole Class Awareness Raising Session 1

Whole Class Awareness Session 1

Learning about ourselves and others

Strengths & Weaknesses
- What are you good at?
- What do you find more difficult?

What makes us the same and what makes us different?

In what ways are these athletes the same and different?
Are you like any of them? How are you different?

Same but different

Work in pairs, think of 2 ways you are the same. Remember to think of the hidden ways we can be the same, things that we cannot see.

Now with your partner think of 2 ways you are different. Remember to think about the things we cannot just see from looking at someone.
Skills we need for different things

What do we need to be a good footballer?

If these parts don’t work properly this can lead to difference.

Sometimes we can see difference other times we cannot.

What is it like for children who have difficulties talking and playing with others/making friends?

• How did you find that? Was it easy or hard?
  • How did it feel to be the person with the picture? How did it feel to be the one who was guessing?
  • How do you think a child may feel if they have difficulties talking/using words?

1. Communicate Differently

What do you think it might be like for a child that cannot use words to talk?

We are going to play a game in pairs to see how it may feel to not be able to tell other people things we want to say.

• Some children who find it difficult to talk also have difficulty understanding what others are saying
  • Listen to what I say and tell me what it means
  • What made it easier to understand me?

Lego activity

• Builders did you find that easy or hard?

• What made it easier?

2. Think differently—Play differently

• Some children think a little differently this means they may play a bit differently.

  Teddy Bear Activity!
  • How did you know where they may look for the teddy bear?
  • Some children find it difficult to guess what other children may be thinking
  • This means they may have difficulties understanding the rules to a game, learn that they need to take turns in a game and how to wish for their turn.
Feelings

Some children find it difficult to understand different facial expressions and feelings. This means they may not understand when and why you may be happy, sad, or scared.

3. Act differently
Some children like to play with the same toys and with things that are familiar because they do not like new experiences and change. They can become upset if change happens.

With thanks to Wendy Symes, University of Manchester

Some children are very sensitive to different sensations e.g. loud noises, touch, taste, smell, bright lights.

Alphabet game: try to say the alphabet backwards when I say go!

How did you feel?

What have we learnt today?

• How we all have strengths and weaknesses
• Ways we can be the same and different from each other
• How our brains may work differently
• What it may be like to have difficulties talking to others and playing with others.
Appendix 17: Whole Class Awareness Raising Session 2

Whole Class Awareness Session 2

Based on structure for the ‘whole-class meeting’ outlined in Newton and Wilson (2003), ‘Creating Circles of Friends’.

1. Brief Recap of previous session

2. Introduction
   a) Explain your involvement with the target pupil
   b) Explain your interest in how youngsters get on with and can help each other

3. Ground Rules
   a) Treat each other with respect
   b) Listen...one person speaking at a time
   c) Confidentiality

4. Need to talk about target pupil
   a) Emphasise this is unusual (to talk behind someone’s back)
   b) Target pupil knows this is happening
   c) Reason is that you need their help to think about ways in which the target pupil can be helped (stress need for/value of their insights).

5. Need for confidentiality (explain)
   a) No reference to who said what about whom – the details stay in this class.
   b) Emphasise that this confidentiality also binds adults

6. Listing positives
   a) Focus on positives first – good at...nice things about....what the target pupil does well (share pupil profile here – strengths from pupil’s point of view).
   b) List all contributions on a flip chart

7. Where things do not go so well/difficult times for the target pupil
   a) Explain that you have heard about some difficulties but probably not all.
b) Ask for descriptions of behaviour – list

c) Describe sort of person he/she is – list.

(Include pupil’s own point of view of needs/things finds difficult by sharing pupil profile).

8. Discussion of friendships

a) Display circle diagram and introduce the circles

i) People you love and who love you

ii) Allies/best friends

iii) Friends/acquaintances

iv) People paid to be in your life

b) Fill in a volunteer’s circle on the flip chart with help from the class.

9. What would it be like if…

a) What would it be like if circles 2 and 3 had no people in them?

b) How would it feel? – make a list

c) How would they behave? – make a list – compare to flip chart from 7

10. List ideas to support target pupil: enlist empathy, support and commitment

11. What’s involved
a) Explain about peer network and that you want to set up a group to which will help _____ (target pupil).

b) Explain what would be required

c) Explain that only six will be involved in total (including target pupil)

d) Hand out pieces of paper. Ask pupils to think whether they would like to volunteer, then to write their name in the paper and tick either yes or no to indicate their preference. Stress confidentiality and ‘no pressure’.

e) Explain that not everyone will be able to do it but

i) everyone can take responsibility for helping

ii) letter home to all parents of those chosen explaining about it
Appendix 18: Information sheet for Parents of Network Peers

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

Participant Information Sheet

Your child’s school have shown an interest in participating in a research project run by a Trainee Educational Psychologist as part of her Doctorate in Educational and Child Psychology. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Who will conduct the research?

Nadia Ezzamel, Trainee Educational Psychologist

Manchester Institute of Education, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester, M13 9PL.

Title of the Research

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

What is the aim of the research?

The aim of the research project is to evaluate the effectiveness of a peer network intervention to improve the social inclusion of pupils who have difficulties communicating and making friends in mainstream primary schools. The intervention aims to develop children’s awareness and understanding of the
difficulties experienced by children who have difficulty interacting/communicating. It also aims to support children (peers) to learn skills needed to interact successfully with pupils with social interaction difficulties. It is hoped the intervention will help peers to interact more positively with a child who has difficulties interacting socially within their class and provide more opportunities for them to be involved in positive social interactions within school.

The children within the pupil’s class have already received 2 class awareness raising sessions about the difficulties pupils who are unable to communicate & interact may encounter. We also talked about friendships and the strategies we may use to help children who have difficulties communicating/making friends.

Following the whole class sessions 6 group sessions with 4-5 peers from the pupil’s class will take place on a weekly basis with myself and a Teaching Assistant from within the class. During these sessions the peers will be taught key skills to be able to interact effectively with a pupil who is having difficulty interacting with others, focusing specifically on playtime games. It may include practising some of these skills through activities on the playground during the group sessions. Your child has volunteered to be one of the group (peer) network members

What would my child be asked to do?

- To participate in 6 weekly group sessions with the researcher alongside 4 other peers from their class. These sessions will last approximately 30-45 minutes and be at a time within the school day that is convenient with the school. Within the sessions your child taught key skills of how to interact effectively with a pupil that has difficulties interacting socially with others. A Teaching Assistant who is a member of school staff will be present during the group sessions.
- The project will involve your child’s interactions being observed with the pupil on the playground on 2 separate occasions (days), at the following time points: before the group sessions begin, a week after the last group session and again after approximately half a school term. The interactions will be recorded on an observation schedule and the information will remain anonymous
- Your child if willing will be asked to participate in a short group interview with the other peers that are involved in the network about their experience of the intervention. This interview will be audio recorded.

What happens to the data collected?

The data from the observations schedule will be compared against the three time points to gain an indication of whether interaction opportunities between the pupil and peers has increased as a result of the intervention. This data will be anonymised so that your child cannot be identified from it. The group
interview data will be transcribed by me. Following this I will analyse the data to identify key themes that are emerging. Another Trainee Educational Psychologist will assist with the analysis to improve reliability. The other Trainee will only have access to anonymous transcripts. The findings from the data will be fed back to the schools that have participated and the Local Authority.

**How is confidentiality maintained?**

Confidentiality will be maintained throughout the research process and following completion of the project. The audio recording of your child’s group interview and information from the playground observations will remain anonymous. The data/information audio recorded from the interview will be stored in a secure place away from unauthorised individuals. The audio recordings will be stored on an encrypted data stick to ensure security of the data. The data from the interview and observation schedule will be destroyed when it is no longer needed for research purposes and will be destroyed securely in accordance with the University’s data disposal procedures. All information given by participants will be anonymous and remain confidential unless any child protection issues were to arise. If this happens then the appropriate child protection procedures will be followed.

**What happens if I do not want to take part or if I change my mind?**

It is up to you whether or not you want your child to participate. If you do decide that your child should take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw your child at any time without giving a reason.

**What is the duration of the research?**

The intervention itself will take place over 8 weeks, however the total research process will last approximately 7/8 months. This will include time for planning and meeting with school and data collection by the researcher before the intervention begins, after the intervention has taken place and 6 weeks after this at follow up.

**Where will the research be conducted?**

The group network sessions and playground observations will take place on the school premises at a pre-arranged date and time. The group interview will take place at your child’s school, at a time convenient with the school.

**Will the outcomes of the research be published?**

The research may be published in an academic journal or presented at an academic conference. The research will be submitted to the University of Manchester as part of my Doctorate in Educational and Child Psychology. The
key themes from the interviews will be included within my doctoral thesis. Quotes used to illustrate the key themes will be anonymised. The information your child provides will remain anonymous at all times. I will provide a written summary of the research to all those that participate in the study.

**Criminal Records Check**

The researcher and all adults involved in the research project have undergone a satisfactory criminal records check and can provide evidence of this if required.

**Contact for further information**

If you would like to talk to discuss the research project please feel free to contact myself by email on nadia.ezzamel@oneeducation.co.uk to set up a telephone conversation.

You may also want to contact my supervisor Dr. Caroline Bond at the University of Manchester. Her email address is caroline.bond@manchester.ac.uk.

Alternatively you can contact Caroline Bond at the School of Education, University of Manchester.

Telephone: 0161 275 3511

**What if something goes wrong?**

If you would like to talk to someone for further advice about the research at any point please feel free to contact any of the people listed above.

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093

I really appreciate your consideration in participating in this project

Thank you

Nadia Ezzamel, University of Manchester.
Appendix 19: Consent form for Parents of Network Peers

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

CONSENT FORM

If you are happy to allow your child to participate in the group sessions, be observed as part of this project and participate in a group interview please complete and sign the consent form below.

1. I confirm that I have read the attached information sheet on the above study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.

2. I understand that participation in the study is voluntary and that I am free to withdraw my child at any time without giving a reason.

3. I agree for my child to be part of a group peer network intervention run by the researcher and member of school staff over the course of 6 weeks.

4. I agree for my child to be observed in the playground with their peers on 2 separate occasions (days) at the following time points: before the group sessions

Please Initial Box
start, after the group sessions have ended and approximately 6 weeks following this.

5. I agree for my child to participate in a short group interview with the researcher and other pupils involved in the network.

6. I understand that the interview with my child will be audio-recorded

7. I agree to the use of anonymous quotes made by my child in the write up of the research project and publication of the findings

8. I understand that any data collected will not be passed to other researchers

9. I agree that any data collected may be published in anonymous form in academic books or journals.

I agree for my child ____________________ (full name) to take part in the above project

Parent’s Name: ____________________________
Signature: ____________________________
Date: ____________________________
My name is Nadia and I am studying at the University of Manchester. For part of my course I have to complete a project.

**The project**

I am interested in helping children at school who are having difficulty making friends and who may not enjoy playtime.

I would like to help a pupil in your class enjoy playtime at your school more and help them make some new friends.

You have volunteered to help by taking part in the group.

**What will we be doing in the group?**

We will meet every week for 6 weeks on ________ (day) in the ________ (location) with ________ (TA name).

We will learn new ways to help a pupil in our class play with us. We will play some fun games together. Sometime we will go outside to practice our games in the playground.

Sometimes I might come back into school to watch you playing with your class mates at break time.
What will happen after the group has finished?

After the group sessions have finished I would like to talk to you all as a group about what you think has been good about the group and how I can make the group better.

I will need to record the group conversation on a recorder so that I don’t forget the important things you tell me. I will make sure no one else hears the recording other than me. This will help me make the next group I run in a different school better.

What do I do next?

It is up to you whether you would still like to take part in the group. If you say yes then change your mind that’s ok too.

Please tell your class teacher and they will let me know if you would still like to take part.

Thank you for reading about my project

Nadia Ezzamel

University of Manchester
Appendix 21: Consent form for Network Peers

The Peer Network Group

PUPIL CONSENT FORM

Please tick/circle below

- I understand why I am being asked to take part in the group and I have had the chance to ask questions

- I understand why I am being asked to take part in a conversation with the other group members and the group leader after the group has come to an end.

- I understand that the group conversation will be recorded so the things I say don’t get forgotten and I understand that only the researcher will listen to the recording.

- I understand that the group leader will sometimes come to see me playing at break time with my other class mates

- I understand that taking part is my decision and I can change my mind at any time without giving a reason
- I understand that my name won’t be used when the results of the project come out

- I agree to take part in the project

My name: …………………………………………………………………………..

School: …………………………………………………………………………...
Appendix 22: Social Story About Peer Network

The Peer Network Group

After the Easter holidays, I am going to start going to a friendship group with some other children from my class.

The group leader is called Nadia.
Mrs __________is also going to be at the group. The group is going to take place every Friday afternoon.

At the group I am going to sit in a circle with the children from my class.
Nadia and Mrs _________ are going to talk to us.

I will try to do some good sitting
I will try to do some good listening

Nadia and Mrs ________ will be really pleased with me if I do some good sitting and listening

At the group we are going to talk about what we like to do.
We are going to play some new games together.

We will take it in turns to have a go.

I will wait nicely for my turn.

Sometimes we might practice our games in the playground.
When the group has finished I will walk back to my class room with my friends
Appendix 23: Table 3 - Peer Network Session Example

Example of Session

Session 4: Adapting the language we use to help others understand us

TA present, 1 peer absent

Timeline of session displayed on whiteboard:

- Getting to know each other
- What we did last week
- News reporters update
- Learning our third friendship skill: helping our friend understand us
- Game
- Making our own rule cards
- How can we use our new skill
- New news reporters

<table>
<thead>
<tr>
<th>Steps of session</th>
<th>Activity</th>
<th>Resources</th>
<th>Reflective Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Circle time</td>
<td>Circle time conversation with chosen topic, e.g., favourite animal/sport/place to visit.</td>
<td>Wand to indicate whose turn it is.</td>
<td>Pupils voted which topic to discuss: chose animal</td>
</tr>
<tr>
<td>2. Recap of previous session</td>
<td>Ask what we did last session, and how have they used this skill (giving choices) outside of the session?</td>
<td>How to be a good friend booklet to prompt.</td>
<td>Had remembered story re Toby and Sam and what Sam did to help Toby join in (including TP).</td>
</tr>
<tr>
<td></td>
<td>Have you used it to ask each other?</td>
<td>Cue card 2-how to help your</td>
<td></td>
</tr>
<tr>
<td>3. News reporters update</td>
<td>Ask news reporters for update of what they shared with rest of class</td>
<td>friend join in</td>
<td></td>
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<tr>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
<td>---------------</td>
<td></td>
</tr>
</tbody>
</table>
|                          | We can use it to ask others what they want to play and to ask others to play a game with you. Ask about the following scenarios  
  - What if you ask someone else what they want to play from the list, but you don’t like/want to play that game  
  - What if the person says no and wants to play on their own?  
  - What could you do if the other person does not understand language? What could you do to show them what you mean?  
  Recap so far we have learnt about ways we can gain our friends attention and how to help them join in with us. | Some of group commented that they had lost their choice boards—had cleared drawers out and couldn’t find. TP commented that he had not used his card but he had asked 2 of the peers in the group to play with him by giving them a choice of activities. Prompt for TA to support pupils/remind pupils to use outside of session. Suggestion to place one on classroom door as reminder. TA photocopied one of original cards to give copies to children in group. |
|                          | Had sent email to c/t Sunday before to remind children to use choice cards, and if could share info with class (news reporters). TA said they had not had chance to tell class, TA had said last session she would |               |
| 4. Introduce third skill: Helping our friends understand us and helping them talk to us. (Using easy sentences & asking our friend to talk/including them). | Introduce Toby and Sam: visual story 3
- e.g., Toby finds it difficult to understand what Sam sometimes says,
- One day Toby and Sam were playing tennis in the playground...they were having a really nice time and were very happy... (card 1)
- "it started to rain a little bit... Toby and Sam carried on playing tennis...they didn't really mind about the rain..." (card 2)
- Then more clouds arrived and it all of a sudden it started to rain lots and lots
- Sam looked at Toby and said, 'oh no...it's raining cats and dogs!'
- Toby looked very confused....he did not understand what Sam was saying...he could not see any cats or dogs...falling from the sky.
- What does Sam mean?
- How can Sam change what he says to help Toby understand? | Toby and Sam characters & visual story 3
- Example of key visuals, objects of reference, using gesture and facial expression.
- Gesture for 'raining'
- Key visuals for rules of game/rule card. | find appropriate time (but she is not always in classroom as works in a different classroom too).
Arranged for me to support peers to deliver news at end of day today.

Had ideas of how to change language, one peer suggested could say, 'it's raining heavily', or 'its raining lots'.

Prompt for gestural ideas: e.g., one peer suggested you could point up to the clouds/rain.

Peers understood story and that need to change language to help others understand saying etc.
What could he say or do to help Toby understand? (Card 3)

Are there any other ways Sam can help Toby understand what he means? – refer to whole class session around language (objects & gestures).

Encourage children to role play ideas.

Let’s see what happened…

Show pictures 4 & 5.

Sam put his hands out… to feel the rain and looked at Toby… then he made a movement with his hands (that looked like rain) to show that he meant rain.

….Toby started to understand what Sam was saying!!

What did Sam do to help Toby understand him?

What could he say? (speech bubble?)…

Comment that some children find it difficult to understand these metaphors/sayings… because they think they are really happening… so in this story Toby really thought that it was going to rain cats and dogs.

This story shows how we can change what we say and do to help others understand us by using easy sentences and showing others what we mean by using our facial expressions, gesture and other ways.

