Educational psychologists’ intervention practices for children with autism spectrum disorder.

A thesis submitted to the University of Manchester for the degree of Doctor of Educational and Child Psychology in the Faculty of Humanities

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Lee M. Robinson

School of Environment, Education and Development
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Figure 3. An adapted model of EBP proposed by the Council for Training on Evidence-Based Behavioural Practice (Spring et al., 2008).

Word count: 41,610
Abstract

The most thoroughly researched topic in relation to Autism Spectrum Disorders (ASD) is the evaluation of interventions. Despite there being systematic literature reviews identifying evidence-based interventions (EBIs) for students with ASD, it is not clear to what extent educational psychologists (EPs) are using EBIs in their practice. The first paper in this thesis is a systematic literature review exploring which school-based interventions are reported in educational and school psychology journals and highlights the challenges of applying research data to idiographic individual casework. The second paper in this thesis is an empirical study investigating the extent to which EPs are using EBIs in their practice and the factors which influence EPs’ decision-making when planning interventions for students with ASD. The survey findings indicate that EPs are using many EBIs for ASD; however, there are many they are unfamiliar with. The most salient factors influencing EPs’ decision-making when planning interventions for students with ASD include the student’s individual needs and factors related to the school context. The third paper in this study discusses the dissemination of evidence to professional practice and looks at the implications of this research for individual EP roles, Educational Psychology Services and future research. Finally, a strategy for disseminating the findings will be outlined alongside a strategy for evaluating the impact of the dissemination.
Declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.
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Dedication
To my parents, Margaret and Eric Robinson, this thesis and all of my achievements to date would not have been possible without your dedicated, unwavering support. I promise this is my last degree and I will now get a real job. To Adrian Ho, you have been my rock for 12 years and I cannot thank you enough for all you have done for me. To the memory of Pat Ho, who began this journey with me, you are missed very much.

To you all, I dedicate my thesis.

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Jan Gibbons, 11 years ago, you showed me how all of the hard work goes on behind the scenes. Thank you for mentoring me through the early days. I am always in awe of your creativity.

Thank you, all.
Introduction

Author’s professional background and relevant experience
The author of this thesis is a Trainee Educational Psychologist (TEP) at the University of Manchester who is on placement in a Local Authority (LA) Educational Psychology Service (EPS) in the North West of England. Prior to commencing the Doctorate in Educational and Child Psychology in 2014, the author trained as a primary school teacher in 2008-2009 and taught for 5 years. During 2012-2013, the author completed a Masters in The Psychology of Education at the University of Manchester.

Rationale for engagement
The concept for this research was pitched as part of a research commissioning project at the University of Manchester. The author of this thesis was interested in the differences within and between LAs in relation to the processes of assessment and diagnosis of Autism Spectrum Disorder (ASD). In the LA in which the author is completing his training placement, the prevalence of ASD is perceived by EPs to be increasing as is the frequency of ASD referrals. EPs do not have a role in the diagnosis of ASD as part of the ASD Pathway in this LA but they do have a pivotal role in the planning of interventions for students with ASD. Over recent years, there has also been an increase in tribunals in relation to ASD interventions in which EPs in the EPS have been invited to take part. Therefore, EPs’ use of ASD interventions was a particular area of interest for the author and his colleagues in the EPS.
Overall strategy and aims of the thesis

This thesis began with the identification that there was a paucity of research investigating EPs’ assessment and intervention practices for students with ASD. An exploratory study using a focus group was carried out with a small group of EPs within the LA in which the author was on placement in March 2015. In relation to intervention, this preliminary study had three main findings. First, the outcomes of EPs’ assessments allowed them to collaboratively design and implement interventions which enable students’ needs to be met in mainstream settings. Second, EPs’ intervention practices took place at a systemic level - recommending interventions and providing training to those who would be delivering them. Third, EPs were ideally placed to provide advice to schools about interventions for ASD. It was not clear from this preliminary study which interventions were being recommended by EPs or whether EPs consulted the evidence base for an intervention before recommending it. Although there is currently increased attention to evidence-based practice, the extent to which EPs’ recommendations of interventions for ASD are aligned with the evidence-base for these interventions is unknown.

There is now robust research into what constitutes best practice in relation to interventions for students with ASD and evidence-based interventions (EBIs) have been identified (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). However, it is not clear to what extent EPs in the UK and Ireland are using EBIs for students with ASD in school settings. There is also a paucity of research exploring the factors that influence EPs’ decision-making when selecting interventions for students with ASD. The empirical research in this thesis (paper 2) aimed to answer the following research questions:
1. To what extent are EPs in the UK and Ireland using focused EBIs for students with ASD?

2. Which factors influence EPs’ decision-making in relation to ASD interventions?

The first paper in this thesis is a systematic literature review (SLR) of what is published in school and educational psychology journals in relation to interventions for children and young people with ASD. This SLR aimed to extend the findings of a previous review (McKenney, Dorencz, Bristol, & Hall, 2015) which focused exclusively on school psychology journals by also including articles published in educational psychology journals. It is important for EPs to know what has been published by the profession and for the profession in relation to the evaluations of ASD interventions and it is also important to understand how this research applies to idiographic individual casework. As educational psychology in the UK and Ireland is the most closely allied profession to school psychology in the US, an assumption is being made throughout this research about the comparability of US school psychology and UK practitioner educational psychology. As a result, the author of this thesis aimed to conduct an SLR to answer the following research questions:

1. What is the type, focus and quality of school-based ASD intervention research in school and educational psychology journals?

2. How does this research support implementation of these interventions in school settings?

In paper 3, the author considers the implications of the findings of this thesis for EPs’ professional practice. The author differentiates between evidence-based practice and practice-based evidence. It is concluded that the literature on ASD
intervention evaluations would benefit from EPs engaging in practice-based evidence which takes into account contextual factors involved in intervention implementation in addition to the social validity of the intervention from the perspective of those who will be responsible for delivering an intervention in a school setting. The author sets out a strategy for dissemination and for the evaluation of the impact of dissemination.

**Positioning for data access**

As a TEP, conducting research into the practices of EPs makes the author an insider researcher. There are three main advantages to being an insider researcher and these include: having an understanding of the profession being studied, not interfering with business as usual, and encouraging the honesty of professionals through a shared intimate knowledge of the subject matter (Bonner & Tolhurst, 2002). Having a required understanding of the national context in relation to the statutory role of the EP (Department for Education, 2014) and an understanding of the guidelines for assessment and intervention for students with ASD (National Institute for Health and Clinical Excellence, 2011) gives the researcher an understanding of the context within which the research participants find themselves. This may give the participants confidence in the competence of the researcher making the participants favourably biased towards the author as a TEP as opposed to an outsider researcher.

**Ontological, epistemological and axiological stances**

The author of this thesis has approached the research through a pragmatic paradigm. As this paradigm does not seek to define ontological concepts such as ‘truth’ and ‘reality’, the value of research can be judged by its effectiveness – that is
do the results fit with the problem the researcher is trying to resolve? (Mertens, 2004). With this in mind, the ontological position occupied by the author is that of a critical realist (Maxwell, 2010). It is assumed that there is no objective form of reality and alternative views of the same phenomenon are valid. It is assumed by the author that knowledge is partial and fallible. As a critical realist, the author believes that there is a reality that exists but that reality “…can be known only imperfectly because of the researcher’s human limitations” (Mertens, 2004, p. 11). It is believed by the researcher that there is a reality around EPs’ practices in relation to ASD interventions; however, this is socially constructed by EPs and as a result the reality of what EPs practice in this area can only be partially known.