When including friend to talk…. Remember to note: Give time for
| 5. Game to illustrate this skill | Zip, zap, boing game  
Sam wants to teach Toby a new game, *(Zip, Zap Boing game).* Toby has not played this game before. Sam tries to tell Toby the rules but Toby does not understand what the words mean,'  
Why is it important to have rules in a game?  
What would happen if there weren’t any rules?  
Other scenario…  
How can he help him to understand the game?  
Model use of visuals and rule card-To help Toby understand the game Sam made a rule card and some pictures of what the rules meant-what he had to do. | Visuals for meaning of zip, zap and boing rules in game.  
Rule card | Gave appropriate answers to why it is important to have rules-so everyone knows what to do/how to play a game.  
Use of rule card and visuals modelled.  
Children seemed to like game and understood point of visuals.  
Good game for practising gaining attention, e.g., saying name of child going to pass the ball to. |
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</thead>
<tbody>
<tr>
<td>6. Make own rule cards</td>
<td>Group to make own rule cards for game from own rule cards (rule card for each of game suggestions from las week).</td>
<td>Card, colours.</td>
<td>Worked in group of 2 and group of 3 together to make rule card for game they play together in playground.</td>
</tr>
</tbody>
</table>
| 7. How can we use this skill? | What could you do if you think someone does not understand what you have said? What if another person in your class or school that has difficulties talking and understanding others/understanding the rules of a game .how could you help them understand/join in? | Whiteboard & pens  
Cue card 3: how can we help our friends understand us? |
| 8. Nominate news reporters | Nominate 2 news reporters for this week | Microphone, visuals and story to share with class. | News reporters supported by myself to give class overview of what we have been doing, shared story from session 3 & 4 choice cards and rule cards, group members told other pupils in class where can get further information about what we have been doing (on classroom door). |
One day Toby and Sam were playing tennis in the playground…they were having a really nice time and were very happy… (card 1)

..it started to rain a little bit.. Toby and Sam carried on playing tennis..they didn’t really mind about the rain..(card 2)

Then more clouds arrived and it all of a sudden it started to rain lots and lots

Sam looked at Toby and said, ‘oh no..it’s raining cats and dogs!’

Toby looked very confused….he did not understand what Sam was saying…he could not see any cats or dogs…falling from the sky..

What does Sam. How can Sam change what he says to help Toby understand? What could he say or do to help Toby understand? Are there any other ways Sam can help Toby understand what he means?
Sam put his hands out to feel the rain and looked at Toby…….

..then he made a movement with his hands (that looked like rain) to show that he meant rain..

….Toby started to understand what Sam was saying!!

What did Sam do to help Toby understand him?

What could he say? (speech bubble?)…
Zip zap boing rules!

**Zip**

If the person who has the ball says *zip* they have to pass the ball to the person on their left.

**Zap**

If the person who has the ball says *zap* they have to pass the ball to the person on their right.

**Boing**
If the person who has the ball says *boing* they have to throw the ball to someone opposite them and are not allowed to pass the ball to the person on their right or left (next to them).
### Table 4: Playground Observation of Peer Engagement Schedule (adapted from Kasari)

<table>
<thead>
<tr>
<th>Interval</th>
<th>Engagement State</th>
<th>Child Initiation &amp; Peer Response</th>
<th>Peer Initiation &amp; Child Response</th>
<th>Comments (affect, activity, atypical behaviour, who child engaging with etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gen = I, Peer R = +</td>
<td>Approp resp = +</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peer NR/Neg = -</td>
<td>Missed opp to resp = -</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>*peer in network</td>
<td>*peer in network</td>
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<td>5</td>
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</tr>
</tbody>
</table>
Engagement State Key

S = Solitary, O = Onlooker, P = Parallel play, PA = Parallel Aware, JE = Joint Engagement, G = Games with rules.

Peer Initiation Key

G = Gaining attention/greeting

J/C = Asks if wants to join play/gives child choice of activity

NV = Non verbal, e.g., handing a toy to child, waving at child, gesturing to come over etc

Q = Asking child questions

C= Commenting on child’s play/their own play to child

A = Offering help/ assistance to child

P = Praising child

I = Inappropriate/negative verbal/non verbal initiation by peer
Table 5 - Observation Schedule Guidelines

Adapted from Kasari, ‘Playground Observation of Peer Engagement Codebook’

When conducting playground observations, observers should arrive at the child’s school with ample time to locate him/her. Remember to bring a clipboard, a stopwatch, a writing instrument, observation sheets. Should a child enquire about what you are doing, reassure him/her that you are watching kids play fun games and that he/she should go and play.

Observers watch for 40 seconds and code for 20 seconds.

<table>
<thead>
<tr>
<th>Engagement States</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solitary/isolated</td>
<td>Child plays alone with no mutual eye gaze with other children. If child is engaged SOLELY with an adult (e.g., teacher or paraprofessional, lunch time organiser) then the child is considered ‘solitary or isolated’.</td>
</tr>
<tr>
<td>Onlooker</td>
<td>Child has one-way awareness of another child. It appears the child is watching another child or group of children or a game with interest OR the intent to participate.</td>
</tr>
<tr>
<td>Parallel</td>
<td>Child and peer are engaged in a similar activity but there is no social behaviour. A common example is when two children are digging side by side in the sand but there is no social communication, awareness or reciprocity.</td>
</tr>
<tr>
<td>Parallel Aware</td>
<td>Child and peer engaged in similar activity and mutually aware of each other during activity.</td>
</tr>
<tr>
<td>Joint engagement</td>
<td>Child and peer direct social behaviour, e.g., offering objects, conversing, toy-taking, and other activities with a turn-taking structure. Children may be physically fighting or engaging in otherwise inappropriate behaviour and still be considered joint engaged.</td>
</tr>
<tr>
<td>Games with rules</td>
<td>Child participates in organised sports such as basketball or football and/or engages in fantasy or pretend play OR a fantasy game that the child or his/her peers have created provided all children are playing by a set of rules that the children have</td>
</tr>
</tbody>
</table>
Typically waiting in line is considered part of a game if the child is attending to the children that are currently playing. If the child is staring off or not attending to the game, then standing in line WILL NOT count as ‘Games with Rules’. There has to be a clear indication that the child is waiting for his/her turn. He/she may converse in line and ‘on topic’ with the other children and still be considered part of a game because the child is playing his/her role and approximately waiting for a turn.

<table>
<thead>
<tr>
<th>Discrete Behaviours: Initiations and Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Child initiation and Peer Response</strong></td>
</tr>
<tr>
<td>(I) General Initiation – These are initiation by the child that are not specifically directed to anyone in particular. Often, children will have something to say and are looking for someone to share it with, but don’t seek out another person to engage with. For example a child could scream out ‘Rockets are so fast!’ and no one would be around to hear him/her despite the attempt</td>
</tr>
<tr>
<td>(+) Child directs communication to a peer/peers – e.g., offers toy, greets, asks to play game, comments, states facts etc. and the peer responds appropriately with a nonverbal gesture or verbal language.</td>
</tr>
<tr>
<td>(-) Child directs communication to a peer/peers and the peer does not respond or ignores the child. Typically the target child will speak to someone’s back and will not get a response.</td>
</tr>
<tr>
<td><strong>Peer/s Initiation and Target Child Response</strong></td>
</tr>
<tr>
<td>(+) Peer/s directs communication to the target child and the target child responds to the overture with a nonverbal gesture or verbal language. Note distinctions between type of peer initiation in table (type of verbal initiation/non verbal).</td>
</tr>
<tr>
<td>(-) Peer/s directs communication to the target child and target child misses an opportunity to respond to a peer with a nonverbal gesture of verbal language.</td>
</tr>
<tr>
<td><strong>Qualitative Comments</strong></td>
</tr>
</tbody>
</table>
This is an opportunity to record any qualitative data that may provide a context for the child’s engagement during break time. Ideally a person who did not observe the interaction should be able to read the comments and determine what happened at this particular play time. Record what the children are doing and any other notes that may be helpful in understanding the child’s playground behaviour.
Appendix 25: Interview Schedule – Target Pupil

Pupil interview

Go through social story outlining the points below

Introduction

I would like to know what you think about the group/friendship network and what parts of it you thought were helpful or unhelpful for you. This will help me make the group even better next time I run it in a different school.

Confidentiality

I will be recording what you say on an audio recording device so that I don’t forget the important information you have shared. I will then write up what you have said but will not use your real names to protect your identity. I may use some of the quotes (things you have said) when I write up my project, but no one else will know it was you that said those things other than me.

Ensure assent has been obtained.

Interview Format

I will ask you some questions and I would like you to answer the questions from your own views, thoughts and feelings. I am going to ask you 8 questions (timeline).

If at any point you would like to break you can show me the break card. If you do not want to answer a question that’s okay too, you can stay I don’t want to answer that Nadia.

If you want the talk to finish you can show me the STOP card.

Questions

Have you got any questions before we start? I’m going to switch the recorder on now and introduce myself, after I say my name please could you say your name?

SWITCH RECORDER ON
Key Questions (written on card)

- What was good about the group? Ratings scale
- What did you learn from the group?
- How has the group helped you?
- Has it helped you to enjoy playtime more? How?
- Do you enjoy playing games with your classmates and friends at playtime?
- What was not so good about the group?
- How do you think we could make the group better?
- I am going to run the group in another school, how should I change it?

Debrief

Thank you for taking part in the interview. It will really help me to improve the group for other children. Do you have any questions about what we have talked about, or about what happens next? If you think of anything please let your teacher know and she can always contact me.
Appendix 26: Social Story about Interview for Target Pupil

The Friendship Network Group

On Friday we had our last Friendship Network session with Nadia and Mrs __________.

Nadia wants to come and talk to me at school next Thursday afternoon.
Nadia wants to talk to me about what I think has been good about the friendship network group and how she can make the group better.

This will help Nadia make the group even better when she runs it again at a different school.
Nadia is coming to speak to me on my own because she wants to find out what I think.

When Nadia comes to talk to me at school she will ask me some questions.

Nadia will ask me about what I liked about the group and what I didn’t like about the group.
Nadia will ask me about how we can make the group better.

I will try to do some good sitting.

I will try to do some good listening.
Nadia will be really pleased with me if I do some good sitting and listening.

Nadia will need to record what we talk about on a recorder so that she doesn’t forget the important things I tell her.

Nadia will make sure no one else hears the recording.

Nadia will be very happy if I try to answer the questions she asks me.
If I need a break from talking to Nadia I can show Nadia the break card

If I don’t want to answer a question Nadia asks me that’s okay too,
I can say, ‘I don’t want to answer that Nadia’,

If I want the conversation to finish I can show Nadia the stop card

After we have finished talking, me and Nadia will walk back to my classroom together.
Appendix 28: Ratings Scale
Appendix 29: Peer Focus Group Schedule

Peer Focus Group Schedule

Please note: in addition to the format outlined below child friendly activities will be included at various points of the session including a warm up activity, and the use of different methods to elicit children’s views that reduce potential participation anxiety e.g., the use of pen and paper/drawing exercises to answer some of the key prompts.

Introduction

I would like to know what you think about the group network and what parts of it you thought were helpful or unhelpful for you. This will help me make the group even better next time I run it in a different school.

Format of the Focus Group

I will ask you some questions and as a group I would like you to talk to each other about each of the questions. The questions will also be written down on a card so you can see it.

There are no right or wrong answers and each of you may have different views, so I would like you to answer the questions from your own views, thoughts and feelings. Only one person at a time must talk and you must remember to give other children in the group a chance to talk. (You don’t need to put your hand up to tell us what you think, you can just talk)

Confidentiality

I will be recording you all on an audio recording device so that I don’t forget the important information you have shared. I will then write up what you have said but will not use your real names to protect your identity. I may use some of the quotes (things you have said) when I write up my project, but no one will be able to identify it’s you from what I write. It is important that what you discuss as a group is kept confidential as some children might not want you to repeat the information they have shared with others. However, if there is any information you share that makes me worry that you may not be safe, I will then have to share what you have told me with another adult.

Ensure all members of group give assent for participation
**Questions**

Do you have any questions?

**Warm up**

When I switch the recorder on we are going to do a little warm up activity where we will each introduce ourselves. I will introduce myself first and then hold the recorder near you for you to each introduce yourselves by saying your first name. After everyone has introduced themselves I will place the recorder in the middle. Is that okay?

SWITCH RECORDER ON!

**Introductions**

**Key Prompts**

- What did you learn about when I came to talk to your class before our group sessions started? **DISCUSSION**
- What was good about the friendship network group? **LIST ON FLIPCHART & RATINGS SCALE**
- What did you learn from the group? **LIST ON FLIPCHART**
- Has the group helped you? How? **PEN AND PAPER EXERCISE-DRAW/WRITE DOWN**

On the table is a piece of paper and pencil, please have a think about how you think the group has helped you and write or draw your thoughts on the piece of paper. You will have about 5 minutes to do this then we will bring out paper back to the circle and share what we have written down and drawn with the group.

**BREAK (OPTION 1)**

- Do you think the group has helped ___ (TP)? How? **DISCUSSION**
- Has the group helped you to understand ___ (TP) better and learn new ways to play with him? **DISCUSSION**

**BREAK (OPTION 2)**

- Was it easy was it to practice the skills we learnt in the group in the playground or classroom? **DISCUSSION**
- What was not so good about the group?/unhelpful? –**LIST ON FLIPCHART**
- How do you think we can make the group better?–**MAGIC WAND**
- I am going to run the group in another school, how should I change it?–**LIST ON FLIPCHART**
DEBRIEF:

Thank you for taking part in the group interview. It will really help me to improve the group for other children. Do you have any questions about what we have talked about, or about what happens next? If you think of anything please let your teacher know and he can always contact me.
Appendix 30: Interview Schedule - Teacher

Interview schedule (Teacher)

Introduction
Welcome and thank for participation

Purpose
Explain the purpose of the interview to participants: To collect information about their experience of the intervention, their perceived impact of the intervention and the applicability of the intervention within the school context and for future use. Remind the participant the interview will be recorded.

Confidentiality
The information from this interview will be audio-recorded, transcribed and analysed. It will be anonymised so that you will not be able to be identified from any quotes used within the write up of the project. The information will be treated sensitively and kept on an encrypted memory stick. It will be destroyed once it is no longer needed for this project. Once the interview has been transcribed I will give you a copy of the script so you can check I have captured what you shared accurately. I can remove anything you are not happy with.

Interview Format
The interview will last approximately 45 minutes to 1 hour depending on the amount of information you have to share. I will ask you some questions and I would like you to answer the questions from your own perspectives and experiences. If at any point you would like to stop or do not want to answer the question then please let me know and we can have a break or leave the question out. You have the right to stop the interview at any point and withdraw from participation in the project.

Terminology used
During this interview I will use the term ASD to describe Autism Spectrum Disorder.

Questions
Do you have any questions before we begin?

I will now switch the recorder on ok?
**Key Questions**

(Please note key questions will be asked to all participants but prompts will be tailored to the participant where appropriate to ensure relevancy).

1. **What (if any) changes have you seen as a result of the intervention/project/Friendship Network Group?**

   *Prompt: specific examples*

2. **Do you feel the intervention has helped/benefitted the Target Child (_______) and if so how?**

   *Prompts: What aspects do you feel were most beneficial/had the greatest impact?*
   
   - *How has the intervention affected the child’s social experiences during outside play?*
   
   - *How has the intervention influenced the child’s social experiences within the classroom?*

3. **How effective do you feel the whole class awareness raising sessions have been?**

   *Prompt: What aspects of the content that was covered do you feel was most helpful/effective?*

   *Prompt: what aspects do you feel need to be further developed/changed?*

4. **How effective do you feel the intervention/project has been in developing peers understanding/attitudes/behaviour towards the TC (_______)?**

   *Prompt: any specific examples of how*

5. **In what way (if any) do you feel the network peers have benefitted from the group?**

   *Prompt: which aspects and why?*

6. **Are there any negative effects of being part of the project/Friendship network that you feel have affected the network peers?**
7. What effect if any do you feel the intervention has had on the wider peer group/class?

8. How achievable has it been to support peers to transfer their learning from the network to the classroom/playground environment?

Prompt: what has helped with this?

Prompt: what has hindered this?

9. How was the intervention/project for you?

Prompt: explore-for teacher- how did you feel about joint delivery of the whole class sessions?

9. Do you feel you as a school you would be able to implement this intervention/aspects of the intervention/project yourselves/again if you identified another pupil may benefit from it/with another pupil who may benefit from it?

Prompt: Which aspects? E.g teacher: Do you feel you would use the resources again/deliver whole class sessions solely by yourself?

10. How could it work better?

11. What factors have affected/hindered the delivery of the intervention?

12. What do you feel would be needed in order to help sustain/maintain the impact of the intervention/project over time?

14. How has the intervention helped your understanding as a school of ways peer awareness/pupil-peer interaction (for children with ASD) can be developed?
15. If I was to repeat the intervention again in a different school, how might I be able to improve it?

- **prompt: whole class session**
- **prompt group sessions**

Thank you for taking part in the interview. Do you have any questions about what we have just discussed, or about what happens next? If you think of anything please don’t hesitate to get in touch.
Appendix 31: Interview Schedule - TA

**Interview schedule (TA)**

**Introduction**

Welcome and thank for participation

**Purpose**

Explain the purpose of the interview to participants: To collect information about their experience of the intervention, their perceived impact of the intervention and the applicability of the intervention within the school context and for future use. Remind the participant the interview will be recorded.

**Confidentiality**

The information from this interview will be audio-recorded, transcribed and analysed. It will be anonymised so that you will not be able to be identified from any quotes used within the write up of the project. The information will be treated sensitively and kept on an encrypted memory stick. It will be destroyed once it is no longer needed for this project. Once the interview has been transcribed I will give you a copy of the script so you can check I have captured what you shared accurately. I can remove anything you are not happy with.

**Interview Format**

The interview will last approximately 45 minutes to 1 hour depending on the amount of information you have to share. I will ask you some questions and I would like you to answer the questions from your own perspectives and experiences. If at any point you would like to stop or do not want to answer the question then please let me know and we can have a break or leave the question out. You have the right to stop the interview at any point and withdraw from participation in the project.

**Terminology used**

During this interview I will use the term ASD to describe Autism Spectrum Disorder.

**Questions**

Do you have any questions before we begin?

*I will now switch the recorder on ok?*
Key Questions

(Please note key questions will be asked to all participants but prompts will be tailored to the participant where appropriate to ensure relevancy).

1. What (if any) changes have you seen as a result of the intervention/project/friendship network?

Prompt: specific examples

2. Do you feel the intervention/project has helped/benefitted the Target Child (______) and if so how?

Prompts: What aspects do you feel were most beneficial/had the greatest impact?

How has the intervention affected the child’s social experiences during outside play?

How has the intervention influenced the child’s social experiences within the classroom?

3. How effective do you feel the intervention/project has been in developing peers understanding/attitudes/behaviour towards the TC (______)?