The epistemological position occupied by this thesis is also that of a critical realist. It is assumed that the way in which phenomena is understood is a construction of our own perspectives and there is no one correct way to understand phenomena (Maxwell, 2010). As this thesis has been approached through a pragmatic paradigm, the author employed research methods and methods of analysis which were deemed appropriate to the research questions as opposed to aligning with any particular theoretical, ontological or epistemological position. In considering the research questions posed by this thesis, it was decided that an exploratory survey design was an appropriate design through which to carry out this research. It was decided by the author that a questionnaire would be a suitable tool for the collection of data in order to answer the research questions as a large quantity of data could be collected from a large number of participants (Gillham, 2008). As this research was being conducted through a pragmatic paradigm and through a critical realist stance in relation to epistemology, it was appropriate for the questionnaire to contain both open and closed questions. As a result, the data from this questionnaire were
analysed using quantitative and qualitative methods which were descriptive statistics and content analysis.

The author’s axiological position – that is his beliefs and understanding of the world and what he deems to be valuable (Cohen, Manion, & Morrison, 2013) in relation to the current research is as follows. The author believes that whenever possible, all children with special educational needs, including those with ASD, should be fully included in mainstream schools. The author is of the understanding that while this view is shared by many teachers in mainstream education, there are still many teachers who do not share this belief. The author believes that it is the EP’s role to be a critical friend and provide elegant challenges to all teachers about their approach to the inclusion and education of students with ASD. Due to competing demands on their time, the author believes that teachers may not have the capacity or the motivation to keep up to date with research findings in relation to effective interventions for students with ASD. The author’s position is that EPs are more likely to have access to this research through engagement with universities, opportunities for continued professional development, and the development of specialisms within educational psychology services. As a result, EPs are ideally positioned to provide this information to teachers in an accessible way. Therefore, the findings of this research are important to the author as he believes that the skilling up of adults working with students with ASD, whether these are teachers or other EPs, is vital in order to provide students with ASD the best opportunities to develop their potential.
References


Department for Education (DfE). (2014). *Special educational needs and disability code of practice: 0 to 25 years.* London: DfE.


Paper One:

Developing effective school-based interventions for autism: A systematic literature review of school-based interventions for students with autism reported in school and educational psychology journals.

This paper has been prepared in accordance with the author guidelines for the journal Psychology in the Schools (see Appendix A for the author guidelines and email clarification in relation to some aspects of the guidelines). Modifications for thesis presentation include reference to and the inclusion of appendices.
Abstract

The most thoroughly researched topic in relation to Autism Spectrum Disorders (ASD) is the evaluation of interventions. Educational psychology in the UK and Ireland is the most closely allied profession to school psychology in the United States. In considering what is published by and for the profession, it is important to include all of those journals which are directly relevant to the profession including educational psychology journals. This review reports on the type, focus and quality of school-based ASD intervention research reported in school and educational psychology journals between 2005 and 2015. 12 evaluation studies are reported which evaluated 10 discrete interventions and two commercial packages. These interventions targeted academic, social, communication, and behavioural outcomes. Implications for the practice of school psychologists are discussed including the application of research to the idiographic nature of the work of school psychologists.
Developing effective school-based interventions for Autism Spectrum Disorder: A systematic literature review of school-based interventions for students with Autism Spectrum Disorder reported in school and educational psychology journals.

Autism Spectrum Disorder (ASD) is no longer an uncommon condition as was once thought (Klin, Saulnier, Tsatsanis, & Volkmar, 2005) and is now thought to affect 1 in 68 children in the US (Centers for Disease Control and Prevention, 2012) and 1% of children in the UK (National Institute for Health and Clinical Excellence, 2011). In line with the increase in ASD prevalence, there has been an increase in the number of reviews evaluating interventions for children and young people with ASD (Wong et al., 2013). Some reviews have overviewed the field as a whole (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013) while others have evaluated interventions addressing particular outcomes such as increasing social skills (McMahon, Lerner, & Britton, 2013) or specific interventions such as Social Stories™ (Qi, Barton, Collier, Lin, & Montoya, 2015). There is a need to systematically evaluate interventions for ASD in order to demonstrate an evidence-base for their efficacy.

Within school psychology, there has been a move towards evidence-based practice (EBP) and in the US, schools must, by law, implement interventions which are strongly supported by scientific research whenever possible (IDEA, 2004). In the UK, although the impetus to recommend evidence-based interventions (EBIs) is not driven by law, educational psychologists are required to demonstrate proficiency in this area in order to meet standards set by the body which governs their profession, the Health & Care Professions Council (HCPC, 2012). EBP is also increasingly advocated in UK education (Goldacre, 2013)
Since 2009, there have been several systematic literature reviews of ASD interventions. Recently, two reviews have reported on the quality of intervention research (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). Wong et al. (2013) evaluated the quality of ASD intervention studies published between 1990 and 2011 and identified 27 EBIs. This review only included those studies which met all of the appropriate criteria for methodological acceptability. Out of 1090 studies, Wong et al. (2013) identified 456 which were of good enough quality to be included in their review. Even more recently, a review of the literature covering the years 2008-2013 (Bond, Symes, Hebron, Humphrey, & Morewood, 2016) identified 22 EBIs with many of the focused interventions matching those identified by Wong et al. (2013). Out of 176 articles identified by Bond, et al.(2016), 85 were considered to be of medium to high quality. Although these reviews are robust and identified those interventions with the strongest scientific support, they highlight some of the limitations of research in this field. Many studies were excluded from the reviews due to weaknesses in methodological quality. Additionally many studies were conducted by researchers as opposed to the professionals who would be responsible for delivering the intervention in school settings.

In addition to understanding the quality of research, practitioners, such as SPs also need to understand the factors affecting implementation of particular interventions thus increasing the relevance of research (Bond, Symes, Hebron, Humphrey, & Morewood, 2016). The field of implementation science has developed particularly in relation to mental health and key factors have been identified for the successful implementation of interventions (Durlak & DuPre, 2008). There is a growing body of literature relating to school-based intervention implementation
(Lendrum & Humphrey, 2012); however, this literature has predominantly focused on universal level interventions so it is unclear to what extent this literature also applies to targeted group or individual interventions. In relation to ASD, although reviews such as Wong et al. (2013) provide an overview of empirically tested interventions, there has been limited consideration of school-based implementation. Kasari and Smith (2013) identified the need for researchers to collaborate with schools in order to understand how effective autism interventions can be developed which are responsive to the needs of individual school contexts and families and only recently have researchers begun to develop models for developing and evaluating autism interventions with stakeholders in a more iterative way (Dykstra Steinbrenner et al., 2015).