Prompt: any specific examples of how

4. In what way (if any) do you feel the network peers have benefitted from the group?

Prompt: which aspects and why?

5. Are there any negative effects of being part of the intervention/project that you feel have affected the network peers?

Prompt: which aspects and why?

6. Are there any negative effects of being part of the intervention/project that you feel have affected the network peers?

Prompt: which aspects and why?

7. What effect if any do you feel the intervention has had on the wider peer group/class?
8. How achievable has it been to support peers to transfer their learning from the network to the classroom/playground environment?

*Prompt: what has helped with this?*

*Prompt: what has hindered this?*

9. How was the intervention for you?

*Prompt: TA group input*

10. Do you feel you as a school you would be able to implement this intervention/aspects of the intervention yourselves/again with another pupil who may benefit from it?

*Prompt: Which aspects?*

*Prompt: How confident would TA feel about delivery/planning? What might it look like?*

11. How could it work better?

12. What factors have affected/hindered the delivery of the intervention/project?

13. What do you feel would be needed in order to help sustain/maintain the impact of the intervention/project over time?

14. How has the intervention helped your understanding as a school of ways peer awareness/pupil-peer interaction (for children with ASD) can be developed?

15. If I was to repeat the intervention/project again in a different school, how might I be able to improve it?

- *Prompt: whole class session*
- *Prompt group sessions*
Thank you for taking part in the interview. Do you have any questions about what we have just discussed, or about what happens next? If you think of anything please don’t hesitate to get in touch.
Appendix 32: Table 6 - Example of codes, subthemes and themes

Thematic Map 3 example of Thematic analysis process

Main Organising Theme: Intrinsic School Factors

<table>
<thead>
<tr>
<th>Example of quote</th>
<th>Code</th>
<th>Subtheme</th>
<th>Main Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Maybe if I had have known or had more information about what to do, what to use and what you’ve sort of been doing...then I could have enforced it...not enforced it but encouraged them to use those cards or to use strategies or to use what they’ve learnt with you, if I had had more information I could have reminded them’ (C/T)</td>
<td>C/T limited knowledge of group sessions and strategies used</td>
<td>Overview of project</td>
<td>Intrinsic School Factors</td>
</tr>
<tr>
<td>‘I would be comfortable in doing it but I wouldn’t feel confident in doing it...because I don’t have the full...I haven’t seen the full spectrum of the...overview of the whole project’ (C/T)</td>
<td>Limited C/T overview of project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘..I think to be honest there’s lots going on in school, there’s lots of meetings...lots of work to do...and you know I’m easily distracted with other things’ (C/T)</td>
<td>Other commitments in school</td>
<td>Competing Priorities/Logistical Factors</td>
<td>Intrinsic School Factors</td>
</tr>
<tr>
<td>‘apart from moving rooms I think that was the only barrier we came across...maybe a bit of the weather...because we had to come indoors.’ (TA)</td>
<td>Logistical factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘there’s obviously the</td>
<td>Constraints on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>Category</td>
<td></td>
<td></td>
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<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
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<tr>
<td>timings and things like that can get in the way…but I think its just logistically in terms of the timetable maybe they’ve got in the way…’ (C/T)</td>
<td>school timetable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘I’m only on duty on Wednesdays so I can only really really tell you what I’ve seen’ (C/T).</td>
<td>Staffing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘At lunch times it’s the lunchtime organisers and at breaktimes it’s the teachers on duty…so.yeah..I’m exposed to other year groups and so are the other teachers’..(C/T)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘I’m not really with him outside..at breaktimes’. (TA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Yeah I quite enjoyed the sessions..yeah..it’s been nice to watch the children get involved in something that’s different for them as well..it’s quite interesting watching their skills grow and thinking outside the box..thinking about how they can speak to other children and just communication with other children..’ (TA)</td>
<td>Staff enjoyment in participation/seeing children acquire new skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘More opportunity to use those strategies and maybe letting other people know around the schools so other teachers and TAs – they can really reinforce what is being said – I think it would be good if there is consistency among staff and</td>
<td>Consistency among staff Wider staff knowledge/ involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intrinsic School Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they are all singing from the same hymn sheet’. (C/T).</td>
<td></td>
<td></td>
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<tr>
<td>‘The other classes...they don’t really have an understanding of autism...’ (C/T)</td>
<td>Wider knowledge of ASD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘The other classes...they don’t really have an understanding of autism...and it would be good to roll out more of a whole school agenda and just be upfront about it...and just you know talk about how people are different and not be afraid to talk about it...I think some schools might be like...oo we can’t because he has that sort of a label we can’t talk about it but it’s important to understand why people are how they are and maybe they are more accepting of other people...with autism’. (C/T)</td>
<td>Whole school understanding of ASD</td>
<td>Whole school approach needed</td>
<td></td>
</tr>
<tr>
<td>‘Maybe if they adopt it as a whole school thing...some sort of policy...and posters all round...so maybe if its adopted as a whole school strategy because it’s probably applicable to other children that might not be autistic but they have that same problem’. (C/T)</td>
<td>Intervention/approach applicable to other children</td>
<td>Intrinsic School Factors</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 33: Information Provided to Participating School

‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with social communication difficulties in mainstream primary schools’

Aim of the Project:

Research has shown that children who may be having difficulties making friends and interacting with others can be supported effectively by other children within their class (peers). Developing an understanding with peers about a pupil’s difficulties and teaching peers’ key skills to be able to interact effectively with them can be very effective in supporting a pupil who may feel isolated from their class.

Overview of the Project:

Two whole class sessions took place in which the researcher and Class Teacher talked to the class and delivered some activities to help them understand the difficulties pupil’s may face when they have difficulty communicating and playing with others. We talked about ways we may be able to help children who are having difficulty making friends, communicating and playing with others.

After the class sessions 5 peers took part in a weekly peer support network session for a pupil with social communication difficulties over a period of 6 weeks. These sessions were delivered by the researcher and a Teaching Assistant within the school.

After the group came to an end the pupils involved in the group took part in a group interview with the researcher to talk to me about their experiences of the group and what could be improved for future groups. The researcher also interviewed the pupil with social communication difficulties and school staff involved in the project.

As part of the study the researcher conducted structured observations of the pupil playing with the peers from the network group in the playground on three separate
occasions before the whole class sessions, after the group had come to an end, and approximately 4 weeks following this.

**Key findings:**

Although this was a small study, the findings indicate promising outcomes of the intervention for the focus pupil including;

- Positive changes in the pupil’s ability to initiate interaction with his peers and respond to their efforts
- Increased ability to take turns and participate in other group activities in the classroom.
- Increased ability to regulate his emotions with the support of his peers and an increased sense of empathy were also reported.
- Information collected from the pupil illustrated that he enjoyed participating in the intervention.

Positive outcomes for the peers included;

- Enjoyment in participation
- Increased understating and acceptance of the pupil’s needs and increased skills to interact with him.
- Peers described that they enjoyed the group and having the opportunity to get to know each other and play together, they were better at gaining the attention of others, listening, sharing and regulating their own emotions.

One concern raised by staff was the sense of ‘exclusivity’ of the group and potential ‘feelings of exclusion’ of the wider class even though efforts were made to include them. School staff felt that the impact would be greater if the intervention was adopted as a whole school policy so that there is consistency among staff within school to support the implementation of the intervention, e.g., lunch time organisers, teachers, and that other children would benefit from the framework.

It is hoped this small scale study has contributed to the initial development of an innovative intervention to support the social inclusion of pupils with social communication difficulties which can be refined further for use in other mainstream school settings.

Thank you for your support with the project,

For any further feedback or to discuss the research findings please contact:

*Nadia Ezzamel, Trainee Educational Psychologist, University of Manchester*

Email: nadia.ezzamel@postgrad.manchester.ac.uk
Appendix 34: Presentation to EPs at CPD Event

Developing Peer Support for Children with ASD in Mainstream School Settings

16th of March 2016
Nadia Ezzame, Educational Psychologist in Training

Session Aims

- To consider the impact of a lack of peer support for children with ASD
- To explore how different models of peer support can be introduced in mainstream school settings

The Current Context

- The number of children with ASD attending mainstream schools has increased considerably with 77% attending such settings (Department for Education, 2013).
- Although attending mainstream settings may have a range of benefits, findings within the literature highlight some of the negative experiences pupils with ASD often face in mainstream schools including increased risk of bullying & rejection by peers. E.g. Applegate, Bicks & Popper, 2012; Humphrey & Synnes, 2010; Jones & Frederiksson, 2010).
- A national autism survey reported that 42% of parents said their child often felt from they were being bullied, with 7.3% finding it so “intimidating” and in some cases “impossible” (National Autistic Society, 2003).

A national autism survey reported that 42% of parents said their child often felt from they were being bullied, with 7.3% finding it so “intimidating” and in some cases “impossible” (National Autistic Society, 2003).

The National Autistic Society

Calls to address this area have been raised by organisations including the National Autistic Society, “Schools should develop and expand the range of services and approaches designed to facilitate the social inclusion of children with ASD including Circle of Friends and Buddy Clubs.”


A Theoretical Model of Pupil-Peer Interaction

Deficits in pupils’ social skills are compounded by poor peer understanding leading to peer social exclusion (Barber et al., 2004).
It is unrealistic to expect that children without autism, rooted in biology and culture, can shed their self-consciousness and conventionalism to imagine the world through autistic eyes. Yet giving autism a greater dialogic space in the school curriculum may enhance the perspective taking skills and nurture the creative potentialities of all children in inclusive classrooms.”


The underlying premise of the REPM stems from attribution theory (Wrenner, 1986), where providing information about a pupil’s needs is assumed to help peers understand that the pupil’s difficulties lie outside their control which can potentially increase empathy and inclusion.

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**Developing Peer Understanding**

- Experimental studies have explored the impact of different information messages on peer understanding. A combination of descriptive (highlights similarities) and explanatory information (causal explanation) was found to improve peer attitudes & behavioral intentions towards a pupil with ASD (Campbell et al., 2004).
- In schools where there is an open dialogue with peers around a pupil’s needs, improved social inclusion has been reported (Ochs, Kremer-Sadlik, Solomon & Sirota, 2001).
- Studies using the Circle of Friends approach have shown the whole class session has been particularly effective in promoting positive peer attitudes and behavior (Fendrich, Warren & Turner, 2005; Gun, 2000; Whitaker, Barrett, Jov, Potter & Thomas).

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**Why is it important to develop understanding of ASD as a whole school agenda?**

- “Students with autism ask teachers to step into their world.”
  
  [https://www.youtube.com/watch?v=3lO](https://www.youtube.com/watch?v=3lO)

- National Autism Awareness Week
  

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**Awareness Raising Resources**

- New materials developed by the National Autistic Society
  

- Materials for pupils Years 5-7 from the Autism Education Trust
  

- Video clips
  
  “Marvelous Man”
  
  [https://www.youtube.com/watch?v=7/MXsM_2c](https://www.youtube.com/watch?v=7/MXsM_2c)

  “My Autism and Me” (BBC)
  
  [https://www.youtube.com/watch?v=epWxP19GG](https://www.youtube.com/watch?v=epWxP19GG)

---

As EPs have you been involved in supporting schools to develop their autism awareness/learning practices?

Have you been involved in supporting schools to promote the social inclusion of pupils with ASD – how?
What are the barriers/difficulties schools may come up against when considering whether to introduce autism awareness activities?

Is awareness raising enough?

- Although peer awareness is important these activities may not be sufficient to change peers’ interactions with pupils with ASD (Campbell & Harper, 2014).
- Peer-mediated interventions (PMI) can enhance awareness raising by incorporating the delivery of directive information messages such as teaching peers key strategies about how to interact effectively with pupils with ASD.
- There is promising evidence demonstrating the success of PMI on the social interaction of pupils with ASD (Chan et al., 2009; Watkins et al., 2015; Zhang & Wheeler, 2011).

Peer-mediated Interventions

- Kasari, Rotheram-Fuller, Locke & Cullum, (2012)
  Taught peers specific skills around how to engage in interactions with pupils with ASD and conflict resolution strategies and this was found to be more effective than a child-assisted intervention (teaching the pupil with ASD social skills) and resulted in positive effects on the ASD pupil's social networks, social skills and isolation during playtime.
- Owen-Deshayes, Carr, Cale & Blakeley-Smith, (2008)
  A peer training intervention focusing on outside play found an increase in peer initiations and pupil initiations and responses.

Benefits and Drawbacks of PMI

- Clear advantages in comparison to adult-mediated approaches (Kasari, Rotheram-Fuller, Locke & Cullum, 2012).
- Generalisation does not need to be planned for as pupils interact directly with peers (Rogers, 2000).
- Peers as “intervention agents” reduces the demands on school staff (Chan et al., 2009).
- Peers may benefit from increased confidence, greater understanding of diversity, academic and social gains and satisfaction in helping others (Jones, 2007; Kamps et al., 1998).
- However ethical concerns with regards to the responsibility placed on peer participants and exposure to challenging behaviour have also been raised (Parsons, Goldberg, MacLeod & Jones, 2009).

Knowledge Gap

- Previous studies have not focused on incorporating all three types of information messages (descriptive, explanatory and directive) as a basis for intervention.
- Failed to seek the views of pupils’ experience of interventions.
- Not delivered interventions in collaboration with schools and addressed the applicability of interventions within the school context (Kasari & Smith, 2013; Zhang & Wheeler, 2011).

The Current Study

- Mainstream primary school.
- Year 3 pupil who had a diagnosis of ASD, no statement/EHCP, spent all time educated in classroom with peers.
- Pupil wanted to interact with peers, but did not know how to do so appropriately. Although peers were inclusive to some extent, they did not have the necessary skills to interact with him successfully.
- His play at break time could be solitary despite his interest in wanting to engage. He was reliant on an adult scaffolding interactions with peers.
Overview of the Intervention

- 2 Whole class awareness raising sessions:
  Delivered in collaboration with class teacher incorporating the delivery of descriptive, explanatory and directive information messages.

- 6 Peer network sessions:
  Key skills taught to 5 peers and pupil (directive information) during group sessions to support them to interact more effectively, with a particular focus on outside play. Pivotal Response Training used as a framework of core skills to be targeted through the use of activities/games. TA supported sessions.

Skills taught

- Gaining attention of others and paying attention
- Helping our friends join in play by giving choices (choice cards)
- Helping our friends understand us and helping them talk to us
- Taking turns
- Praising others, winning and losing
- Conflict resolution

The Whole Class Sessions

- First session:
  Learning about ourselves and others around us.
  - Focus:
    - What makes us similar and different to each other
    - The learn, what might cause differences, hidden and visible differences
    - Experiential: what is might be like to have difficulty, talking to others.
  - Second session:
    - Based on CIF class session, exploring pupil’s strengths and difficulties, circles of relationships, problem solving/strategies of how we can help pupil.

The Peer Network Sessions

- Set structure to session, circle time, review of skill learnt the previous week, introduction of new skill through problem solving stories, use of new skill within game, how would use new skill.
- Children encouraged to take ownership - came up with group name, rules. Two pupils fed back to the class each week about the skills learnt through ‘News Reporter’ roles.
- Use of role play, modelling, visual cue cards to teach new skills
- Pupils made own resources to use in school

Measuring the outcomes of the intervention


- Interviews with Teacher and TA
- Interview with Pupil
- Focus Group with Peer Network Volunteers

Key Findings

- Although this was a small study, the findings indicate promising outcomes of the intervention.

  For the pupil:
  - Positive changes in the pupil’s ability to initiate interaction with his peers and respond to their efforts
  - Increased ability to take turns and participate in other group activities in the classroom.
  - Increased ability to regulate his emotions with the support of his peers and an increased sense of empathy were reported.
  - Information collected from the pupil illustrated that he enjoyed participating in the intervention.
Positive outcomes for the peers included:

- Increased understanding and acceptance of the pupil’s needs and increased skills to interact with him.

- Peers described that they enjoyed the group, having the opportunity to get to know each other and play together, were better at gaining the attention of others, listening, sharing and regulating their own emotions.

Issues arising from the study

- ‘Exclusivity of group’, ‘Feelings of exclusion’ despite efforts to include whole class.

- Lack of wider staff knowledge of ASD

- Changes of staff at break times, change of teacher when missing your groups

- Competing priorities

- Whole school approach advocated
Implications for Schools

- Whole school v small group interventions
- Involving wider class
- Terminology used
- Support from external professional to initially set up intervention

References

Appendix 35: Feedback Questionnaire for EPs

EP CPD Day 16th March 2016

1. ‘Do you think this intervention is relevant to the schools you work with and their current priorities?’

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6. ‘What else would you want to know about the programme/do you think schools would want to know?’

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Any other comments
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Thank you
Appendix 36: EP Feedback Questionnaire with Summary of Key Themes

1. ‘Do you think this in an intervention that is relevant to the schools you work with and their current priorities?’
   - All EPs stated it is a relevant intervention for many schools

2. ‘Are you aware of your schools using any similar interventions?’
   - Circle of Friends
   - Buddy systems
   - Lego Therapy
   - Most EPs stated they were not aware of their schools using any similar approaches.

3. ‘What support or training do you think schools/school staff might need to trial this programme?’
   - Whole school Training for staff on ASD/communication difficulties
   - Training for staff on the intervention/programme.
   - Training around the programme to include: an introduction to the programme which includes an introduction to the key aims, theory behind intervention, an outline of the programme and opportunities to practice activities, how to carry out the intervention.
   - A handbook/manual, video clips to show how to deliver programme.
   - Support around choosing an appropriate group of children for the intervention (peers & pupil)
   - Modelling of process-how to teach the skills successfully
   - As is can be a sensitive topic and there is a potential risk of children expressing views and acting in ways that do not fit with the ethos of inclusion, school staff may benefit from supervisory support from an Educational Psychologist.
   - Advice/support to adapt the intervention for individual pupils and their peers.
   - Follow up sessions/consultations from an EP

4. ‘Are there any aspects of the programme you think could be changed to make it more accessible to schools or improved in anyway?’
   - Importance that the programme is delivered in a flexible way taking into account the views and wishes of target pupils and their families.
   - Structured schedule outlining each session
• Opportunity for staff delivering programme to observe practice – video clips, or establish a ‘centre of excellence’ (accreditation)-Resource Provision Schools as potential centre?
• Need to be adapted during implementation in response to issues that may arise.
• Thinking about how a targeted cohort could be included in all aspects of the programme
• how the programme could be adapted to promote a broader understanding of diversity and the inclusion of pupils with other special educational needs
• Further training for EP team (as potential disseminators) on how to implement intervention with confidence.