Even though SPs have access to intervention research outside of psychoeducational publications, it is important to have an understanding of what is published by the profession and for the profession in relation to ASD interventions. An initial review by McKenney et al. (2015) into the literature being published in school psychology journals in relation to ASD found that the most frequently investigated topic was the evaluation of interventions and, contrary to Kratochwill & Stoiber (2002) and Bramlett et al. (2010), they considered this a strength in the field. They identified two main types of intervention research, comprehensive treatment models, which are multi-component intervention programmes incorporating a conceptual framework targeting the core deficits of ASD (Wong et al., 2013), and focused intervention techniques such as video self-modelling, social stories, exercise, and physical proximity. Although these interventions were considered to be EBIs, they were not all carried out in school settings which makes it difficult to assess their educational utility. Additionally McKenney et al. (2015) did not focus on the quality
of the research published in school psychology journals nor the extent to which the research supported the implementation of interventions in school settings.

Although McKenney et al. (2015) provide a useful overview of literature published in school psychology journals, literature from educational psychology journals was not included in their review. Educational psychology in the UK and Ireland is the most closely allied profession to school psychology in the United States. In considering what is published by and for the profession, it is important to include all of those journals which are directly relevant to the profession including educational psychology journals. It is the current authors’ opinion that educational psychology journals include a significant body of international research which warrants inclusion in a review of literature relevant to applied psychologists working with schools to support the inclusion and progress of pupils with ASD.

In summary, SPs are encouraged to recommend and implement those interventions for children and young people with ASD that are considered to be evidence-based. Systematic literature reviews have identified interventions for ASD which have the highest quality empirical support for their efficacy for children and young people. However, there is a gap between intervention research and intervention implementation which SPs are ideally positioned to help bridge. Publishing about interventions in school psychology journals is considered a strength and the purpose of this review is to expand the findings of McKenney et al. (2015) regarding what is being published in school psychology journals in relation to the evaluation of ASD interventions by also including articles published in educational psychology journals. In doing so, this review will answer two research questions.

**Research Questions**
1. What is the type, focus and quality of school-based ASD intervention research in school and educational psychology journals?
2. How does this research support implementation of these interventions in school settings?

**Method**

The methodology for this review was informed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman, & Prisma, 2010). See figure 1 for an outline of the review process.

The databases Psychinfo and Google Scholar were searched between 15th November and 15th December 2015. These databases were selected as they were the ones searched by McKenney et al. (2015). ERIC was also searched but no new articles were found. The search was limited to articles published between 2005 and 2015 as there has been a significant increase in ASD research during the last decade (Bond, Symes, Hebron, Humphrey, & Morewood, 2016).
Article abstracts were searched for key words relating to the research question; populations with ASD and interventions and titles were searched for reference to school and educational psychology ((ASD, ASC, autis*, pervasive, PDD, Asperger*) AND (intervention, therp*, evaluation, strategy*) AND (educational, school, psychology)). This is in contrast to the approach of McKenney et al. (2015) who did not operationalise key words for ‘intervention’ but instead classified studies as interventions at the inclusion stage. Previous systematic literature reviews and meta-analyses were used for reference harvesting resulting in 3 additional articles. After excluding 17 duplicates, 135 articles remained to be screened.
Application of inclusion criteria

The abstracts of 135 studies were examined to see if the study met the following inclusion criteria. Criteria relating to diagnosis, age and focus were informed by Wong et al. (2013).

- The article was written in English.
- The study was published in a school or educational psychology journal.
- The study collected primary data about the effectiveness of an intervention.
- The Interventions were behavioural/developmental/educational in nature.
- The participants were aged between birth and 22.
- The participants had a diagnosis of ASD, Pervasive Developmental Disorder (PDD), Pervasive Developmental Disorder- Not Otherwise Specified (PDD-NOS), or Asperger’s Syndrome (AS).
- The interventions took place in a school settings.
- The study evaluated discrete interventions as opposed to comprehensive treatment models.

123 articles were excluded on the basis of the above inclusion criteria. As a result 12 articles out of 135 remained for inclusion in the review. 11 Studies were single-case experimental (SCE) designs and one study was a qualitative interview design. The quality and relevance of each study were evaluated in accordance with Gough (2007) who argues that these characteristics inform its weight of evidence.

The qualitative study was evaluated using the Review Framework for Qualitative Evaluation Research as developed by Woods, Bond, and Symes (2011) in their systematic literature review of solution focused interventions (see Table 1). One point was awarded for each criterion met with a maximum score of 12 points. Using the system developed by Woods et al. (2011), each study was rated as being either...
high quality research (9-12 points), medium quality research (5-8 points) or low quality research (0-4 points). Given that research in the current review tended to use small scale community samples similar to those in the Woods et al. (2011) review, setting relatively generous thresholds enabled the range of quality to be described without studies being excluded.

The SCE designs were coded using the Review Framework for SCE Designs. This framework draws on criteria from Reichow, Volkmar, and Cicchetti (2008) for evaluating evidence-based practices in ASD (Table 1). These studies were judged against 6 primary quality indicators and 6 secondary quality indicators and were then categorised by quality of research according to Reichow et al. (2008). A study could receive a rating of high, acceptable, or unacceptable quality for each of the primary and secondary indicators. Strong quality assessment required high quality ratings for each of the six primary indicators, and evidence of three or more of six secondary quality indicators. Adequate quality assessment required high quality ratings on four or more primary quality indicators with no unacceptable quality ratings in addition to evidence of at least two secondary quality indicators. Weak quality was identified by fewer than four high quality ratings on primary indicators, in addition to evidence of less than two secondary quality indicators.

Table 1.

*Review framework criteria for qualitative and quantitative studies*

| Criteria for the qualitative study (Woods, Bond, & Symes, 2011). These criteria were drawn from Henwood and Pidgeon (1992) and Spencer, Ritchie, Lewis, and Dillon (2003) |
- Appropriateness of the research design
- Clear sampling rationale
- Well executed data collection
- Analysis close to the data
- Emergent theory related to the problem
- Evidence of explicit reflexivity
- Comprehensiveness of documentation
- Negative case analysis
- Clarity and coherence of the reporting
- Evidence of researcher-participant negotiation
- Transferable conclusions
- Evidence of attention to ethical issues

Criteria for SCE studies (Reichow, Volkmar, and Cicchetti, 2008)

**Primary quality indicators**

- Study gives details of participant characteristics
- Information about the treatment is provided with replicable precision
- Dependent measures are described with operational and replicable precision, and show a clear link to treatment outcomes
- All baselines include three measurements points, and show evidence of stability
- All relevant data for each participant was graphed. Inspection of graph reveals (a) all data appears stable (b) contained less than 25% overlap with data from other conditions and (c) showed a shift in level or trend which coincides with the implementation or removal of the intervention
- Evidence of intervention effect
Secondary quality indicators

- Inter-observer agreement
- Kappa calculated and showing good reliability
- Procedural or treatment fidelity adequately assessed
- Raters blind to the treatment condition of the participants
- The study has evidence of social validity
- Generalisation and maintenance were assessed

Prior to the coding of all studies, the authors undertook an inter-rater reliability check (Appendix B). The authors independently scored 25% (3) of the articles in relation to the appropriate frameworks. The sum of the scores for the three articles was calculated and a percentage of agreement (0.97) calculated. Scoring differences were discussed between the authors in order to finalise interpretation of criteria. As a high level of inter-rater agreement had been established, the lead author scored the remaining articles using the finalised criteria.

Given that identifying effectiveness of interventions was not the primary focus of this review and effectiveness of interventions for ASD is summarised comprehensively elsewhere (Wong et al., 2013), the authors instead provided an evaluation of effectiveness of each intervention in Table 2. Authors’ data were used to identify whether studies provided either some positive (P) or neutral/negative (N) evidence of effectiveness.

Results

This review included 12 studies; six were published in school psychology journals and six in educational psychology journals. Of the studies, nine were conducted in the USA, two studies were conducted in the UK, and one was
conducted in Ireland. A summary of the 12 studies included in this systematic literature review can be found in Table 2.
Table 2.

*Details of the studies included in this systematic literature review*

<table>
<thead>
<tr>
<th>Author, study</th>
<th>Intervention &amp; interventionist</th>
<th>Participants, setting &amp; country</th>
<th>Outcomes &amp; intervention effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrow &amp; Hannah (2012)</td>
<td>Communication: Computer aided interviewing</td>
<td>Eight 9- to 15-year-olds with ASD</td>
<td>The ‘In My Shoes’ programme facilitated communication, allowed the children to use their own vocabulary and enabled the children to take control of the direction of the conversations.</td>
</tr>
<tr>
<td>- Medium</td>
<td>Delivered by:</td>
<td>Mainstream primary, secondary and a special school</td>
<td>No follow-up data collected</td>
</tr>
<tr>
<td>- SPI</td>
<td>Researchers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location: UK</td>
<td>Effectiveness: P</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bellini et al. (2007)</strong></td>
<td>Social: Social engagement with peers</td>
<td>Video self-modelling Delivered by: Teachers</td>
<td>Two 4- to 5-year-olds with autism and PDD-NOS</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td><strong>Carlson, B (2009)</strong></td>
<td>Academic: Handwriting Without Tears Delivered by: researcher</td>
<td>Two 4-year-olds with autism and developmental delays</td>
<td>Quality of letters increased for each participant during the programme. Student one showed variability in legibility of one letter; student two demonstrated variability in the legibility of all letters. No follow-up data collected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special education preschool classroom</td>
<td>Location: USA</td>
</tr>
<tr>
<td>Study</td>
<td>Social Domain</td>
<td>Academic Domain</td>
<td>Population</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
<td>-----------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
Hanley-Hochdorfer et al. (2010)

Location: Ireland

12%. participant 2 - remained stable.

No follow-up data collected

Effectiveness: social engagement = P; academic engagement = N

<table>
<thead>
<tr>
<th>Hanley-Hochdorfer</th>
<th>Social: Verbal initiations and contingent responses</th>
<th>Social stories Delivered by: School staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>et al. (2010)</td>
<td>Four 6- to 9-year-olds with autism and AS</td>
<td>School settings (not specified)</td>
</tr>
</tbody>
</table>

For participants 1-4 the PND for observation points for verbal initiations were: 38%, 1%, 1%, and 11% and the PND for contingent responses were 31%, 36%, 31% and 11% respectively. No effect indicated across baseline, intervention or follow-up phases.

Location: USA

Effectiveness: N
<table>
<thead>
<tr>
<th>Study</th>
<th>Example/Method</th>
<th>Client Details</th>
<th>Intervention Details</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martin et al. (2005)</td>
<td>Rejection training (FCT):</td>
<td>One 10-year-old with autism</td>
<td>Pushing away successfully replaced with touching an icon to reject items. Successful use of desired rejecting method during 78-90% of the opportunities during the last eight sessions.</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>IJEEP</td>
<td>Delivered by: Self-contained classroom</td>
<td>No follow-up data collected</td>
<td></td>
</tr>
<tr>
<td>Nicholson et al. (2011)</td>
<td>Academic: Antecedent physical activity</td>
<td>Four 9-year-olds with autism and AS</td>
<td>Increased engagement during the treatment phase (effect sizes -0.7, -1.5, -1.02, -0.9 for students 1-4 respectively). Follow-up phase: for student 1, less academic engaged time than during the intervention (ES= -0.6). Students 2,3 and 4, academic engaged time returned to or fell below the levels found at baseline (ES= 0.3, -0.3 and -0.2). Effectiveness: P</td>
<td></td>
</tr>
<tr>
<td><strong>Reisener et al. (2014)</strong></td>
<td><strong>Academic:</strong></td>
<td><strong>Listening passage</strong></td>
<td><strong>Four 9- to 10-year-olds with ASD</strong></td>
<td><strong>Participant 1, LPP and RR fairly effective (90% and 80% PND respectively). Participant 2, LPP and RR highly effective (100% PND). Participant 3, LLP and RR questionable effectiveness (PND 70% and 50% respectively). Participant 4, LPP had questionable effectiveness (50% PND) but RR highly effective (100% PND).</strong> Follow-up data indicated sustained reading fluency 3 weeks after intervention.</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Reading fluency skills</strong></td>
<td><strong>preview (LPP) and repeated readings (RR)</strong></td>
<td><strong>General education and inclusion classrooms</strong></td>
<td><strong>Effectiveness: P</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Thompson et al. (2011)</strong></th>
<th><strong>Communication:</strong></th>
<th><strong>Differential reinforcement</strong></th>
<th><strong>One 9-year-old with autism</strong></th>
<th><strong>Talk-outs decreased across all settings. At baseline the mean number of talk-outs was 10.9 and this reduced to</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Adequate</td>
<td>Delivered by:</td>
<td>Self-contained special education classroom</td>
<td>3.1 during the differential reinforcement with token economy intervention stage.</td>
<td></td>
</tr>
<tr>
<td>- EJREP</td>
<td>researchers</td>
<td>Location: USA</td>
<td>No follow-up data collected</td>
<td></td>
</tr>
</tbody>
</table>

**Wilczynski et al. (2005)**

- Academic: Off-task behaviour
- Social proximity

- Adequate
- Teacher and TA
- Teacher and TA

One 15-year-old with autism

Experimental condition, the student spent 48-50 seconds engaged in on-task behaviour in the distant condition as opposed 0 seconds when the TA was in close proximity. During the intervention phase the student worked to avoid close proximity. No follow-up

Location: USA

Effectiveness: P.
<table>
<thead>
<tr>
<th>Wilkinson (2005)</th>
<th>Behaviour: Challenging behaviour</th>
<th>Delivered by: student</th>
<th>One 9-year-old with AS</th>
<th>69% increase in on-task and compliant behaviours between baseline and intervention. 4-week follow-up: on-task and compliant behaviour remained 64% above baseline.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- EPiP</td>
<td>Self-management</td>
<td>Main stream classroom</td>
<td>Location: USA</td>
<td>Effectiveness: P</td>
</tr>
</tbody>
</table>

Participant characteristics

Across all of the studies, 31 participants were involved. Samples ranged from one to eight participants with the mean number of participants being three. The ages of the participants ranged from 4 to 15 years old with the modal age being 9 years old. 18 males and five females participated across the studies, however, one study did not disclose the gender of their participants (Barrow & Hannah, 2012). As indicated in Table 2, samples included participants diagnosed with ASD, AS, and autism and one participant had a developmental delay.

Where did the interventions take place?