5. ‘Is this programme something that you think parents, school staff and the local community would support/find relevant/see as a priority?’

• Yes- the inclusion of pupils with autism is an issue which is frequently raised by parents, school staff and the wider community and parents often keen to get structured support for development of their child’s social skills-preference for peer support over TA support.
• Inclusion of a parent workshop may be useful
• Communicating benefits to peers would be helpful in promoting relevance to parents of peers.

6. ‘What else would you want to know about the programme/do you think schools would want to know?’

• Advice on tailoring the programme in accordance with individual needs
• How it could be developed for older children
• If more than one child could be supported through the approach
• How much time it would take to implement effectively
• Time and cost implications – EP time
• Staffing

Any other comments

• One EP stated it had promoted their thinking around recommendations in EP reports and how to support schools to address this key aspect of effective inclusion better
• Competency profile for Resource Bases-could this be included in those competencies.
Appendix 37: NAS Newsletter Article

NAS Newsletter:

‘Developing Peer Support for Children with ASD in Mainstream Primary Schools’

Nadia Ezzamel, Trainee Educational Psychologist, University of Manchester

The number of children with Autism Spectrum Disorders (ASD) attending mainstream schools has increased considerably in many countries. In the United Kingdom approximately 71% of pupils with ASD attend mainstream settings (Department for Education, DfE 2013).

Parents are often concerned about how their child will cope with the social demands of a mainstream school and peer victimisation can be a frequent worry. A recent national survey revealed 42% of parents reported their child often tells them they are being bullied, with 73% finding break time extremely difficult and in some cases frightening (Kennedy, 2013).

However, many children with ASD express a desire to have social relationships and social support can reduce loneliness (Lasgaard, Nielsen, Erikson & Goossens, 2010) and improve resiliency in individuals with ASD (Humphrey & Lewis, 2008).

The Reciprocal Effects Peer Interaction Model (REPIM) illustrates how the social difficulties of children with ASD can be compounded by a lack of peer awareness and understanding, resulting in reduced quality and frequency of pupil-peer interactions, limited social networks and increased bullying and social rejection (Humphrey & Symes, 2011). This isolates the pupil with ASD and reduces motivation for social contact resulting in reduced opportunities for peers to learn about ASD.

The model highlights the importance of developing understanding within the peer group to promote positive peer attitudes alongside teaching social skills to pupils with ASD.
The Reciprocal Effects Peer Interaction Model (REPIM) (Humphrey & Symes, 2011)

Researchers in the field (Campbell & Barger, 2014) argue interventions need to include three types of information messages; descriptive (highlights similarities between pupil and peers), explanatory (causal information about a pupil’s needs) and directive (teaching peers strategies about how to interact effectively with pupils with ASD) to promote positive peer attitudes and behaviour.

The Current Study:

The current author developed and delivered a peer support intervention to promote the social inclusion of a Year 3 pupil with ASD in a mainstream primary school, in collaboration with school staff. The intervention incorporated the three types of information messages.

The researcher and class teacher delivered 2 awareness raising sessions about what it might be like to have difficulties communicating and playing with others, and talked about the strengths and difficulties of the pupil with the pupil’s class. A peer network was then set up for the pupil with 5 peers. The group met weekly for 6 weeks with the researcher and a Teaching Assistant to practice key skills to help the peers interact with the pupil more effectively. The skills included; gaining others attention, sharing, using simple language and resolving conflicts. Two ‘News Reporters’ from the group fed back to the rest of the class about the skills they had learnt on a weekly basis.

The researcher conducted playground observations before the group began, after the group ended and at follow up. The researcher interviewed the pupil, Teacher and Teaching Assistant and conducted a group interview with the network peers.

Key findings:

Although this was a small study, the findings indicate promising outcomes of the intervention for the pupil including;

- Positive changes in the pupil’s ability to initiate interaction with his peers and respond to their efforts
- Increased ability to take turns and participate in other group activities in the classroom.
- Increased ability to regulate his emotions with the support of his peers and an increased sense of empathy were reported.
- Information collected from the pupil illustrated that he enjoyed participating in the intervention.

Positive outcomes for the peers included;

- Enjoyment in participation
- Increased understating and acceptance of the pupil’s needs and increased skills to interact with him.
• Peers described that they enjoyed the group, having the opportunity to get to know each other and play together, were better at gaining the attention of others, listening, sharing and regulating their own emotions.

One concern raised by staff was the sense of ‘exclusivity’ of the group and potential ‘feelings of exclusion’ of the wider class even though efforts were made to include them. School staff felt that the impact would be greater if the intervention was adopted as a whole school policy so that there is consistency among staff within school to support the implementation of the intervention and that other children would benefit from the framework.

It is hoped this small scale study has contributed to the initial development of an innovative intervention to support the social inclusion of pupils with ASD in mainstream school settings.

For any further information or to discuss the research findings please contact:

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References


With ‘Schools Autism Awareness Week’ taking place this week and ‘World Autism Awareness Week’ fast approaching, it is an ideal time to reflect on how raising awareness of Autism Spectrum Conditions (ASC) can be introduced within mainstream schools. Statistics show that children with ASC are more likely to experience social rejection and bullying than their mainstream peers and children with other Special Educational Needs. The Reciprocal Effects Peer Interaction Model (Humphrey & Symes, 2011) highlights the importance of developing peer understanding alongside teaching pupils with ASC social skills to promote social inclusion.

Recent studies show the positive outcomes of promoting understanding of ASC within the peer group. Some researchers within the field state that providing information to peers about a pupil’s needs will help peers understand that the pupil’s behaviours/difficulties lie outside of their control and may support them to be more positive in including them. Additionally interventions such as ‘Circle of Friends’ that include opportunities for peers to problem solve strategies for social inclusion with the pupil with ASC have shown positive outcomes.

This year the National Autistic Society has launched a big campaign to promote awareness raising of ASC and has produced assembly and lesson materials for primary and secondary schools. Although awareness strategies are important in promoting positive peer attitudes, research also shows that teaching peers’ key skills to enable them to interact successfully with pupils with ASC alongside awareness raising strategies are needed. The ‘Saturation Model’ (Morewood, Humphrey & Symes, 2011) is a good example of how whole school awareness raising activities can be supplemented by more formalised peer support strategies in the context of a mainstream secondary school.

The current author has developed a peer support intervention for use in mainstream primary schools, which aims to raise awareness of ASC and teach peers key skills to interact with pupils with ASC. The initial piloting of this intervention has shown promising outcomes and was well received by school staff. It is hoped that this model of intervention will be piloted again in the near future.
When introducing peer support interventions it is important to plan collaboratively with pupils, parents and staff so that the intervention is individualised and issues such as pupils' awareness of their own diagnosis, parents' views and staff awareness of ASC can be managed sensitively.

Nadia Ezzamel (Educational Psychologist in Training & Dr Caroline Bond (University of Manchester)

Please contact Nadia for further information about the project.

References


National Autistic Society Awareness Raising Materials

Appendix 39: Presentation at SENCo Conference

Developing Peer Support for Children with ASD in Mainstream School Settings

3rd of March 2016
Nadia Ezernel, Educational Psychologist in Training

Session Aims

- To consider the impact of a lack of peer support for children with ASD
- To explore how different models of peer support can be introduced in mainstream school settings

The Current Context

- The number of children with ASD attending mainstream schools has increased considerably with 71% attending such settings (Department for Education, 2011).
- Although attending mainstream settings may have a range of benefits, findings within the literature highlight some of the negative experiences pupils with ASD often face in mainstream schools including increased risk of bullying & rejection in peers (Lappasbi & Napier, 2012; Humphreys & Symes, 2010; Jones & Frischknecht, 2010).
- A national autism survey reported that 42% of parents said their child sometimes/often felt lonely and 73% finding it all time "extremely difficult" and in some cases "terrifying" (Kennedy, 2013).

- Peer victimisation has been linked to anxiety, depression and loneliness in children with ASD (Storch et al., 2012).
- Additionally many children with ASD express a desire to have social relationships and social support can reduce loneliness (Lassgaard, Nielsen, Eriksson & Goosens, 2010) and improve resiliency in individuals with ASD (Humphreys & Lewis, 2008).

A Theoretical Model of Pupil-Peer Interaction

Calls to address this area have been raised by organisations including the National Autistic Society,

"Schools should develop and expand the range of services and approaches designed to facilitate the social inclusion of children with ASD including Circle of Friends and buddy clubs" (Barnard, Broach, Potter & Prior, 2002, p26).
It is unrealistic to expect that children without autism, rooted in biology and culture, can shed their self-consciousness and convertability to imagine the world through autistic eyes. Yet giving autism a greater dialogic space in the school curriculum may enhance the perspective taking skills and nurture the creative potentialities of all children in inclusive classrooms' (Ochs, Kremer-Sadlik, Solomon & Sirota, 2001, p.116).

The understanding premise of the RPPM stems from attribution theory (Winnicott, 1986), where providing information about a pupil’s difficulties is assumed to help peers understand that the pupil’s difficulties lie outside their control which can potentially increase empathy and inclusion.

Developing Peer Understanding
- Experimental studies have explored the impact of different information messages on peer understanding. A combination of descriptive (highlights similarities) and explanatory information (causal explanation) was found to improve peer attitudes & behavioural intentions towards a pupil with ASD (Campbell et al., 2004).
- In schools where there is an open dialogue with peers around a pupil’s needs, improved social inclusion has been reported (Ochs, Kremer-Sadlik, Solomon & Sirota, 2001).
- Studies using the Circle of friends approach have shown the whole class session, has been particularly effective in promoting positive peer attitudes and behaviour (Frendahl-Evans, Warren & Turner, 2005; Gunn, 2000; Whittaker, Bennett, Jiv, Potter & Thomas).

Why is it important to develop understanding of ASD as a whole school agenda?
- “Students with autism ask teachers to step into their world”
  https://www.youtube.com/watch?v=31th
- National Autism Awareness Week
- World Autism Awareness week: 2nd-8th April

Awareness Raising Resources
- New materials developed by the National Autistic Society
  http://www.autism.org.uk
- Materials for pupils Years 5–7 from the Autism Education Trust
  http://www.autismeducatustrust.org.uk/resources/autism%20pe ers/year5year7/coachingaspergers.aspx
- Video Clips
  “Marvellous Max”
  http://www.youtube.com/watch?v=wc7YR8sM_2c
  “My Autism and Me” (BBC)
  http://www.youtube.com/watch?v=-zjWMP1HSOG

"What do you currently do within your school to promote awareness/understanding of Autism?"
"What is your diversity awareness approach?"
Peer-mediated Interventions

- Kasari, Rotheram-Fuller, Locke & Cullum, (2012)
  Taught peers specific skills around how to engage in interactions with pupils with ASD and conflict resolution strategies; and this was found to be more effective than a child-assisted intervention (teaching the pupil with ASD social skills) and resulted in positive effects on the ASD pupil’s social networks, social skills, and isolation during playtime.

- Owen-DeShner, Carr, Cale & Blakeley-Smith, (2008)
  A peer training intervention focusing on outside play found an increase in peer imitations and pupil initiations and responses.

Is awareness raising enough?

- Although peer awareness is important, these activities may not be sufficient to change peers’ interactions with pupils with ASD (Campbell & Barjer, 2014).
- Peer-mediated interventions (PMI) can enhance awareness raising by incorporating the delivery of directive information messages such as teaching peers key strategies about how to interact effectively with pupils with ASD.
- There is promising evidence demonstrating the success of PMI on the social interaction of pupils with ASD (Chan et al., 2009; Watans et al., 2015; Zhang & Wheeler, 2011).

Benefits and Drawbacks of PMI

- Clear advantages in comparison to adult-mediated approaches (Kasari, Rotheram-Fuller, Locke & Cullum, 2012)
  Generalization does not need to be planned for as pupils interact directly with peers (Rogers, 2009).
- Peers as intervention agents reduces the demands on school staff (Chan et al., 2009).
- Peers may benefit from increased confidence, greater understanding of diversity, academic and social gains and satisfaction in helping others (Jones, 2007; Kamp et al., 1998).
- However, ethical concern with regards to the responsibility placed on peer participants and exposure to challenging behaviours have also been raised (Parsons, Goldberg, MacLeod & Jones, 2009).

Knowledge Gap

- Previous studies have not focused on incorporating all three types of information messages (descriptive, explanatory and directive) as a basis for intervention.
- Failed to seek the views of pupils’ experience of interventions.
- Not delivered interventions in collaboration with schools and addressed the applicability of interventions within the school context (Kasari & Smith, 2013; Zhang & Wheeler, 2011).

The Current Study

- Mainstream primary school
- Year 3 pupil who had a diagnosis of ASD, no statement/EP, spent all time educated in classroom with peers.
- Pupil wanted to interact with peers, but did not know how to do so appropriately. Although peers were supportive to some extent, they did not have the necessary skills to interact with him successfully.
- His play at break time could be solitary, despite his interest in wanting to engage. He was reliant on an adult scaffolding interactions with peers.
Overview of the Intervention

- **2 Whole class awareness raising sessions:**
  Delivered in collaboration with class teacher incorporating the delivery of descriptive, explanatory and directive information messages.

- **6 Peer network sessions:**
  Key skills taught to 5 peers and pupil (directive information) during group sessions to support them to interact more effectively, with a particular focus on outside play. Pivotal Response Training used as a framework of core skills to be targeted through the use of activities/games. TA supported sessions.

The Whole Class Sessions

- **First session:**
  - ‘Learning about ourselves and others around us’
  - Focus:
    - What makes us similar and different to each other
    - The brain, what might cause differences, hidden and visible differences
    - Everyday activities, what is might be like to have difficulty talking to others, understanding others, thinking differently, sensory differences.

- **Second session:**
  Based on CoF class session; exploring pupil’s strengths and difficulties, circles of relationships, problem solving strategies of how we can help pupil.

Skills taught

- Gaining attention of others and paying attention
- Helping our friends join in play by giving choices (choice cards)
- Helping our friends understand us and helping them talk to us
- Taking turns
- Praising others, winning and losing
- Conflict resolution

The Peer Network Sessions

- **Set structure to session, circle time, review of skill learnt the previous week, introduction of new skill through problem solving stories, use of new skill within game, how would use new skill.**
  - Children encouraged to take ownership – came up with group name, rules, two pupils fed back to the class each week about the skills learnt through ‘News Reporter’ roles.
  - Use of role play, modelling, visual cue cards to teach new skills
  - Pupils made own resources to use in school

Measuring the outcomes of the intervention

- **Playground observations**
- **Interviews with Teacher and TA**
- **Interview with Pupil**
- **Focus Group with Peer Network Volunteers**

Key Findings

- Although this was a small study, the findings indicate promising outcomes of the intervention;

  For the pupil:
  - Positive changes in the pupil’s ability to initiate interaction with his peers and respond to their efforts
  - Increased ability to take turns and participate in other group activities in the classroom.
  - Increased ability to regulate his emotions with the support of his peers and an increased sense of empathy were reported.
  - Information collected from the pupil illustrated that he enjoyed participating in the intervention.

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Positive outcomes for the peers included:

- Increased understanding and acceptance of the pupil’s needs and increased skills to interact with him.

- Peers described that they enjoyed the group, having the opportunity to get to know each other and play together, were better at gaining the attention of others, listening, sharing and regulating their own emotions.

Issues arising from the study

- ‘Exclusivity of group’, ‘feelings of exclusion’ despite efforts to include whole class.

- Lack of wider staff knowledge of ASD

- Changes of staff at break times, change of teacher when moving year group

- Competing priorities

- Whole school approach advocated

Implications for Schools

- Whole school v small group interventions

- Involving wider class

- Terminology used

- Support from external professional to initially set up intervention

References


Thank you for listening!
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Appendix 40: SENCo Feedback Questionnaire

SENCo Conference 3rd March 2016

1. ‘Do you think this in an intervention that is relevant to your priorities as a school?’
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

2. ‘Do you currently use any similar interventions within your school? If so, would you be interested in trialling the use of this programme as an alternative? Is there anything you would need to know to help you decide?’
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

3. ‘On a scale of 1 to 10 how interested would you be in trialling this intervention within your school?’ (with 0 representing ‘not interested at all’ and 10 representing ‘very interested’)

   | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

   ‘What would make it one point higher on the scale?’
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

4. ‘What support or training do you think staff might need to trial this programme?’
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

5. ‘Are there any aspects of the programme you think could be changed to make it more accessible to schools?’
   ……………………………………………………………………………………………………………………………
6. ‘Is this programme something that you think parents, school staff and the local community would support/find relevant/see as a priority?’

7. ‘What else would you want to know about the programme?’

Any other comments

Thank you
Appendix 41: SENCo Feedback Questionnaire – Summary of Key Themes

SENCo Feedback Questionnaire

1. ‘Do you think this is an intervention that is relevant to your priorities as a school?’
   - All SENCos stated that it was a relevant priority.
   - It develops pupil skills and also supports the focus child.

2. ‘Do you currently use any similar interventions within your school? If so, would you be interested in trialling the use of this programme as an alternative? Is there anything you would need to know to help you decide?’
   - Lego Club
   - Circle of Friends
   - Lunch clubs
   - Some stated they were not currently using any specific intervention

3. ‘On a scale of 1 to 10 how interested would you be in trialling this intervention within your school?’ (with 0 representing ‘not interested at all’ and 10 representing ‘very interested’)
   Responses varied from 7-10, with high interest in trialling the programme.
   - 6 SENCos rated this as 10
   - 2 SENCO’s rated this as 8
   - 2 SENCo’s rated this as 7.

   ‘What would make it one point higher on the scale?’
   - More information
   - School to agree

4. ‘What support or training do you think staff might need to trial this programme?’
   - A greater understanding of ASD/knowledge of ASD for all staff including lunch time organisers.
   - How to handle difficult questions
   - Focus on why it is important
   - The theory behind the intervention and how it would work day to day.
   - Information on how to deliver
5. ‘Are there any aspects of the programme you think could be changed to make it more accessible to schools?’