Four studies took place in mainstream schools (Bellini, Akuuiian, & Hopf, 2007; Greig & MacKay, 2005; Hanley-Hochdorfer, Bray, Kehle, & Elinoff, 2010; Wilkinson, 2005), one in mainstream and special schools (Barrow & Hannah, 2012), four in a special educational classroom within a mainstream school (Carlson, Mclaughlin, Derby, & Blecher, 2009; Martin, Drasgow, Halle, & Brucker, 2005; Thompson, McLaughlin, & Derby, 2011; Wilczynski, Fusilier, Dubard, & Elliott, 2005) and three took place in special education and general education classrooms (Grey, Bruton, Honan, McGuinness, & Daly, 2007; Nicholson, Kehle, Bray, & Van Heest, 2011; Reisener, Lancaster, McMullin, & Ho, 2014).

Who delivered the interventions?

Six of the interventions were delivered by the researchers (Barrow & Hannah, 2012; Carlson et al., 2009; Greig & MacKay, 2005; Martin et al., 2005; Nicholson et al., 2011; Thompson et al., 2011), five were delivered by school-based staff (Bellini et al., 2007; Grey et al., 2007; Hanley-Hochdorfer et al., 2010; Reisener et al., 2014; Wilczynski et al., 2005) and one was a self-management intervention which was self-delivered by the student (Wilkinson, 2005). In relation to outcome areas, researchers delivered all of the interventions addressing communication
outcomes; teachers delivered all of those addressing social outcomes and there was an even split between researchers and teachers delivering academic and multiple outcomes. The behavioural outcome was managed by the student himself.

**Study quality**

Although the Woods et al. (2011) and Reichow et al. (2008) rating categories are not necessarily directly comparable, they do enable quality to be summarised for each type of research design. It is disappointing that none of the studies included in this review were considered to be of high/strong quality. Five studies were evaluated as being of medium/adequate quality (Barrow & Hannah, 2012; Bellini et al., 2007; Thompson et al., 2011; Wilczynski et al., 2005; Wilkinson, 2005) and seven were evaluated as being of low/weak quality (Carlson et al., 2009; Greig & MacKay, 2005; Grey et al., 2007; Hanley-Hochdorfer et al., 2010; Martin et al., 2005; Nicholson et al., 2011; Reisener et al., 2014).

**Outcome foci of included interventions**

Each study in this review evaluated a distinct intervention with 10 of the interventions targeting a single outcome and two interventions targeting multiple outcomes as defined by the authors of the studies. Two thirds of the interventions have previously been identified as being EBIs (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013) whilst the remaining third are not considered to have an evidence base. Only five out of the 12 studies provide post intervention follow up, this is reported where available.

**Interventions targeting academic outcomes.** Academic outcomes were the most frequently targeted outcomes for students with ASD in this review; however, out of the four academic outcome studies, only physical activity has been identified as an EBI.
Reisener et al. (2014) evaluated the use of stimulus control in the form of listening passage preview (LPP) and repeated readings (RR) to increase the oral reading fluency of four 9- and 10-year-old children. An analysis of percentage of non-overlapping data (PND) revealed that both LPP and RR had a positive effect on reading fluency. However, the greatest gains were seen in the RR condition. These gains continued to be demonstrated for three weeks after the termination of the intervention.

In an evaluation of a commercial package for teaching handwriting, ‘Handwriting Without Tears’, Carlson et al. (2009) measured the legibility and size of the letters of two 4-year-olds. They found that the legibility of the children’s letters was increased through the materials included in the commercial package but it was unclear which aspects of the package may have produced the desired effects or whether just having the opportunity to practice their handwriting would have had the same effect.

There were two studies which looked at increasing academic engagement as measured by on-task behaviour (Nicholson et al., 2011; Wilczynski et al., 2005). Nicholson et al. (2011) found that the observed academic engagement of four 9-year-olds was increased though antecedent physical activity; however, this was variable across the participants. A follow-up four weeks after the intervention demonstrated that three of the student’s academic engaged time returned to or fell below baseline measurements with only one student remaining above baseline. The authors concluded that, overall, physical activity increases academic engaged time; however, there is no discussion as to which students are more likely to improve their academic engagement through this intervention.

Wilczynski et al. (2005) reported that social proximity impacted on-task behaviour of a 15-year-old student. They found that the student spent more time
engaged in on-task behaviour when staff were proximally distant. As this student had an aversion to social attention it was proposed that the greater the distance from the teacher and teaching assistant, the more likely he was to engage in on-task behaviours.

**Interventions targeting communication outcomes.** There were three studies which evaluated interventions targeting communication outcomes. Differential reinforcement and FCT are considered to be EBIs. Whilst technology aided instruction and interventions are considered to be EBIs, the specific programme ‘In My Shoes’ does not yet have a sound evidence base.

Martin et al. (2005) successfully used FCT to teach a 10-year-old to reject an item by touching an icon as opposed to pushing it away. Although a pattern of acquisition was demonstrated, there were increases in other problematic behaviours which served a rejection function. The authors theorised that this was due to the extra effort required by the young person to give a socially acceptable response.

In the only qualitative study included in this review, Barrow & Hannah (2012) evaluated a commercial computer aided interviewing (CAI) programme called In My Shoes. They found that CAI offers potential as a consultation tool for 9- to 15-year-old students. The authors found that this intervention provided a bespoke approach for each individual, enabling children to use their own vocabulary for feelings, people and places. Unfortunately, the way in which the data were analysed was not detailed in the article.

Differential reinforcement was used by Thompson et al. (2011) to reduce the number of inappropriate verbalisations of a 9-year-old student. A visual analysis of the data shows that the frequency of talk-outs reduced across all settings; however, the demonstrated reduction in talk-outs seemed to be context specific.
**Interventions targeting social outcomes.** Two studies targeted social outcomes. The intervention approaches evaluated were both EBIs.

Bellini et al. (2007) used video self-modelling with two children, aged 4 and 5 years old, in order to increase social interactions with their peers. An increase in observed unprompted social engagement during the intervention phase was found which was sustained during a two-week maintenance period. However, the maintenance data were collected immediately following the termination of the intervention.

Hanley-Hochdorfer et al. (2010) evaluated the use of social stories to increase the verbal initiations and contingent responses of four 6- to 12-year-old children. The social stories intervention was ineffective for addressing verbal initiations and contingent responses for these children. Follow-up data collected six weeks after the end of the intervention also showed no intervention effect.

**Interventions targeting behaviour outcomes.** One study targeted behavioural outcomes which included reducing non-compliance and off-task behaviour through the use of self-management which is an EBI. Wilkinson (2005) found a significant increase in compliant and on-task behaviour during the use of self-management with a 9- year-old child. This behaviour change was maintained during a follow-up period four weeks after the intervention had finished.

**Interventions targeting multiple outcomes.** The final two studies evaluated interventions targeting multiple outcomes (Greig & MacKay, 2005; Grey et al., 2007). The first, which was not considered to be an EBI, targeted the social and academic outcomes of increasing social and task engagement through the use of cooperative learning (CL) for two 8-year-old boys (Grey et al., 2007). An observational analysis found that CL increased social engagement but did not increase academic engagement.
Greig and MacKay (2005) worked with a 12-year-old boy targeting three outcomes with one EBI. These were the social outcome of increasing social competence; the emotional outcome of decreasing anxiety, depression, anger and stress; and the pre-academic outcome of increasing school adjustment. ‘The Homunculi’ therapeutic intervention was based on CBT. The authors found that the participant’s emotional state outcomes, as measured by the Briere Trauma Scales (Briere, 1996), and social competence outcomes, as measured by student and parental reports (Spence, 1995), became closer to the mean value for his age group. Additionally, the participant’s teachers reported less concern regarding school adjustment.

**Implementation considerations**

Implementation factors were considered in six out of 12 studies in relation to intervention fidelity and social validity (Bellini et al., 2007; Carlson et al., 2009; Hanley-Hochdorfer et al., 2010; Reisener et al., 2014; Wilczynski et al., 2005; Wilkinson, 2005). Percentage of intervention fidelity ranged from between 90%-100% across these six studies; however, factors related to the variance in implementation were identified in only two of these studies. Wilczynski et al. (2005) reported treatment integrity was 100% during the experimental phase of the social proximity intervention and then fell to 77% during the intervention phase and attributed this to both of the staff giving commands to the student. Bellini et al. (2007) asked the teachers delivering the video self-modelling intervention to record the days on which the intervention was delivered, partially delivered, or not delivered. For one participant, the video was shown in full on 16 out of 17 days and for the second, 15 out of 17 days. Implementation delivery was affected by factors such as participant, inattention, or equipment failure.
Only three studies in this review measured the social validity of the interventions being implemented. Bellini et al. (2007) found that video self-modelling was a socially valid intervention as it did not interfere with usual classroom activities; was not disruptive to other students; was easy to administer and enjoyable to implement. Hanley-Hochdorfer et al. (2010) found that social stories were considered acceptable to teachers as they were practical, time efficient and not disruptive to other students. Wilkinson (2005) measured social validity of the self-monitoring intervention from the student’s perspective. Although the student rated the intervention as generally acceptable, no further details were given as to why.

Discussion

This systematic literature review investigated the type, focus and quality of school-based ASD intervention research in school and educational psychology journals and the extent to which the research supports implementation of these interventions in school settings.

Research question 1

Between 2005 and 2015, 12 different ASD interventions carried out in school settings were published in school and educational psychology journals. These interventions targeted academic, social, communication, and behavioural outcomes. This is in line with the outcomes most frequently targeted in recent reviews (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013).

Over half of the studies in this review were of low/weak methodological quality representing a major weakness of school and educational psychology research into interventions for students with ASD. Examples of the methodological weaknesses include: not establishing stable baseline data before implementing interventions; not employing a control group; not controlling for extraneous variables; and not assessing maintenance and generalisation. As a result it is
concluded that there is a need for more robust, high quality school-based research evaluating ASD interventions from the school and educational psychology profession. Additionally, it would be helpful for future research to calibrate a shared rating system between qualitative research and SCE designs as the framework developed by Woods et al. (2011) is potentially less stringent than the framework developed by Reichow et al. (2008). As a result, it is difficult to make comparisons between methodological quality across study designs.

It is promising that two thirds of the interventions evaluated in this review were identified as being evidence-based or using evidence-based techniques (e.g. technology aided instruction and interventions) (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). Although data about the effectiveness of the included studies is presented, this may not reflect the general effectiveness of these particular types of intervention as the studies are only a small subset of evaluation studies in the larger literature base. The small samples also highlight the variability of individual response even when EBIs are used and the importance of SP decision making when using interventions in real life contexts.

**Research question 2**

Unfortunately, none of the interventions which were delivered by the researchers discussed how the interventions could be implemented by school-based professionals, who may face barriers to implementing interventions due to different levels of training and knowledge about interventions in addition to differing amounts of school-based responsibilities (Locke et al., 2015). Also missing from this research is a consideration of student characteristics. Even those studies which were carried out by school-based staff fail to inform the reader of how an intervention can be adjusted or adapted to meet the disparate needs of other individuals with ASD. As a
result, it is difficult for other professionals to understand how applicable those interventions will be to their current context.

This review has also identified that the research into school-based ASD interventions often fails to measure the social validity of an intervention or discuss the acceptability of interventions. These are important factors taken into consideration by SPs when implementing interventions (Brubaker, Bundy, Winslow, & Belcher, 2010). Social validity was directly measured in only three of the studies included in this review (Bellini et al., 2007; Hanley-Hochdorfer et al., 2010; Wilkinson, 2005) but this tended to be limited.

A major limitation of most of the studies included in this review is that the assessments of acceptability did not evaluate whether the teachers, parents and students felt the interventions addressed the identified needs of the students in a meaningful way. In only one study (Martin et al., 2005) was the focus for the intervention co-constructed with the student’s mother and teachers enabling client preference to be taken into account (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996).

**Weaknesses of ASD intervention research in school and educational psychology journals.**

In addition to the weaknesses already cited in this discussion, further limitations of the ASD intervention research include the small sample sizes used in SCE studies and the lack of qualitative research. Generally, there is a need for more high quality RCTs in autism research to overcome some of the weaknesses of SCE designs (Miller & Frederickson, 2006). However, small scale case study designs may address the needs of practitioners in relation to implementation as they have the potential to describe the individual characteristics of students; the context, and the mechanisms which make interventions effective.
Although the quality of qualitative studies in the ASD field is often low (Bölte, 2014), qualitative studies have the potential to give SPs a different perspective on the mechanisms underpinning effective implementation of interventions for ASD in school settings (Bond, Symes, Hebron, Humphrey, & Morewood, 2016). Addressing the need for more case studies and qualitative research in the ASD intervention literature will be relevant to the idiographic work that SPs are involved with - that is working with students as individuals with unique and disparate characteristics and circumstances instead of subsuming them into a homogenous group. This will enable SPs to use their professional expertise to match best available evidence to student characteristics.

Inevitably, children who participate in intervention studies represent a small subset of the wider ASD population and the children with whom professionals work may face additional challenges to those included in the studies (Dingfelder & Mandell, 2011). The difficulty here is that once interventions are adapted to meet the needs of individual children, they are no longer being implemented in the way in which they were evaluated and this may have a negative impact on their effectiveness.

Implications of this review for SPs and future research

In addition to school psychology journals, educational psychology journals also include a significant body of international research. There are two implications of this. Firstly, this research warrants inclusion in a review of literature relevant to professional psychologists working with schools to support the inclusion and progress of pupils with ASD. Secondly, SPs should be looking outside of SP journals when reading research related to interventions for ASD.

In addition, it is important that research evaluating school-based interventions for students with ASD include data about those factors that facilitate or impede
implementation. These factors may include context, adaptability, student characteristics, and organisational factors. Additionally, the social validity of interventions is one of the main considerations taken into account by SPs when recommending them to schools (Brubaker et al., 2010). As a result, it is important that practitioner-researchers are reporting on these factors when publishing their evaluations.

Furthermore, it is important that researchers are evaluating interventions carried out by those school-based staff who will be responsible for implementing the interventions such as has occurred in more recent evaluations of comprehensive interventions such as JASPER (Chang, Shire, Shih, Gelfand, & Kasari, 2016). This research could be completed in collaboration with academic professionals in local universities in doctoral training programmes.

**Limitations of current review**

This review does not provide an exhaustive list of interventions being carried out in school-based settings for students with ASD. It only reviews those which were reported in school and educational psychology journals. Additionally, given the small number of studies, it is not possible to recommend particular interventions from this review as more research is needed focusing on what works for whom, in what context and in relation to which foci.