- For a larger number of pupils to be able to access it
- Involving a lunchtime staff member as part of the plan
- More whole class activities

6. ‘Is this programme something that you think parents, school staff and the local community would support/find relevant/see as a priority?’

- Very relevant and supportive
- Parents would appreciate it as they are concerned about their child’s social skills
- Wellbeing of children with ASD is important
- Would sit well within school’s Autism Strategy

**Barriers:**

- Parents view of child’s needs

7. ‘What else would you want to know about the programme?’

- Time and cost implications

**Any other comments**

................................................................................................................................................................................

................................................................................................................................................................................

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................................................................................................................................................................................

Thank you
Appendix 42: Ethics Application

Manchester Institute of Education

Ethical Approval Application Form

This ethical approval application form has been revised to incorporate changes made to the new University Research Ethics Committee (UREC) Form. It has been designed to incorporate prompts for information needed to ascertain whether the proposed research matches MIE’s research template pre-approved by UREC and to facilitate completion of the form to a standard that will allow speedier review, and approvals, by RIC members. Please follow all directions contained in this document.

Please note that the appendices labelled within this application have been added to the overall appendices as follows:

<table>
<thead>
<tr>
<th>Ethics Application</th>
<th>Thesis</th>
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<tbody>
<tr>
<td>Appendix 1</td>
<td>Appendix 7</td>
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<td>Appendix 2</td>
<td>Appendix 30 &amp;31</td>
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<td>Appendix 3</td>
<td>Appendix 26</td>
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<td>Appendix 4</td>
<td>Appendix 29</td>
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<td>Appendix 19</td>
<td>Appendix 12</td>
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<td>Appendix 20</td>
<td>Appendix 13</td>
</tr>
</tbody>
</table>
**SECTION 1: Student Details /Identification of the person responsible for the research**

<table>
<thead>
<tr>
<th><strong>Name of Student:</strong></th>
<th>Nadia Ezzamel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student ID (quoted on library/swipe card):</strong></td>
<td>5856296</td>
</tr>
<tr>
<td><strong>Email Address:</strong></td>
<td><a href="mailto:nadia.ezzamel@postgrad.manchester.ac.uk">nadia.ezzamel@postgrad.manchester.ac.uk</a></td>
</tr>
<tr>
<td><strong>Name of Supervisor:</strong></td>
<td>Caroline Bond</td>
</tr>
<tr>
<td><strong>Supervisor email:</strong></td>
<td><a href="mailto:caroline.bond@manchester.ac.uk">caroline.bond@manchester.ac.uk</a></td>
</tr>
<tr>
<td><strong>Programme (PhD, ProfDoc, MEd, PGCE, MSc, BA etc):</strong></td>
<td>Professional Doctorate in Educational and Child Psychology</td>
</tr>
<tr>
<td><strong>Year of Study</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Full/Part-time</strong></td>
<td>Full time</td>
</tr>
<tr>
<td><strong>Title of Research Project:</strong></td>
<td>‘An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with ASD in mainstream primary schools’</td>
</tr>
</tbody>
</table>
| **Recruitment and Data Collection** | **Start Date:** On receipt of confirmation of ethical approval  
**End Date:** May 2016 |
| **Location(s) where the project will be carried out:** | Within the premises of the 2 participating mainstream primary schools. |
| **Student Signature:** | ![Signature] |
| **Supervisor Signature:** | **Date:** |

** Supervisor signature confirms that the student has the relevant experience, knowledge and skills to carry out the study in an appropriate manner**
SECTION 2: PROJECT DETAILS

(Please write your answers in the boxes provided. Boxes will expand to fit answers as necessary)

1. Aims and Objectives of the Project

1.1 Research Question

State the principal research question(s).

R1: To what extent does a peer network intervention increase the social interaction opportunities of pupils with ASD in mainstream primary schools and are any benefits sustained after a period of 6 weeks?

R2: How do pupils with ASD and their peers perceive participating in a peer network intervention and what are the perceived benefits?

R3: How do school staff perceive the implementation of the intervention and what are the implications for its future development?

1.2. Academic justification
The introduction of the government inclusion policy (Department for Education and Employment, 1997) has lead to a greater number of pupils with ASD being educated in mainstream settings (Keen & Ward, 2004). Although this can bring potential benefits in providing opportunities for social experiences and learning from peers, there have been concerns about the quality of social experiences for children with ASD in these settings (Humphrey & Lewis, 2008). Recent studies have shown pupils with ASD are at increased risk of experiencing difficulties within the peer group and are more likely to experience bullying and receive less social support in mainstream settings (Cappadocia, Weiss & Pepler 2012; Humphrey & Symes, 2010). These experiences have been shown to have negative implications on the emotional wellbeing, educational attainment (Ambitious about Autism, 2013) and later life experiences of individuals with ASD (Storch et al 2012).

Despite accumulating evidence illustrating the difficulties pupils with ASD encounter socially, studies exploring how peer relations can be improved within schools are limited. Some (Ochs, Kremer-Sadlik, Solomon & Sirota 2001) have argued developing peer awareness of ASD is central to contributing to improved acceptance and inclusion. The need for interventions within schools to promote social inclusion has been outlined by the National Autistic Society (Barnard, Broach, Potter & Prior, 2002).

Within existing research there remains a lack of focus on the applicability of interventions within schools, with many implemented by researchers alone rather than in collaboration with school staff (Kasari & Smith, 2013). Utilising aspects from existing literature this study aims to evaluate the introduction of a peer network intervention to support the social inclusion of pupils with ASD in mainstream primary schools. It will examine whether incorporating specific aspects central to developing peer acceptance can be successfully implemented within schools in collaboration with key staff members. The intervention will be conducted within 2 mainstream primary schools.

2. Methodology

2.1 Project Design:
2.2 Data Collection Methods:

Describe the research procedures/activities as they affect the study participant and any other parties involved. Which of the following will your research involve and what will you be asking your participants to do.

2.2.1. Interviews

[ ] Yes
[ ] No
2.2.2. Questionnaires

Yes ☐  No ☒

If Yes, how will these be delivered to and collected from participants? (Append your draft questionnaire(s)):

2.2.3. Observations

Yes ☒  No ☐

If Yes, describe the context for the observation and what participants will be engaged in. (Append copy of any observation framework or other data collection guide to be used):

Structured playground observations of interactions between the target pupils and their peers, pre, post and at follow up, using a structured observation schedule (see appendix 5). This will take place at the usual break time slots during the school day.

2.2.4. Diary

Yes ☒  No ☐

If Yes, describe the context for use of the diary and what participants will be asked to do. (Append copy of the Diary instructions and format):

Target pupils will be required to complete a short daily rating scale pre, during and post intervention of their level of enjoyment of playing with their peers during break time. The names Teaching Assistant for the pupil will support the pupil to complete this (see appendix 6).
2.2.5. Intervention

Yes ✗ No

If Yes, describe the intervention and what participants will be asked to do. (Append a detailed description and any images necessary to support the description):

The intervention will consist of 2 whole class awareness raising sessions for the pupils within the target pupils’ class which will cover similarities and differences among people, and a description of ASD/social communication difficulties (other terminology will be used to describe the difficulties children with ASD experience should the terminology ASD not be felt appropriate by parents and the class teacher). Activities will be used to encourage peers to experience what it may be like to have social interaction difficulties. Discussion around friendships and recruitment of network peers will take place in the second session. The sessions will be delivered in collaboration with the class teacher and the target pupil will be able to attend for all or part of the sessions if felt appropriate and if they wish. If the target pupil is interested themselves in discussing their own needs/strengths/views during the whole class sessions they will be supported to do so following liaison with parents and school. Please see appendix 7 for a brief overview of the whole class sessions.

Following recruitment of peer volunteers 6 peer network group sessions will be conducted. Within these sessions skills from the pivotal response training framework will be targeted through informal play activities to teach/support peers to engage with pupils with ASD (see appendix 8 for an outline of skills). The target pupil will be present for the peer network sessions, but will not attend the first part of the first session to allow the researcher to tune the peers into the purpose of the group and allow them to facilitate the peers ideas/expertise and feelings they may wish to discuss. Please see the appended documents for a brief description of the content of the whole class and group network sessions.

2.2.6. Assessments

Yes ✔ No ✗

If Yes, give full details of the assessment(s) and what participants will be asked to do. (Append a copy of the assessment schedules to be used):
2.2.7. Other

Yes [ ] No [x]

If Yes, complete the VASTRE documentation - Available from:
http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/stillimageresearch/

2.2.8. Does data collection use video or still image?

Yes [ ] No [x]

2.2.9 Research Experience

I am currently in my first year of training as an Educational and Child Psychologist. Prior to this I have worked with children and young people with ASD for 7 years in various educational and community settings. I have planned and delivered autism awareness training to professionals working in early years settings.

I have received training in conducting semi-structured interviews as part of the research component of the Doctorate in Educational and Child Psychology. Some specific training has also been received in carrying out thematic analysis which I have put into practice already for a short research project.

2.3 Sampling

What type of sampling method do you propose to use?

2.3.1. Statistical

Yes [ ] No [x]
2.3.2. Other

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Opportunistic sampling: as a result of contacting schools that may be interested and meet the inclusion criteria as identified by the EPS/LA at the researcher’s placement. Once ethical approval has been gained an initial letter detailing the purpose, process of the research and criteria for participation (see appendix 9) will be sent to mainstream primary schools who the Educational Psychology Team feel may be interested in developing their inclusion/ASD practice.

2.4 Analysis method

What type of analyses do you propose to use to explore this data?

2.4.1. Quantitative analyses

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If Yes, please give details:
Quantitative analyses will be conducted through use of descriptive statistics using the data from the playground observations allowing comparison pre, post intervention and at follow up, reference will be made to frequency and percentage tables. Descriptive statistics will also be used to analyse the information from the pupil rating scales.

2.4.2. Qualitative analyses

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Data from the pupil interview, school staff interviews (TA & Class Teacher) and focus groups will be analysed using the six-stage thematic analysis process developed by Braun & Clarke (2006). The six stages comprise of: familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report.
2.5 Ethical Issues

**Briefly state the main ethical issues raised by the methodology outlined above.**

**For the target child:** Parents of the target child will be given an information sheet (appendix 10) and required to sign a consent form to give permission for their child to participate in the research project (appendix 11). The content of the whole class awareness raising sessions may evoke particular feelings/views, (e.g. some children may not be aware of their own diagnosis, parents may not want the terminology ASD to be used with peers) therefore the more specific elements of content and terminology used during these sessions will be decided upon in collaboration with the target pupils parents and school staff. The purpose of the intervention will be clearly communicated to parents and school before the process begins. The decision to include the target pupil in the whole class sessions will be decided upon by the parents and school taking into consideration the content of the sessions and the interest of the target pupil in attending, or even in contributing to the content themselves if they show a particular desire to. Assent will be obtained from the target child for the whole class sessions to take place. A child friendly information sheet (appendix 12) will also be read to the pupil before assent is obtained and the pupil will also have the opportunity to complete a child consent form appendix 13) if appropriate. The intervention will only take place in schools where the target child has given informed assent and parental consent has been obtained.

For some young people with ASD a social situation like an interview may cause anxiety and stress. A short interview will only be conducted with the target pupils if they are able to give informed assent to participate, fully understand the purpose of the interview and can be supported through the interview with the use of visual supports (e.g. timeline outlining how many questions there are/structure of session) or supported to help aid their receptive/expressive communication (talking mats, visual symbols to indicate they want a break/want the interview to stop etc). It is also acknowledged that if break time is a part of the school day they find particularly stressful, some negative emotions may arise during discussion around playtime connected to these experiences. However, it is hoped that the open structure of the questions will allow the participant to control the direction of the discussion, mitigating any risks. Parents will be de-briefed if any issues arise and the named Teaching Assistant for the pupil will be asked to sit in the interview if felt this to be necessary. The interview will not be continued if it is felt the participant is becoming in any way visibly distressed/upset.
3. Participant Details

3.1 Characteristics of participants

Please specify the characteristics of the participants you wish to recruit.

| number | 2 target pupils with a diagnosis of ASD (one from each school), 4-5 peers from the target pupil’s class for participation in the peer networks, a class teacher and teaching assistant from each school to participate in joint |
Vulnerable groups

3.2.1. Will your project include participants from either of the following groups?

(Tick as appropriate)

- [x] Children under 16 in school, youth club or other accredited organisation.
- [ ] Adults with learning difficulties in familiar, supportive environments
- [ ] NONE OF THE ABOVE (go to item 4.)

3.2.2. Inclusion of vulnerable groups

*Please describe measures you will undertake to avoid coercion during the recruitment stage.*

It will be made clear on the participant information sheets and information sheets for parents of participating children that participation by the school staff, target pupils and peers is entirely voluntary and that participants are free to withdraw without prejudice at any point (i.e. before, during or after data collection).

3.2.3. Research in UK with vulnerable groups

Please confirm you have relevant clearance for working with vulnerable groups from DBS and/or other relevant sources.

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<tr>
<td>Other</td>
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3.2.4. Please confirm that you will notify the Administrator for Ethics and Fieldwork (AEF) immediately if your DBS status changes.

I will immediately notify the AEF if my DBS status changes  

X  

NA  

4. Recruitment

4.1 Permissions
Do you have permission to collect data from an organisational fieldwork site from...

4.1.1. The organisation where the research will take place
(e.g. School head etc)? Yes  

NA  

4.1.2. Sub-settings within the organisation (e.g. class teacher etc)? Yes  

NA  

If Yes, append letter/email confirming access to this application

If NA, please explain why permission is not applicable.

Permission has not yet been sought as participating schools will not be ascertained until Sept-Oct 2014 when the researchers' placement location has been confirmed and after ethical approval has been obtained.
4.2 Participant recruitment

4.2.1. How will your pool of potential participants be identified? (tick all that apply)

- Letters/emails and follow up phone calls to organisations
- Posters/Advertisements
- Website/Internet (including Facebook/other social media)
- Known or named client groups (students, etc.)
- Networks and recommendations
- Person in a position of authority in organisation
- Directory/database/register in public domain

Describe the nature of these routes to identify your pool of potential participants.

Following confirmation of the researcher’s placement and ethical approval, the researcher will liaise with the EPS within the LA regarding contacting potential mainstream primary schools the team is aware of that may be interested in developing their inclusion/ASD practice. Initial scoping letters (appendix 5) containing information about the purpose of the research and process will be sent to these schools, from which 2 schools will eventually be selected based upon the inclusion criteria outlined (appendix 1).

4.2.2. Who will the potential participants be?

- Persons unknown to the researcher
- Client groups (students, etc.) within an organisation known by the researcher
- Persons accessed through networks and recommendations
- Persons nominated by a position of authority
- Other (describe here):
4.2.3. How will you approach potential participants? (tick all that apply)

Indicate whether there is any existing relationship between yourself and the source/group of potential participants.

None.
Indicate how information about your study will be delivered to potential participants and how they will (directly or indirectly) let you know they would like to take part in your research.

Following obtaining potential participating schools, (through school information letter) target pupil’s parent identified as possible candidates will be provided with a parent information sheet (appendix 10 and child-friendly information sheet (appendix 12) that will explain what the research entails in more detail. Parents can read this to their children and give them time to think about whether they would like to be involved If both parents and participants would like to opt into the study, they will let me know via the school and parents will then be required to sign written consent (appendix 11) before the pupil’s assent will be sought. The pupil will also be given a child friendly consent form (appendix 13) to complete if appropriate. If they require further information, a meeting can be organised, at their convenience, for both parents and pupils to ask any questions. Parents of peers within the pupils class will receive an opt out letter (appendix 14) describing the purpose of the whole class awareness raising sessions and opportunity to withdraw their child from this if preferred. Parent’s of peers that have volunteered to be part of the network and subsequently selected will be sent information letters (appendix 15) and written parental consent will need to be obtained (appendix 16) before participation in the group sessions and focus group interview. A child friendly information sheet (appendix 17) and consent form (appendix 18) will be provided for network peers. The class teachers and TAs involved will also be given an information sheet (appendix 19) and consent form to sign (appendix 20) before participation.

4.2.4 How will you ensure those interested in the research are fully informed about the study and what will be expected of them if they take part?

Append text of letters / emails / posters / advertisements / presentation etc
Information giving will be undertaken through:

Information giving will be undertaken by:

- [X] the researcher
- someone in a position of authority
- a neutral third party to known or named client groups
- Other (describe here):

Provide details on how you will fully inform potential participants about your study:

See above.

4.2.5 Information accessibility

Information sheets are clearly and appropriately worded. However, if participants need the information presented in an alternative format (e.g. less text, visual supports) then this will be accommodated. A child friendly information sheet can also be read to participating pupils by their parents, teachers and/or the researcher. Participants (adult & parents on behalf of pupils) will receive the information at least two weeks in advance of the different stages within the research intervention e.g., the whole class session and group network, so that they have the chance to process and consider the information given. Participants will be able to ask any questions about the research in person, over the phone (at office base) or by email.

Please confirm:

- [X] I have supplied information relevant to each participating group
- [X] The information provided follows the guidance provided in the University of Manchester Participant Information Sheet Template
4.2.6 Decision period

How long will the participant have to decide whether to take part in the study? *If you are proposing a decision period of less than 2 weeks, full justification for this approach should be given*.

At least two weeks for all participant groups within this study (school staff, pupils with ASD & peers).

4.2.7 Incentives

State any payment or any other incentive that is being made to any study participant. *Specify and state the level of payment to be made and/or the source of the funds/gift/free service to be used and the justification for it.*

N/A

4.2.8 Avoiding coercion

It will be made clear on participant information sheets that participation is entirely voluntary and that participants are free to withdraw without prejudice at any point (i.e. before, during or after data collection).

Pupils and their parents and school staff (Teacher & Teaching Assistant) will be informed that they are under no obligation to participate in the research and that they will experience no prejudice or preference as a result of decision to participate or not. They will also be told that they are free to withdraw at any point without any explanation or prejudice. If the target pupil is unable to give informed assent due to limited speech/poor understanding they will be excluded from consideration in the project.

4.3. Consent

4.3.1 How will participants’ consent to take part be recorded?
Please confirm:

X My consent taking procedures are relevant to each participating group

X The consent taking procedures follow the guidance provided in the University of Manchester Consent Form Template

4.3.2 Special arrangements

Please outline any special consent taking arrangements relevant to your research study.

Following obtaining parental consent, assent from target pupils will be sought prior to the whole class awareness raising sessions and the purpose of the class sessions and network sessions will be made clear to the pupil, parents and school. Assent will be ascertained from peers who volunteer to take part in the network group and peer focus group interview in addition to parental written consent.

5. Participation in the research

5.1 Duration
How long will each participant be expected to take part in activities?

Whole class sessions: 2 x 1hour sessions for all pupils within the target pupil’s class (target pupil may be present depending on their preference and preferences of their parents and school). The sessions will be delivered in conjunction with the class teacher.

Peer network sessions: 6 x approximately 30-45 minute sessions where peers will be taught strategies to engage effectively with the target pupil through the use of a range of play activities. The target pupil will participate in all the sessions, but will join the first session part way through to enable the researcher to tune the peers into the purpose of the sessions focus on the peers’ knowledge of the target pupil and expertise about what strategies they feel may help before the target pupil joins the group.

Focus group interviews: the peer network members will participate in a focus group interview about the impact of the intervention and what they perceive the benefits of the intervention to be for themselves. The duration of the focus group will depend on how much information the peers have to share but will go on no longer than 30-45 minutes.

Pupil Interview: the pupil will take part in a short interview the duration of this will depend on how much information the pupil has to share, but will not last longer than 30 minutes.

Observations: structured playground observations will occur at three time points during the research, pre intervention, post intervention and 6 weeks later at follow up. The observations will occur for 15 minutes over 2 different days during each of the 3 stages.

5.2 Benefits to participation

Are there any benefits to participation for participants (beyond incentive noted above)?

The intervention aims to help improve the social experiences of children with ASD that may be having difficulty socially within school, therefore it is hoped that involvement in the intervention will increase opportunities for positive social interactions for the target pupils. The intervention aims to help peers better understand the pupil with ASD and gain strategies to interact more effectively with them.

The process will enable children (target pupils and peers) to have their views considered about the impact of the intervention from their perspective and to aid in the development of the intervention for future use.

5.3 Deficits to participation


Will any benefit or service otherwise received by participants be withheld (e.g. pupil misses lesson, or part thereof) as a consequence of taking part in this study?

The group network sessions will take place at a time most convenient with the school and be negotiated to ensure that pupils participating will miss as little lesson time as possible. The target pupil interviews and peer focus groups will also take place at an appropriate time during the school day.

The teacher and TA interviews will take place at a time arranged with school to ensure there is sufficient time to conduct the interviews effectively and ensure this is at a time convenient with them. This may mean the interviews may take place at the end of the school day eg 4pm.

6. Risks and Safeguards

Please outline any adverse effects or risks for participants in respect of the methods you have indicated in Section 2B [Interview; Questionnaire; Interventions; Assessments; Observation; Diary keeping; Other activity]

6.1 Physical risks
6.1.1 Potential

What is the potential for adverse effects of a physical nature; risks or hazards, pain, discomfort, distress, inconvenience, or change in lifestyle / normal routine for participants?

Risk assessments of the rooms used will be completed to ensure the location for the group network and interviews are suitable.

Where it is identified that a target pupil may become anxious as a result of changes eg to school day/routine due to the group, planning with school and parents will take place to ensure the target pupil is prepared for the group sessions (eg use of social stories, schedules etc).

6.1.2 Safeguards
6.2 Psychological risks

6.2.1 Potential

Will any topics discussed (questionnaire, group discussion or individual interview) potentially be sensitive, embarrassing or upsetting, or is it possible that criminal or other disclosures requiring action could take place during the project?

Whole class sessions: may contain some sensitive information regarding the target pupil’s needs however this will depend on what parents and the pupil want to be shared and the terminology they would like to be used eg (whether parents want ASD to be mentioned or just a description of the difficulties-eg interaction/communication difficulties). This will be planned with parents and school before the sessions take place.

There is a very small possibility that discussing the impact of the group with the target child in an individual interview may be upsetting for the young person depending on their experience of social times with their peers. The named TA for the pupil will be present is felt necessary as a familiar person for the pupil, and appropriate debriefing will be given. The interview will not be continued if it is apparent that they target pupil is becoming upset/distressed.

6.2.2 Safeguards
What **precautions or measures** have been taken to minimise or mitigate the risks identified above?

Participants will be reminded prior to interview what to do if they get upset and of their right to withdraw at any point. The use of open questions and a collaborative approach to interview will allow participants to control the direction of the interview and help avoid any potentially upsetting situations. Visual supports will be used where necessary to support the pupil’s receptive language levels and ability to express themselves and any needs (e.g., if they want a break/want to stop the interview). The pupil’s named Teaching assistant will be present during the interview if felt appropriate and following the interview to talk through any issues raised. All transcripts and quotes included from the interviews in the university assignment will be fully anonymised.

Participants will be made aware that although anonymity can be assured, confidentiality may be breeched under certain circumstances (re if a disclosure is made than needs to be addressed).

---

**6.3 Risks for you as researcher**

It is important that the **potential** for adverse effects, risks or hazards, pain, discomfort, distress, or inconvenience, of a physical or psychological nature to **you** as the researcher have been assessed. **This is a requirement by law.** Risks to you are **identified as part of the RREA/FRA process.** Ensure this assessment has been completed by either:

a. a completed and approved Fieldwork Risk Assessment (FRA), or
b. a signed Low Risk Fieldwork Declaration in Section D of RREA form.

Briefly state here the conclusions of your assessment and append a copy of your approved FRA form (if required), in addition to your RREA, to this application.

Please see appendix 21 for the RREA completed form.

---

**6.4 Early termination of the research**

**6.4.1 Criteria**
Although not anticipated, the research will be terminated early if participants become unduly distressed or if the intervention is causing any negative effects. Researcher indisposition will also terminate the research.

6.4.2 **Please confirm**, by ticking here, that:

- [x] any adverse event requiring radical change of method/design or abandonment will be reported in the first instance to your research supervisor and then to the MIE RIC Chair

---

**7. Data Protection and confidentiality**

**7.1 Data activities and storage of personal data**

Will the study use any of the following activities at any stage?
7.2 Confidentiality of personal data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>Electronic transfer by email or computer networks</td>
</tr>
<tr>
<td></td>
<td>Use of personal addresses, postcodes, faxes, e-mails or telephone numbers</td>
</tr>
<tr>
<td>x</td>
<td>Publication of direct quotations from respondents</td>
</tr>
<tr>
<td></td>
<td>Publication of data that might allow identification of individuals</td>
</tr>
<tr>
<td>x</td>
<td>Use of audio/visual recording devices</td>
</tr>
<tr>
<td></td>
<td>Sharing data with other organisations</td>
</tr>
<tr>
<td></td>
<td>Export of data outside EU</td>
</tr>
</tbody>
</table>

Will the study store **personal** data on any of the following?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>Manual files</td>
</tr>
<tr>
<td>x</td>
<td>Home or other personal computers</td>
</tr>
<tr>
<td></td>
<td>Laptop computers</td>
</tr>
<tr>
<td></td>
<td>University computers</td>
</tr>
<tr>
<td></td>
<td>Private company computers</td>
</tr>
<tr>
<td></td>
<td>NHS computers</td>
</tr>
</tbody>
</table>

7.3 Research monitoring and auditing

Please confirm:
The student researcher’s supervisor(s) will monitor the research.

If other arrangements apply please specify:

7.4 Data Protection

Please provide confirmation that you will employ measures that comply with the Data Protection Act and the University Data Protection Policy (UDPP)?

**Data Protection Act**: I confirm that all Data collected will be:

- [X] Fairly and lawfully processed
- [X] Processed for limited purposes as outlined in this application
- [X] Adequate for the purpose, relevant and not excessive
- [X] Accurate
- [X] Not kept longer than necessary
- [X] Processed in accordance with the participant’s rights
- [X] Secure – on an encrypted storage device
- [X] Only transferred to other settings with appropriate protection.

**University Data Protection Policy** (UDPP): I confirm

- [X] My data and its storage will comply with the UDPP
- [X] Paper copies of data and encrypted storage devices will be stored in a locked draw or cupboard

For UG research: On completion of my research, the data will be kept until the study has been completed and will then be shredded/destroyed.
For PGT/PGR research: On completion of my research, the data will be passed to my supervisor for archiving at the University for a period of 5 years after which it will be shredded/destroyed

7.5 Privacy during data analysis Please confirm:

- Analysis will be undertaken by the student researcher
- Analysis will take place in a private study area

If other arrangements apply please describe:

N/A

7.6 Custody and control of the data Please confirm:

- The student researcher’s supervisor will have custody of the data
- The student researcher will have control of the data

If other arrangements apply please describe:

N/A

7.7 Access to the data

- The student researcher will have access to the data
- The student’s supervisor(s) will have access to anonymised data
7.8 Use of data in future studies

Will the data be stored for use in future studies?  Yes  No X

If Yes, confirm this is addressed in the information giving/consent taking process by ticking here.

8. Reporting Arrangements

8.1 Dissemination

How do you intend to report and disseminate the results of the study?

(Tick all that apply)

X Peer reviewed scientific journals
Book / Chapter contribution
Published review (ESRC, Cochrane)
Internal report
X Conference presentation
X Thesis/dissertation
Other e.g Creative works (describe here):

8.2 Participant and community feedback

How will the results of research be made available to research participants and communities from which they are drawn? (Tick all that apply)
9. Research Sponsorship

9.1 External funding

Are you in receipt of any external funding for your study? (tick one)

- [ ] External Funding
- [x] No external funding

If you have funding please provide details:

<table>
<thead>
<tr>
<th>Organisation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Contact</td>
<td></td>
</tr>
<tr>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Sponsoring organisation

Who will be responsible for governance and insuring the study? (tick one)

- [x] The University of Manchester
- [ ] Other organisation
10. Conflict of interest

Have any conflicts of interest been identified in relation to this project? (tick at least one option)

- Payment for doing this research?
  - If so, how much and on what basis?

- Direct personal involvement in the research of a spouse/funder?
  - If so, please provide details:

- Does your department/the University receive payment (apart from costs)?
  - If so, please provide details:

X NONE of the ABOVE APPLY

Thank you

This is the end of the form
Please use the checklist below to ensure that you append all necessary supporting documents

**CHECKLIST**

Please tick to indicate whether the document is APPENDED OR NOT APPLICABLE for this application.

<table>
<thead>
<tr>
<th>Documents</th>
<th>Appended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Data collection instruments</strong></td>
<td></td>
</tr>
<tr>
<td>Draft copy of each data collection instrument named in Q2.2</td>
<td></td>
</tr>
<tr>
<td>(Questionnaire, Interview guide, etc)</td>
<td></td>
</tr>
<tr>
<td>Video and Still Image Recording Declaration (VASTRE)</td>
<td></td>
</tr>
<tr>
<td><strong>Participant recruitment</strong></td>
<td></td>
</tr>
<tr>
<td>Letter(s) of permission to conduct research within each organisation</td>
<td></td>
</tr>
<tr>
<td>Recruitment advertisement(s) specified in Q4.2.1 (poster/email/letter/presentation)</td>
<td></td>
</tr>
<tr>
<td>Participant Information giving – one for each participant type specified in Q3.1 (Information sheet/letter/email/script)</td>
<td></td>
</tr>
<tr>
<td>Consent taking – one for each participant type specified in Q3.1 (Consent form or alternative procedure)</td>
<td></td>
</tr>
<tr>
<td><strong>Fieldwork risk assessment</strong></td>
<td></td>
</tr>
<tr>
<td>Fieldwork Risk Assessment Form (approved)</td>
<td></td>
</tr>
<tr>
<td>RREA form Low Risk Fieldwork Declaration (Section D) completed</td>
<td>X</td>
</tr>
</tbody>
</table>
### Application for Approval of Minor Amendment to a Research Study

**Details of proposed amendment (please give as much detail as possible)**

<table>
<thead>
<tr>
<th>Supervisor’s signature*</th>
<th>Date.</th>
</tr>
</thead>
</table>

**Supervisor Declaration**

I agree that the amendment proposed does not change the character of this research or the participant groups.

I confirm that the research risk assessment for the study as MEDIUM remains.

---

Please send applications for amendment to ethical approval for MEDIUM risk research to the Manchester Institute Administrator for Ethics and Fieldwork at ethics.education@manchester.ac.uk who will pass on the request to the RIC member who authorised the original application wherever possible.

---

2 Minor amendments are those that do not alter the character of the research or the participant groups
Appendix 5  

Playground Observation of Pupil-Peer Interaction

Information for administering schedule

During the pre, post and follow up observation stages the researcher will observe the target pupil and their peers during playtime across 2 separate days. Each observation will take place over a period of 15 minutes, where the researcher will observe for 40 seconds and code for the following 20 seconds. The observation schedule will collate information about the engagement state of the target pupil and the frequency of initiations and responses of the target pupil and their peers. Network peers will be distinguished from other peers by use of an asterix when recording.

a) Engagement state of target pupil/child: taken from the Playground Observation of Peer Engagement as described in Kasari, Locke, Gulsrud & Rotheram-Fuller, (2011). The engagement states will be summed into total interval counts to yield a total percentage of intervals in each engagement state.

<table>
<thead>
<tr>
<th>Engagement State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solitary/isolated</td>
<td>Child plays alone, with no peers within 3 feet and no mutual eye gaze with other children</td>
</tr>
<tr>
<td>Proximity</td>
<td>Child plays alone within 3-foot range of peer</td>
</tr>
<tr>
<td>Onlooker</td>
<td>Child has one-way awareness of child who is farther away than 3 feet. It appears the child is watching another child or group of children or a game with interest or the intent to participate</td>
</tr>
<tr>
<td>Parallel</td>
<td>Child and peer are engaged in a similar activity but there is no social behaviour</td>
</tr>
<tr>
<td>Parallel aware</td>
<td>Child and peer are engaged in similar activity and mutually aware of each other during activity</td>
</tr>
<tr>
<td>Joint engagement</td>
<td>Child and peer direct social behaviour, e.g., offering objects, conversing, toy-taking, and other activities with a turn-taking structure</td>
</tr>
<tr>
<td>Games with rules</td>
<td>Child participates in organized sports such as 4-square, basketball, or handball and/or engages in fantasy or pretend play OR a fantasy game that the child or his/her peers have created provided all children are playing by a set of rules that the children have specified. A game has to be with another child.</td>
</tr>
</tbody>
</table>

b) Initiations & Responses made by Peers & Target Pupils

The frequency of initiations and responses will be calculated within each observed interval.
Social initiations are defined as a positive social behaviour that begins a social interaction with another person eg handing a toy to child, asking the child if they wished to join an activity, offering assistance during play, greeting, questioning or praising the child, or commenting on the child’s activity.

Responses are defined as positive social behaviours made towards a child, that are preceded by a positive social initiation by that child or by a response from that child.

Peers:

Peer initiation: The number of social initiations directed towards the pupil with ASD, record type of initiation made (see key below as used in schedule on following page).

<table>
<thead>
<tr>
<th>NV</th>
<th>J</th>
<th>A</th>
<th>G</th>
<th>Q</th>
<th>P</th>
<th>C</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non verbal (eg, handing toy to child),</td>
<td>Asking child to join activity,</td>
<td>Offering assistance,</td>
<td>Greeting,</td>
<td>Questioning,</td>
<td>Praising Child,</td>
<td>Commenting on play,</td>
<td>Sustaining play/encouraging child.</td>
</tr>
</tbody>
</table>

Peer response: The number of responses by the peer to initiations made by the pupil with ASD including verbal and non verbal responses.

Note * for recording network peers’ (trained peers) initiations and responses at post intervention and follow up observations. The data for the ‘trained’ and ‘untrained’ peers (other peers) will be pooled.

Target child:

Child initiation: the number of social initiations directed towards peers, record whether this is a positive or negative initiation. Positive initiations would include successful initiations eg where the child directs communication to a peer/peers (e.g. offers toy, greets, asks to play game, comments, states facts, etc) and the peer responds with a nonverbal gesture (e.g. head, nod/shake, follows the child, laughs etc.) or verbal language. Negative (failed) initiation attempts would be where the target child directs communication to a peer/peers and the peer does not respond or ignores the child.

Child response: The number of positive or negative responses made by the child towards an initiation by their peers. An example of a positive response would be when the child says yes when peer asks him to play. An example of a negative (missed) response would be when a peer asks them to play and the child doesn’t respond.

Observation Schedule

<table>
<thead>
<tr>
<th>Time interval</th>
<th>Engagement State</th>
<th>Peer Initiation Tally type</th>
<th>Peer response (+/-)</th>
<th>Child initiation (+/-)</th>
<th>Child response (+/-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1m: 0-40s</td>
<td>N V</td>
<td>J A G Q P C S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2m: 0-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>40s</td>
<td>3m: 0-40s</td>
<td>4m: 0-40s</td>
<td>5m: 0-40s</td>
<td>6m: 0-40s</td>
</tr>
<tr>
<td>-------</td>
<td>-----</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
</tbody>
</table>

**Qualitative Observations**
Appendix 6  

Pupil Rating Scale

A scale of 1-5 will be used depending on the pupils understanding of number (1= did not enjoy, 5 = very much enjoyed). There is also an option for the child to circle ‘did not play with class mates today’.

Date: ____________

How much did you enjoy playing with your class mates at playtime today?

1  2  3  4  5
I didn’t play with my class mates at playtime today

## Appendix 7

### Overview of Intervention

**Table 2: Overview of Intervention**

<table>
<thead>
<tr>
<th>Session</th>
<th>Target audience</th>
<th>Content covered</th>
<th>Type of information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Whole class session</td>
<td>Similarities and differences among students in classrooms. Touch on obvious and hidden disabilities. ASD/SC description: activities illustrating main difficulties: Thinking differently, act differently &amp; communicate differently shown through videos, books, perceptual activities (link to strengths and difficulties of Target Pupil if appropriate).</td>
<td>Descriptive &amp; explanatory</td>
</tr>
<tr>
<td>2.</td>
<td>Whole class session</td>
<td>Discussion of friendships-Circle of Friends friendship/relationship activity for peers and peers do for Target Pupil. How to make friends with pupil with ASD/SC (read book) and discuss/problem solve basic strategies. Introduce purpose of network.</td>
<td>Explanatory &amp; directive</td>
</tr>
<tr>
<td>3.</td>
<td>Peer network session (Target pupil present for part of session).</td>
<td>Introduction with peers to tune them in to purpose of group, opportunities for peers to share ideas/expertise/feelings about Target Pupil. Target pupil present for second half of session where discussion will take place about what each member of peer network likes to do at playtime and what they may need help with/find more difficult at playtime.</td>
<td>Explanatory, directive.</td>
</tr>
<tr>
<td>4-8</td>
<td>Peer network sessions with Target pupil</td>
<td>5 peer network sessions targeting the development of core play skills (see PRT framework) for teaching peers how to interact with pupil with ASD through modelling and joint problem solving during different activities. Use of cue cards to prompt strategies where needed. Peers and pupil to have a slot to feedback to class regarding what they have been working on within the group.</td>
<td>Directive strategies through modelling</td>
</tr>
</tbody>
</table>

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During the playground debrief session. Some skills may be practised on the playground during the session to facilitate generalisation.