The selection of journals and research articles contained in this review has been assumed to have been written by and for school and educational psychologists. This carries an assumption about how psychologists access information about interventions for ASD. However, in reality, school and educational psychologists are not restricted to reading research published by their profession and can access research published in related professions such as clinical journals and those related to special educational needs among others. Furthermore, psychologists are likely to be
searching databases for research which best matches their search terms as opposed to limiting their searches to journals specific to their profession.

**Conclusion**

This systematic literature reviewed investigated what was published in school and educational psychology journals in relation to the type, focus and quality of school-based ASD interventions between 2005 and 2015. The review has highlighted some promising interventions but also illustrates some of the limitations of the evidence base and challenges for SPs in using research in practice. It is concluded that more robust school-based research into the areas of social validity, adaptability, and implementation of ASD interventions needs to be undertaken in order to empower SPs to be confident in the use of their professional expertise when recommending or implementing interventions with schools.
References


Summary, 61, 1–19.


IDEA. Individuals with Disabilities Education Improvement Act (2004).


children and young people: Recognition, referral and diagnosis of children and young people on the autism spectrum.


Paper Two:

A UK and Ireland survey of Educational Psychologists’ intervention practices for students with autism.

This paper has been prepared in accordance with the author guidelines for the journal Educational Psychology in Practice (see Appendix C for the author guidelines). Modifications for thesis presentation include reference to and the inclusion of appendices.
A UK and Ireland survey of Educational Psychologists’ intervention practices for students with Autism Spectrum Disorder.

Although evidence-based interventions (EBIs) for Autism Spectrum Disorder (ASD) have been identified in recent systematic literature reviews, the extent to which the practice of educational psychologists (EPs) in the UK and Ireland is informed by these is unknown. This study presents the results of a questionnaire which surveyed 146 EP practitioners in the UK and Ireland about their use of 31 EBIs for ASD. This survey also explored the factors which influence EP practitioners’ decision-making when planning interventions for students with ASD. Out of the 31 EBIs, EP Practitioners were most often involved with implementing visual supports, social stories, reinforcement, antecedent-based interventions, prompting, and social skills training. The most salient factors which influenced EP Practitioners’ decision-making when planning interventions for students with ASD included the student’s individual needs and factors related to the school context. Implications for EP practice are discussed in addition to the limitations of this study.

Keywords: autism, evidence-based interventions, educational psychologists

Introduction

Young people with Autism Spectrum Disorders (ASD) experience impairments in social communication and interaction in addition to experiencing repetitive and stereotyped behaviours and interests (American Psychiatric Association, 2013). In the UK, ASD occurs in 1% of children (National Institute for Health and Clinical Excellence, 2011). In England, ASD is one of the most common primary needs among students with special educational needs (SEN) (Department for Education [DfE], 2016) and 71% of pupils with a diagnosis of ASD attend a mainstream school (DfE, 2014).

As the needs of students with ASD often cover a number of SEN categories, such as Social, Emotional and Mental Health; Cognition and Learning; and Sensory Needs, (DfE, 2014), it is important that educational psychologists (EPs) are familiar
with a range of approaches, strategies and interventions which will support students with ASD to achieve personalised outcomes whether this is part of statutory advice or supporting schools through ongoing casework with students. Although there is evidence of which interventions are deemed to have the best empirical support (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013), there is currently an absence of information about which ASD interventions are being implemented in the UK and Ireland. Research into the practice of EPs in the UK in relation to ASD has focused exclusively on their contributions to assessment and diagnosis (Waite & Woods, 1999). As a result, there is a paucity of empirical research in the UK and Ireland investigating EPs’ use of interventions for ASD.

**Using ASD interventions in schools**

Since 2009, researchers have endeavoured to identify evidence-based interventions (EBIs) for ASD with the most recent systematic literature reviews identifying 31 focused EBIs between them (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). These are discrete rather than comprehensive interventions. Research into the use of school-based interventions for ASD has emanated from the US and is driven by the evidence-based practice (EBP) agenda. In the US, school psychologists (SPs) are required by law to recommend and implement only those interventions which are deemed to be evidence-based (IDEA, 2004). A recent US survey of SPs (Sansosti & Sansosti, 2013) found that SPs used many of the EBIs recommended by the National Standards Project (National Autism Center, 2009). Out of 13 established or emerging interventions, SPs were highly likely to recommend behavioural interventions and visual supports yet only somewhat likely to recommend counselling, self-management and computer-assisted instruction. It was also found that there was a high degree of unfamiliarity with some interventions
among SPs such as child-directed teaching interactions, story-based approaches, and social skills strategies.

In the UK and Ireland, EBP is less of a driver in education and there is no legal requirement for EPs to use EBIs (Burnham, 2012; Goldacre, 2013). As a result it is likely that there are factors other than the evidence base which influence EPs’ decisions when recommending/suggesting interventions. In the UK, it has been suggested that EPs regard the utility and social value of their practice as more important than an established evidence base (Burnham, 2012). Whilst EPs believed there are benefits to their professional practice being grounded in scientific enquiry, Burnham (2012) found that EPs are pragmatic in the development of bespoke solutions in naturalistic contexts using the resources that are at hand as opposed to relying solely on evidence-based interventions.

**Considerations when using best available evidence**

While Sansosti and Sansosti (2013) explored psychologists’ use of EBIs, they did not explore which factors were taken into consideration by psychologists when they were making decisions about implementing interventions. Several models of EBP have been proposed. These models have three elements in common which influence decision-making regarding intervention implementation: best available evidence, client characteristics and availability of resources (Sackett et al., 1996; Spring et al., 2008). These models make it clear that best available evidence is only one element of an EBP approach to intervention. Consideration of factors that affect implementation such as the client’s characteristics, values and preferences in addition to availability of resources in the context are also important.

Students with ASD are a heterogeneous group and as such EPs will work with students with ASD who have disparate needs (Dingfelder & Mandell, 2011).
EPs must consider how an intervention can meet the needs of individual students with ASD, their family and school (Miller & Frederickson, 2006). Additionally, the implementation of an intervention which is evidence-based is a moot point unless there is a trained practitioner available to deliver it (Spring & Hitchcock, 2010) and deliver it with fidelity (Durlak & DuPre, 2008). Currently, the extent to which EPs consider these factors when implementing interventions for students with ASD is unknown.

**Rationale**

There is a lack of UK research into EPs’ intervention practices for students with ASD. Although EBIs for ASD have been identified, it is not known to what extent they are being used by EPs in the UK and Ireland. There is also a paucity of research exploring the factors that influence EP practitioners’ decision-making when selecting interventions for students with ASD. This study expands upon the approach of Sansosti and Sansosti (2013) through the use of an updated and larger range of EBIs and an exploration of factors other than the evidence-base for an intervention which may influence EPs’ decision-making in relation to interventions for students with ASD.

**Research Questions**

1. To what extent are EPs in the UK and Ireland using focused EBIs for students with ASD?

2. Which factors influence EPs’ decision-making in relation to ASD interventions?
Method

Design
This study adopted an exploratory survey design. Data were collected for this study using a questionnaire which was distributed to EPs in the UK and Ireland. The questionnaire was hosted online using Key Survey between 07.12.16 and 31.01.17.