Appendix 8 **Pivotal Response Training Framework**

Please see table 3 below for a list of the core skills included in the Pivotal Response Training Framework (as described in Harper, Symon & Frea, 2008). A sixth core skill; conflict resolution has been added by the researcher as it was felt this was an important additional skill that may need to be targeted.

**Table 3: Pivotal Response Training Framework**

<table>
<thead>
<tr>
<th>Core skill</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gaining attention</td>
<td>How to engage/communicate with pupil, getting down to child’s level, short instructions/use of gesture/visuals to gain initial attention.</td>
</tr>
<tr>
<td>2. Varying activities</td>
<td>Learning to give Target Pupil choice of activity with cue cards/choice boards tailoring this to pupil’s needs etc</td>
</tr>
<tr>
<td>3. Narrating play/commenting</td>
<td>Showing Target pupil how to play through/modelling play and commenting.</td>
</tr>
<tr>
<td>4. Reinforcing child’s attempts</td>
<td>Teaching peers how to give positive praise to target pupil.</td>
</tr>
<tr>
<td>5. Turn taking</td>
<td>Sharing; how to prompt the target pupil to turn take appropriately</td>
</tr>
<tr>
<td>6. Conflict resolution</td>
<td>How to respond to the target pupil’s inappropriate or challenging behaviour/how to react during a conflict.</td>
</tr>
</tbody>
</table>
Appendix 21: Ethics: Research Risk and Ethics Assessment (RREA) Form

RESEARCH RISK AND ETHICS ASSESSMENT
Manchester Institute of Education, University of Manchester

To be completed by AEF administrator

<table>
<thead>
<tr>
<th>RIA reference</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date received</td>
<td>Date approved</td>
</tr>
</tbody>
</table>

SECTION A - SUMMARY OF RESEARCH PROPOSAL
This section should be completed by the person undertaking the research.

<table>
<thead>
<tr>
<th>A1. Name of Person/Student:</th>
<th>Nadia Ezzamel</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2. Student ID (quoted on library/swipe card):</td>
<td>5856296</td>
</tr>
<tr>
<td>A3. Email Address:</td>
<td><a href="mailto:nadia.ezzamel@postgrad.manchester.ac.uk">nadia.ezzamel@postgrad.manchester.ac.uk</a></td>
</tr>
<tr>
<td>A4. Name of Supervisor:</td>
<td>Caroline Bond</td>
</tr>
<tr>
<td>A5. Supervisor email address &amp; contact phone no.:</td>
<td><a href="mailto:caroline.bond@manchester.ac.uk">caroline.bond@manchester.ac.uk</a></td>
</tr>
<tr>
<td>A6. Programme (PhD, ProfDoc, MEd, PGCE, MSc, BA etc):</td>
<td>Professional Doctorate in Educational and Child Psychology</td>
</tr>
<tr>
<td>A7. Year of Study</td>
<td>1</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---</td>
</tr>
<tr>
<td>A9. Course Code</td>
<td>EDUC</td>
</tr>
<tr>
<td>A10. Title of Project:</td>
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<tr>
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<tr>
<td>A13. Proposed Fieldwork Start Date:</td>
<td>On recruitment of identified schools-approx November 2014</td>
</tr>
<tr>
<td>A14. Location(s) where the project will be carried out:</td>
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<td>A17. Date</td>
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The following section to be completed by the SUPERVISOR

SECTION B – DESCRIPTION OF RESEARCH

This section should be completed by the person undertaking the research.

B1. Provide an outline description of the planned research (250 words max).
Principle Research Question(s):

R1: To what extent does a peer network intervention increase the social interaction opportunities of pupils with ASD in mainstream primary schools and are any benefits sustained after a period of 6 weeks?

R2: How do pupils with ASD and their peers perceive participating in a peer network intervention and what are the perceived benefits?

R3: How do school staff perceive the implementation of the intervention and what are the implications for its future development?

Academic justification:

The introduction of the government inclusion policy (Department for Education and Employment, 1997) has lead to a greater number of pupils with ASD being educated in mainstream settings (Keen & Ward, 2004). However, there have been concerns about the quality of social experiences for children with ASD in these settings (Humphrey & Lewis, 2008) with studies showing pupils with ASD are at increased risk of experiencing difficulties within the peer group and are more likely to experience bullying in mainstream settings (Cappadocia, Weiss & Pepler 2012; Humphrey & Symes, 2010). These experiences have been shown to have negative implications on the emotional wellbeing, educational attainment (Ambitious about Autism, 2013) and later life experiences of individuals with ASD (Storch et al 2012).

Despite accumulating evidence illustrating the difficulties pupils with ASD encounter socially, studies exploring how peer relations can be improved within schools are limited. There remains a lack of focus on the applicability of interventions within schools, with many implemented by researchers alone rather than in collaboration with schools (Kasari & Smith, 2013). This study aims to evaluate the introduction of a group peer network intervention to support the social inclusion of pupils with ASD in collaboration with key staff within mainstream primary schools. The network will include the target child with ASD and 4-5 peers from their class and be conducted in 2 primary schools.

B2. The principal research methods and methodologies are (250 words max):
Project Design

The research design will adopt a mixed methods approach in order to evaluate the implementation and outcomes of an innovative peer network intervention. The evaluation will focus on both the process of developing the intervention as well as the outcomes for pupils (Stufflebeam, 2000).

Data Collection Methods:

Following the implementation of the intervention data will be collected using semi-structured interviews with the class teacher, TA and target pupils (aged 8-10 years) who have a diagnosis of ASD. A focus group with the peer network members (children aged 8-10 years from the child’s class) and a short individual interview with the target child will be conducted following the final network session. The interviews and focus group will be audio-recorded, transcribed and member checked. In addition to this structured playground observations will be conducted pre, post and at follow up to measure the social interactions between the target pupil and peer group.

Sampling:

Inclusion criteria will be as follows: schools interested in developing their inclusion/ASD practice, who have a pupil aged 8-10 years old (school year 4 or 5) who they feel will benefit from the network intervention. The pupil will have a diagnosis of ASD but have sufficient level of receptive and expressive language (which can be supported through the use of visuals) to enable informed assent to be given and participation in the group network and pupil interview. Children who are particularly vulnerable or are engaging in extremely challenging behaviours that may be a risk to themselves or their peers will be excluded from this study.

Method(s) of Analysis:

The data from the staff, target pupil interviews and peer focus group will be transcribed using thematic analysis. The data collected through playground observation and from the pupil ratings scale will be analysed using descriptive statistics.

NB: If your research methods include collection of image or video data, you must complete the VASTRE document (regardless of research risk).
B3. Please indicate which of the following groups are expected to participate in this research:

- Children under 16, other than those in school, youth club, or other accredited organisations.
- Adults with learning difficulties, other than those in familiar, supportive environments.
- Adults who are unable to self-consent
- Adults with mental illness/terminal illness/dementia/residential care home
- Adults or children in emergency situations
- Those who could be considered to have a particularly dependent relationship with the researcher
- Prisoners
- Young Offenders
- Other vulnerable groups (please detail)

OR

X None of the above groups are involved in this study

B4. Number of expected research participants.

A maximum of 10 network peers (4-5 in each school) across both schools. 2 target pupils (one in each school), 2 teachers (one per school) and 2 TAs (one per school).

B5. Will you conduct fieldwork visits?

---

3 The person with learning difficulties has appropriate support within the setting from accredited support workers or family members.
Complete either the Declaration in Section D1 or the Fieldwork Risk Assessment (FRA) form if indicated in your RREA by criteria marked by an asterisk.

Yes

X

Complete the Declaration in Section D2

No

B6. The research will take place (tick all that apply):

X within the UK

within the researcher’s home country if outside the UK

wholly or partly outside the UK and not in the home country of the researcher*

* You must complete a separate Fieldwork Risk Assessment form

SECTION C – RESEARCH RISK ASSESSMENT

The following sections should be completed by the person undertaking the research in discussion with their supervisor/tutor.

C.0 – Criteria for research classified as HIGH RISK – National Research Evaluation Service

The study involves primary research with adults who are unable to self consent

The study involves primary research with NHS patients

The study involves primary research with prisoners/young offenders

Students - If any of these options apply, you should complete an NRES application. See your supervisor for further guidance.

Supervisors – Forward this RREA form to ethics.education@manchester.ac.uk when you are satisfied that the project requires approval through the Integrated Research Application Service (IRAS).

* The researcher’s ‘home country’ is defined as one in which (1) the researcher holds a current passport through birthright or foreign birth registration, (2) a country where the researcher has resident status, or (3) where the researcher holds a permit or visa to work, has a contract of employment, and is not a UK tax-payer.
C.1 – Criteria for research classified as **HIGH RISK** (tick any that apply)

I/we confirm that this research:

- involves vulnerable or potentially vulnerable individuals or groups as indicated in B3
- addresses themes or issues in respect of participant’s personal experience which may be of a sensitive nature (i.e. the research has the potential to create a degree of discomfort or anxiety amongst one or more participants)
- cannot be completed without data collection or associated activities which place the researcher and/or participants at personal risk*
- requires participant informed consent and/or withdrawal procedures which are not consistent with accepted practice
- addresses an area where access to personal records (e.g. medical), in collaboration with an authorised person, is not possible
- involves primary data collection on an area of public or social objection (e.g. terrorism, paedophilia)
- makes use of video or other images captured by the researcher, and/or research study participants, where the researcher cannot guarantee controlled access to authorised viewing.
- will involve direct contact with participants in countries on the Foreign and Commonwealth Office warning list5 *
- involves face to face contact with research participants outside normal working hours6 that may be seen as unsocial or inconvenient*
- will take place wholly or partly without training or qualified supervision*
- requires appropriate vaccinations which are unavailable*
- will take place in locations where first aid and/or other medical support or facilities are not available within 30 minutes*
- may involve the researcher operating machinery, electrical equipment, or workplace vehicles, or handling or working with animals at the research location(s), for which they are not qualified, and where a qualified operative or handler is not available to act as supervisor.*

* IF YOU HAVE TICKED these HIGH risk criteria you must also complete a separate Fieldwork Risk Assessment form

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6 For example, in the UK, normal working hours are between 8am-6pm, Mon-Fri inclusive.
IF YOU HAVE ONLY TICKED HIGH risk criteria NOT marked (*) you MUST complete the LOW Risk Fieldwork Declaration on page 9 of this form.

If no HIGH risk items are ticked supervisors and students should continue to section C.2 on the next page ➔

C.2 – Criteria for research classified as MEDIUM RISK (tick any that apply)

I/we confirm that this research:

- is primary research involving children or other vulnerable groups which involves direct contact with participants.\(^7\)
- study is on a subject that a reasonable person would agree addresses issues of legitimate interest, where there is a possibility that the topic may result in distress or upset in rare instances.
- is primary research which involves substantial direct contact\(^8\) with adults in non-professional roles.*
- is primary research which focuses on data collection from professionals responding to questions outside of their professional concerns.
- is primary research involving data collection from participants outside of the EU or the researcher’s home country via direct telephone, video, or other linked communications.
- is practice review/evaluation involving topics of a sensitive nature which are not personal to the participants.
- involves visits to site(s) where a specific risk to participants and/or the researcher has been identified, and the researcher may not be closely supervised throughout.*
- requires specific training and this is scheduled to be completed before fieldwork starts, or, training will not be undertaken but the research will be closely supervised by an academic advisor with appropriate qualifications and skills.
- requires vaccinations which have been received, or are scheduled to be received in a timely fashion.*
- requires face to face contact with research participants partly outside normal working hours\(^9\) that may be seen as inconvenient.*

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\(^7\) This does not include research in locations where children are present if they are not the focus of the research.  
\(^8\) For example in focus group or one to one interview in private locations, and not ‘market research’ which is characterised by brief interaction with randomly selected individuals in public locations. 
\(^9\) In the UK normal working hours are between 8am-6pm, Mon-Fri inclusive.
takes place in, or involves transport to and from, locations where the researcher’s lack of familiarity may put them at personal risk*

may require the operation of machinery, electrical equipment, or workplace vehicles, or handling or working with animals at the research location(s), for which they are not qualified, but such operation or handling will be undertaken under close supervision from a qualified operative or handler*

* IF YOU HAVE TICKED these MEDIUM risk criteria you must also complete a separate Fieldwork Risk Assessment form

* IF YOU HAVE ONLY TICKED MEDIUM risk criteria NOT marked (*) you MUST also complete the LOW Fieldwork Risk Declaration on page 9 of this form

If none of the HIGH or MEDIUM risk criteria have been ticked, supervisors and students should continue to section C3 on the next page ⇒

If ONE OR MORE of the MEDIUM risk criteria have been selected, ethical approval must be sought from the Manchester Institute of Education (MIE) Research Integrity Committee (RIC) and so you should complete the MIE Ethical Approval Application form (available on the Manchester Institute of Education Ethics Intranet).

The supervisor and student should agree this RREA assessment and submit:

- Completed RREA form
- Completed Manchester Institute of Education Ethical Approval Application form
- Completed Fieldwork Risk Assessment form where indicated
- Supporting documents.

NB: ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.

Document should be submitted for review as indicated below:

A. PGR Thesis - Mrs. Debbie Kubiena, Room B3.10 along with your PhD Research Plan for consideration at the PhD/Prof Doctorate Review Panel.

10 This document and guidance for completion can downloaded from http://www.education.manchester.ac.uk/intranet/ethics
B. **All other cases** - to the Administrator for Ethics and Fieldwork (AEF) via Ethics.Education@manchester.ac.uk by your supervisor. In doing so, supervisors confirm that they have agreed the assessed risk level and that the documents are complete and correct. The AEF will forward your completed documents to a member of the MIE RIC committee for approval.

*If none of the HIGH or MEDIUM risk criteria have been ticked, supervisors and students should continue to section C3 on the next page.*

C3 – Criteria for research classified as **LOW RISK**

**C 3.1  NO human participants**

I/we confirm that this research (tick as appropriate):

- is not of high nor medium risk to the researcher, in accordance with the criteria provided in sections C.1 and C.2 respectively.
- is Secondary research (i.e. it will use material that has already been published or is in the public domain).
- is Secondary data analysis (i.e. it will involve data from an established data archive)

*If you have ticked one of the options in C3.1 above, and C3.2 does not apply, you should now complete section C3.3.*

**C3.2  Human participants**

I/we confirm that this research (tick as appropriate):

- is not of high nor medium risk to the researcher, or participants, in accordance with the criteria provided in sections C.0, C.1 and C.2 respectively.
- X A reasonable person would agree that the study addresses issues of legitimate interest without being in any way likely to inflame opinion or cause distress
  
- is Practice review (i.e. the research involves data collection from participants on issues relating to the researcher’s professional role, in a setting where the researcher is employed or on a professional placement)
- is Practice evaluation (i.e. the research involves data collection on a student’s professional role, in a setting where the researcher is employed or on a professional placement. The

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11 A reasonable person would agree that the study includes no issues of public or private objection, or of a sensitive nature.
data collected will be used for comparison against national or other targets or standards).

is Primary research on professional practice with participants in professional roles conducted in their work setting.

is Market research (i.e. the research may involve data collection from the general public approached or observed in public locations for the purposes of market investigation).

is Primary research using a questionnaire completed and returned by participants with no direct contact with the researcher.

is part of a research methods course and participant groups are limited to peers, colleagues, family members and friends.

is a Pilot Study

C 3.3 Research context

I/we confirm (tick as appropriate):

- the location(s) of the research are not listed on the Foreign and Commonwealth Office warning lists\(^\text{12}\)
- the researcher is not in a position to coerce potential participants/secondary data owners
- Primary or practice research involves no vulnerable group (as indicated in question B3).
- Primary or practice research will be conducted in a public space or building (e.g. the high street, the University campus, a school building, etc)

D. LOW Risk Fieldwork Declaration

Students not directed to complete the separate Fieldwork Risk Assessment in Section C should tick the items in D.1 or D.2 to confirm the LOW risk nature of their fieldwork visits. Then sign the Declaration in D.3

D.1 Fieldwork visits (If you will not make any fieldwork visits, tick the alternative items in D.2 below.)

I/we confirm:

- the researcher will not travel outside the UK or their home nation.
- the fieldwork does not require overnight stays in hotels or other types of public temporary accommodation.

public and private travel to and from the research location(s) are familiar to the researcher and offer no discernable risk.

the researcher will not travel through, or work in research locations which may have unlit areas, derelict areas, cliffs, or local endemic diseases

the researcher will carry only necessary personal items when travelling to, and within, research locations.

no specific vaccinations are required to undertake this research

first aid provision and a trained first aider are available where appropriate

the researcher will only operate machinery, electrical equipment, or workplace vehicles, or handle or work with animals at the research location(s) if they are qualified to do so

the fieldwork will be carried out within normal working hours\(^\text{13}\) at a time convenient to participants.

the researcher will not give out personal telephone information to participants, or owners of secondary data resources, in relation to the research project

the researcher is fully aware of and sensitive to cultural and religious practices of participant groups, and will act accordingly.

primary or practice research will not involve fieldwork visits to private homes.

the researcher will provide a regularly updated fieldwork visit schedule to a nominated University contact.

the researcher will carry a Manchester Institute of Education Emergency Contact Information Card during all fieldwork visits.

### D.2 No Fieldwork visits

I/we confirm:

- this research does not involve fieldwork visits of any kind
- the researcher will not give out personal telephone information to participants, or owners of secondary data resources, in relation to the research project

\(^{13}\) For example, in the UK normal working hours are between 8am and 6pm Mon-Fri inclusive.
If you are unable to tick all items above, you must complete a separate Fieldwork Risk Assessment form.

D.3 Researcher Declaration:

By signing this completed document, I declare that the information in it is accurate to the best of my knowledge and that I will complete any actions that I have indicated I will complete.

Signature: [Signature]

Date: 04.06.2014

Name in Capitals: NADIA EZZAMEL

Student ID: 5856296
If ONE OR MORE of the **LOW risk** criteria above have been selected, ethical approval must be sought from the Manchester Institute of Education Research Integrity Committee. The supervisor and student should agree this research risk assessment and submit:

- Completed RREA form
- Completed the Manchester Institute of Education Ethical Approval Application form
- Completed Fieldwork Risk Assessment form where indicated
- Supporting documents

**NB**: ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.

Documents should be submitted to:

Mrs. Debbie Kubiena, Room B3.10 along with your PhD Research Plan for consideration at the PhD/Prof Doctorate Review Panel.

⇒ **UG, PGT, PGR Pilot studies, PROF DOC Research Papers involving ONLY LOW RISK CRITERIA**

⇒ *Go to Section E.1 page 11*

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34 This document and guidance for completion can downloaded from [http://www.education.manchester.ac.uk/intranet/ethics](http://www.education.manchester.ac.uk/intranet/ethics)
Appendix 43: Ethics Approval Confirmation

From: Ethics Education (ethics.education@manchester.ac.uk)
Sent: 16 September 2014 10:31:09
To: Nadia Ezzamel (nadia.ezzamel@postgrad.manchester.ac.uk)

Dear Nadia

Ref: PGR-5856296

Project Title: An evaluation of the effectiveness of a peer network strategy to support the social inclusion of pupils with ASD in mainstream primary schools’

I am pleased to confirm that your ethics application has now been approved by the School Research Integrity Committee (RIC) against a pre-approved UREC template.

If anything untoward happens during your research then please ensure you make your supervisor aware who can then raise it with the RIC on your behalf

This approval is confirmation only for the Ethical Approval application.

Regards

Georgia Irving
Appendix 44: Amendments to Ethics 1

SECTION 3: MINOR AMENDMENT TO RESEARCH PROJECT

Please note that appendix 1 within this ethics amendments form is numbered in the overall thesis as appendix 24.

Application for Approval of Minor Amendment\(^{15}\) to a Research Study

Details of proposed amendment (please give as much detail as possible)

Sections it refers to in other form-numbered sections of the main form the changes correspond to.

Change in observation schedule

The Playground Observation of Peer Engagement (POPE) (Kasari, Rotheram-Fuller & Locke, 2005) will be used in this study instead of the observation schedule initially proposed (Playground Observation of Pupil-Peer Engagement) originally discussed in section 2.2.3 of the initial ethics application and attached in appendix 5 of the initial ethics application. The authors of the schedule have agreed to its use within this project. Please refer to appendix 1 of this document for a copy of the observation schedule and the codebook (instructions) for using it. Section 5.1 of the original ethics application detailing aspects around the duration of the observation and frequency will remain the same for the new schedule. The analysis method for data obtained from the observation scheduled originally discussed in section 2.4 of the original application will also remain the same.

It is felt this will give a more accurate measure of the interaction between the target pupil and their peers than the observation schedule initially proposed in section 2.2.3. The initially proposed observation schedule had been constructed from 2 pre-existing observation schedules by myself and therefore has not been used within research in this field before. As the POPE has already been used in previous research to measure interactions between pupils with ASD and their peers, it is felt this would be a more reliable and valid measurement tool to use.

The POPE will be piloted to measure its suitability before use within the intervention phase of this project. In previous studies the POPE has been used to capture how a pupil with ASD interacts with his/her peers whereas the current study aims to capture how peers interact with a pupil with ASD. This difference may lead to some revisions of the observation schedule following the pilot. Arrangements for piloting the observation schedule will be made with a resourced provision school who participated in my year 1 research study. A resourced provision school has also been chosen as it gives the researcher greater control over the number of pupils involved in the observation sessions. The observation schedule will be piloted with a small group of children (3-4), including one pupil with ASD. The parents of the pupils observed will be provided with a covering letter (see appendix 2) detailing the purpose of the observation and required to give informed consent (see appendix 3) before the

\(^{15}\)Minor amendments are those that do not alter the character of the research or the participant groups

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**Change to Initial Scoping Letter for Schools**

When reading the initial scoping letter discussed in section 2.3.2 and shown in appendix 9 of the ethics application it was felt it would be important to add a few sentences to make some aspects of the proposed project clearer to potential participating schools. Elements felt to need further clarity include potential circumstances in which the target pupil’s parents may prefer the terminology ASD not be used and instead wish for their child’s needs to be described in an alternative way (e.g. has difficulty talking/interacting without mention of the label ASD). Therefore a couple of sentences to clarify this have been added (see appendix 4, page 2, bullet point 2). In addition to this, it was felt aspects of the criteria for participation in the study should be reflected more clearly in this letter, therefore a couple of sentences have been added to ensure this is communicated clearly (appendix 4, page 2, bullet point 8).

**Supervisor Declaration**

I agree that the amendment proposed does not change the character of this research or the participant groups.

I confirm that the research risk assessment for the study as MEDIUM remains.

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<tr>
<th>Supervisor’s signature*</th>
<th>Date.</th>
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Please send applications for amendment to ethical approval for MEDIUM risk research to the Manchester Institute Administrator for Ethics and Fieldwork at ethics.education@manchester.ac.uk who will pass on the request to the RIC member who authorised the original application wherever possible.
Appendix 2

Information Sheet for Parents of Pupils Involved in Piloting of Observation Schedule

‘A pilot to determine the suitability of an observation schedule to measure the interaction between pupils with Autism Spectrum Disorder (ASD) and their peers’

My name is Nadia Ezzamel and I am a Trainee Educational Psychologist at Manchester University. As part of my Doctorate in Educational and Child Psychology I am conducting a research project that aims to improve the relationships between pupils with ASD and their peers. This research project will be conducted in other primary schools. Part of my research project will involve observing pupils with ASD interacting with their peers and recording this interaction using an observation schedule. To ensure the observation schedule is appropriate for my research project I need to trial/pilot it first as it may need some refining. Your child’s school have shown an interest in participating in the piloting of the observation schedule.

Before you decide if you would like your child to participate in the pilot of the observation schedule it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish your child to take part. Thank you for reading this.

Who will conduct the observation?

Nadia Ezzamel, Trainee Educational Psychologist

Manchester Institute of Education, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester, M13 9PL.

What is the aim of the pilot?

The aim of the pilot is to test the suitability of an observation schedule that measures the interaction between pupils with ASD and their peers. Following piloting the observation schedule, the researcher will decide whether the schedule is suitable for use within her main thesis project. The main thesis project will be completed in other schools. The aim of the main thesis project is to evaluate the effectiveness of a peer network intervention to improve the social inclusion of pupils with ASD in mainstream primary schools.
What would my child be asked to do?

- To participate in a maximum of 2 short play sessions within school where they will have the opportunity to play with their peers in a small group for 10-15 minutes per session.
- The sessions will involve your child’s interactions being observed on the playground or in an alternative location within school arranged by staff within the school. The interactions will be recorded on an observation schedule by the researcher. A member of school staff will be present for the duration of the observation.

What happens to the data collected?

The data from the observations schedule will be used to assess whether the observation schedule is suitable for use within my main research project. The data will be anonymised to ensure your child cannot be identified from it. Once the data has been used to ascertain whether the observation schedule will be suitable for future use, the data obtained from the observation will be destroyed in accordance with university data disposal policies.

How is confidentiality maintained?

Confidentiality will be maintained throughout this process. The data from the observation schedule will be destroyed when it is no longer needed for research purposes and will be destroyed securely in accordance with the University’s data disposal procedures. All information given by participants will be anonymous and remain confidential unless any child protection issues were to arise. If this happens then the appropriate child protection procedures will be followed.

What happens if I do not want my child to take part or if I change my mind?

It is up to you whether or not you want your child to participate in the observation sessions. If you do decide that your child should take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw your child at any time without giving a reason.

What is the duration of the observation sessions?

The observation sessions will take approximately 10-15minutes and will be arranged at a convenient time during the school day.

Where will the research be conducted?

The observation sessions will take place on the school premises at a pre-arranged date and time.

Will the outcomes of the observation be published?

No, the data obtained from the observation sessions is solely to help ascertain whether the observation schedule will be appropriate to use in my main research project which is
taking place in other schools. Therefore the data obtained will not be published in any academic journals or books.

**Criminal Records Check**

The researcher has undergone a satisfactory criminal records check and can provide evidence of this if required.

**Contact for further information**

If you would like to discuss the observation sessions please feel free to contact myself by email on nadia.ezzamel@postgrad.manchester.ac.uk to set up a telephone conversation.

You may also want to contact my supervisor Dr. Caroline Bond at the University of Manchester. Her email address is caroline.bond@manchester.ac.uk.

Alternatively you can contact Caroline Bond at the School of Education, University of Manchester.

Telephone: 0161 275 3511

**What if something goes wrong?**

If you would like to talk to someone for further advice about the observation/research at any point please feel free to contact any of the people listed above.

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093

I really appreciate your consideration for your child to participate in the observation sessions.

Thank you
Appendix 3

Consent Form for Parents of Pupils (piloting observation schedule)

‘A pilot to determine the suitability of an observation schedule to measure the interaction between pupils with Autism Spectrum Disorder (ASD) and their peers’

CONSENT FORM

If you are happy to allow your child to participate in the observation sessions please complete and sign the consent form below.

1. I confirm that I have read the attached information sheet about the study and have had the opportunity to consider the information, ask questions and have these answered satisfactorily. □

2. I understand that participation in the study is voluntary and that I am free to withdraw my child at any time without giving a reason. □

3. I agree for my child to be observed in a small group with their peers by the researcher for a maximum of 2 observation sessions. I understand that the researcher will be recording the interactions observed on an observation schedule. □

4. I understand that the sole purpose of my child participating in the observation sessions is for the researcher to test out the suitability of an observation schedule for use within a subsequent research project that will be completed in other schools. □
5. I understand that any data collected will not be passed to other researchers.

6. I understand that any data collected will not be published in any academic books or journals.

7. I understand that the data obtained from the observation sessions will be destroyed once it is no longer needed and will be destroyed in accordance with the University data disposal policies.

I agree for my child ________________ (full name) to take part in the observation sessions outlined above

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<tr>
<th>Parent’s Name</th>
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Appendix 4

Information for Schools (Initial Scoping Letter)

Promoting social inclusion for pupils with autism within schools: a peer network intervention package

Introduction:

My name is Nadia Ezzamel and I’m a Trainee Educational Psychologist. Your school is being invited to take part in this research project as part of the researcher’s Doctorate in Educational and Child Psychology.

Aims of the Intervention Package

Children with autism spectrum disorder (ASD) are increasingly likely to be educated within mainstream schools. However, research suggests that children with ASD are more likely to experience poorer social and academic outcomes than their peers in these settings.

There is an accumulating body of research highlighting the difficulties children with ASD experience within their peer groups, particularly in gaining acceptance and sustaining positive social relationships. Recent statistics show that children with ASD are more likely to experience bullying and receive less social support in mainstream settings than their peers. These experiences have been shown to have a negative impact on the emotional wellbeing, educational attainment and later life experiences of individuals with ASD.

Within current research it has been strongly suggested that developing peer understanding and awareness of ASD in schools is paramount in developing positive peer attitudes and behaviour to support the social inclusion of pupils with ASD.

This study aims to harness the power of the peer group in facilitating positive social inclusion for pupils with ASD through the delivery of an intervention package that will target raising awareness within the peer group and teaching a network group of peers key skills to enable them to interact effectively with pupils with ASD, with a particular focus on outside play. It will focus on outside play as children with ASD find unstructured times of the school day particularly difficult including playtime. It is hoped this
intervention will lead to greater positive opportunities for pupils with ASD to interact with their peers. The researcher also aims to evaluate the applicability of the intervention within the school context.

What’s involved?

The Trainee Educational Psychologist will undertake the following:

- Observations of the target pupil and their peers at three different time points within the course of the project (pre intervention, post and at follow up).
- 2 whole class ASD awareness raising sessions for the peers in the target pupil’s class, in joint collaboration/delivery with the teacher. The target pupil may participate/be present in the whole class sessions if felt appropriate and if they show a preference to. The terminology used to describe the child’s needs will be dependent on parental preference and the child’s understanding of their own needs. For example, parents may prefer for the label ASD not to be used when discussing their child’s needs with staff and the peer group. In this case, alternative descriptions of the child’s needs will be used (e.g., difficulties communicating/interacting with others). The terminology and content of the sessions will be agreed collaboratively with parents and school staff prior to the sessions taking place.
- 6 peer network group sessions with 4-5 peers from the pupil’s class and the target pupil. The target pupil will not participate in the first part of the first session to give the researcher the opportunity to have an open discussion with the peers, gain any ideas and describe the purpose of the group in more detail. The target pupil will join the group for the second half of the first session.
- An individual interview with the target child following the intervention to gain their views about the intervention.
- A focus group with the network peers following the last network session to gain their perspectives of the impact of the intervention.
- Return visit to the school after half a school term to discuss the impact and applicability of the intervention with the class teacher and TA through individual interviews.

To be involved in the project:

In order to be involved in the project outlined above the Trainee Educational Psychologist would like to hear from a Primary School who are able to offer the following:

- An enthusiasm and interest in developing their inclusive practice and in creating better outcomes for pupils with ASD.
- A setting where there is a pupil with a diagnosis of ASD in year 4 or year 5. The pupil should have a Statement of Special Educational Needs and be supported by a named TA for at least part of the week. The pupil should have a good attendance record. The pupil may be experiencing difficulties socially within the peer group, but show some interest in interacting with peers.
• Release for the class teacher, and TA to liaise with the researcher and parents regarding the target pupils’ strengths and difficulties to ensure the content of the sessions and intervention is as effective as possible.

• A time slot within the class timetable for 2 whole class awareness raising sessions.

• Commitment to release of the target pupil and group network peers for 6 network sessions, once a week during the school day (30-45 minutes per session).

• The package will involve joint delivery of 2 awareness raising sessions by the researcher and the class teacher of the target pupil’s class.

• The named TA for the pupil will be required to be present and support the researcher during the 5 group network sessions and for the individual interview with the target child if felt necessary.

• Release of TA & Class teacher for an individual interview at follow up, this can be arranged at a time convenient with the school.

• An identified coordinator from the senior leadership team who will liaise with the Trainee Educational Psychologist during the research process.

**What is the duration of the research?**

The intervention itself will take place over 8 weeks, however the total research process will last approximately 7/8 months. This will include time for planning and meeting with school and parents prior to the intervention taking place, data collection by the researcher before the intervention begins, after the intervention has taken place and 6 weeks after this at follow up.

**Will the outcomes of the research be published?**

The research may be published in an academic journal or presented at an academic conference. The research will be submitted to the University of Manchester as part of my Doctorate in Educational and Child Psychology.

**Contact for further information**

If you have any further questions or are interested in participating in the research project please contact me by email at nadia.ezzamel@postgrad.manchester.ac.uk
Appendix 45: Amendments to Ethics 2

### SECTION 3: MINOR AMENDMENT TO RESEARCH PROJECT

<table>
<thead>
<tr>
<th>Application for Approval of Minor Amendment(^{16}) to a Research Study</th>
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</thead>
<tbody>
<tr>
<td><strong>Details of proposed amendment (please give as much detail as possible)</strong></td>
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<tr>
<td>Sections it refers to in other form-numbered sections of the main form the changes correspond to.</td>
</tr>
</tbody>
</table>

#### 1) Sociogramme to select volunteer pupils for Peer Network

As part of the process of selecting a group of peers from the target pupils class for the peer network group part of the intervention I now feel it would be beneficial to ask the class teacher to complete a sociogramme with the pupils in the class before the intervention begins (before the whole class awareness raising sessions). The Class teacher would be required to draw a visual map of where the children sit in the classroom. The class teacher would then ask pupils in the class to write down which three pupils in the class they would most like to play with at school. I would then collate this information into a visual diagram.

This process would give an overview of the relationships between children in the class and help inform discussions with the class teacher around which of the class volunteers may be most suitable for participation in the group. It would also provide information around which peers the target pupil may prefer to play with.

Please see appendix 1 for information around how the sociogramme would be conducted.

#### 2) Change in age of target pupil and peers for study

Due to issues with recruiting pupils in years 4 and 5 for the study, and schools requesting that they feel some of younger pupils in years 3 & year 2 may benefit from the project I now wish to extend the age range for participation in the project from year 2-year 5. The intervention would be adapted in collaboration with the schools to make sure it is suitable and appropriate for the relevant age groups.

**Supervisor Declaration**

I agree that the amendment proposed does not change the character of this research or the participant groups.

I confirm that the research risk assessment for the study as MEDIUM remains.

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\(^{16}\) Minor amendments are those that do not alter the character of the research or the participant groups
Please send applications for amendment to ethical approval for MEDIUM risk research to the Manchester Institute Administrator for Ethics and Fieldwork at ethics.education@manchester.ac.uk who will pass on the request to the RIC member who authorised the original application wherever possible.
Appendix 1: Sociogramme Instructions for Class Teacher

Classroom Sociogramme

The idea of a sociogramme is to visually depict social and reciprocal relationships within a peer group. This information will help in setting up the peer network group as will give the group leader and class teacher an idea of who the focus child may/may not want in their group. It will also provide information about the dynamics of other friendships. These are important factors to consider before selecting which volunteers are to make up the group.

Please can you draw a quick classroom plan of where children currently sit, giving their first names and last initial for any children with the same names.

- Please give the response sheets to all pupils and ask them to place their full name at the top followed by this question
  ‘Write down the names of three classmates that you would most like to play with at school’
- Please collect the sheets of paper and pass onto me on my next visit into school.
- From this information I will create a visual sociogramme diagram that I will then be able to share with you.

I’m really grateful for your time and help with this,

Many thanks

Nadia Ezzamel
Trainee Educational Psychologist