Participants and Sampling
A non-probability, purposive sampling procedure was used in this study to directly target the population of EPs in the UK and Ireland. Participants were recruited through five avenues; an invitation to participate through the JISCMail forum, EPNET – an email forum supporting the exchange of ideas within the EP profession; direct email to the National Educational Psychology Service (NEPS) in Ireland; emails to programme leaders of the Educational and Child Psychology Doctorate programmes in the UK, training providers for EPs; emails directly to Educational Psychology Services; and an advertisement distributed by the Association for Educational Psychologists (AEP) (see Appendix D for email text). In each case, participants were self-selecting. Participants were required to be practicing EPs, Trainee Educational Psychologists (TEPs), or Assistant EPs with or without an ASD specialism.

Materials
A questionnaire was selected as an appropriate data collection method as the researchers aimed to collect a large amount of data from a large number of people (Cohen et al., 2013) (Appendix E). The structure of the questionnaire was based on previous literature (Sansosti & Sansosti, 2013) and consisted of two sections. The first section contained 13 items relating to demographic information such as gender,
professional role, number of years working as a qualified EP, specialisms and type, size and location of educational psychology service (EPS).

The second section of the questionnaire asked participants to estimate the proportion of ASD intervention activity they were engaged in during the past year and also included 12 items about intervention practices. A list of 31 EBIs synthesised from recent systematic literature reviews (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013) was presented and EPs were asked to identify the extent to which they have been involved with implementing each EBI. For all ratings, participants used the following scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.

The 31 EBIs were synthesised by comparing the 27 interventions identified in the review by Wong et al. (2013) with the 22 interventions identified by Bond et al. (2016). The reviews by Bond et al. (2016) and Wong et al. (2013) used different methods to evaluate studies and identify an intervention as evidence based. Wong qualified an intervention as an evidence-based practiced if it was supported by a) two high quality experimental or quasi-experimental studies conducted by two different research groups; b) five high quality SCE design studies, conducted by three different research groups and included 20 participants across all studies; or c) a combination of research designs which include one high quality experimental or quasi experimental study, three high quality SCE studies, and be conducted by more than one research group. Bond qualified interventions based on the amount of evidence available. Interventions with most evidence were supported by four randomised control trials (RCTs) or quasi-experimental studies or six or more SCE studies. Interventions with moderate evidence were supported by three RCTs or quasi-experimental studies or four or more SCE studies. Interventions with some
evidence were supported by two or more RCTs or quasi-experimental studies or three or more SCE studies. Interventions with a small amount of evidence were supported by one RCT or quasi-experimental study and two SCE studies. The categorisation of interventions differed across these two reviews as the review by Wong et al. (2013) covered a 21 year period and therefore included a lot more studies than the review by Bond et al. (2016) which only covered a five year period and, as such, was not able to conclude about the overall strength of evidence behind an intervention.

Interventions which were duplicated across reviews were considered the same and listed once. Interventions were considered to be duplicates based on a review of the intervention descriptions given by Bond et al. (2016) and Wong et al. (2013). For example, Bond et al. (2016) identified ‘peer-mediated’ interventions under two outcome foci; social outcomes and communication outcomes. Wong et al. (2013) identified ‘Peer-Mediated Instruction and Intervention’ and described how it can be used to meet different outcomes which include social and communication outcomes. As the interventions listed in this questionnaire were not presented under outcome foci, EPs were able to decide whether they had used the intervention regardless of the outcomes targeted by the intervention.

The second section also contained questions which asked participants about factors influencing their decision-making when choosing an intervention (for example, individual child’s needs, school context and evidence base). This was followed up with a qualitative question asking EPs to explain how these factors have influenced their decision-making.

The questionnaire was piloted during June 2016 with 5 TEPs and 5 EPs for; clarity of questions, appropriateness of response format, identification of omissions
or redundant questions, and estimation of expected completion time. Feedback from the pilot suggested that EPs may not have been familiar with some of the names or terms included in the interventions listed even though they may actually be involved with implementing them. As a result, a short description of the EBI was included and a “not familiar” category was added so that the researchers could differentiate between EPs who do not use an intervention because they had not heard of it and those who are familiar with the intervention but have never used it.

**Procedure**

Once the project received ethical approval from the Manchester Institute of Education Research Integrity Committee (Appendix F) and the research had been approved by NEPS in Ireland (Appendix G), a link to the questionnaire was emailed out to participants. The questionnaire was accessible and data were collected for 8 weeks. A follow up email was distributed 4 weeks into the study in the same way as the original email to encourage potential participants to complete the questionnaire.

When participants clicked on the link provided in the email, they were immediately presented with the participant information sheet prior to completing the questionnaire (Appendix H). Participants’ consent was assumed by submitting the questionnaire.

**Analysis**

The quantitative data collected from the online questionnaire were analysed using SPSS version 22; the data were treated descriptively. The qualitative data from the questionnaire were analysed using conventional content analysis as described by Hsieh and Shannon (2005) using Nvivo software version 11. First, the data were read repeatedly to gain immersion and a sense of the whole. Then the data that
captured key thoughts or concepts were coded. Next, related codes were sorted into categories so that codes could be organised into meaningful clusters. Definitions were then given for each category, subcategory and code.

Inter-rater coding was undertaken in order to validate the coding scheme used for the content analysis (Appendix I). For this purpose 70% of the data from one qualitative question were independently coded by the lead author and a colleague researcher. An average number of codes generated by the researchers was identified. A percentage agreement of 84% was calculated by dividing the number of matched codes (66) by the average number of total codes (79). The researchers discussed the wording and semantics related to the generated codes to identify whether code-matching occurred. The lead author continued to code the remaining data independently.

Results
A total of 146 participants responded to the survey (127 females and 19 males) with 102 participants completing and submitting a completed survey. For an overview of participant roles see Table 3. As this study surveyed a range of EP practitioners, the following results and discussion apply to all those surveyed but the term ‘EP’ will be used to talk about these practitioners collectively.

Table 3. Number of participants by role

<table>
<thead>
<tr>
<th>Role</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Psychologist (EP)</td>
<td>72 (49.7%)</td>
</tr>
<tr>
<td>Trainee Educational Psychologist (TEP) Year 1</td>
<td>6 (4.1%)</td>
</tr>
<tr>
<td>TEP Year 2</td>
<td>12 (8.3%)</td>
</tr>
<tr>
<td>Qualification</td>
<td>Frequency</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>TEP Year 3</td>
<td>20 (13.8%)</td>
</tr>
<tr>
<td>Senior EP</td>
<td>27 (18.6%)</td>
</tr>
<tr>
<td>Principal EP</td>
<td>5 (3.4%)</td>
</tr>
<tr>
<td>Associate EP</td>
<td>1 (0.7%)</td>
</tr>
<tr>
<td>Assistant EP</td>
<td>2 (1.4%)</td>
</tr>
</tbody>
</table>

**Sample Characteristics.**

As shown in table 3 the majority of participants were qualified EPs. Of the sample, 17 (12%) considered themselves an ASD specialist meaning 125 (88%) of the respondents did not have an ASD specialism. Table 4 shows the location of respondents with the majority being from English regions.

**Table 4. Location of participants**

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>13 (9.2%)</td>
</tr>
<tr>
<td>Scotland</td>
<td>6 (4.2%)</td>
</tr>
<tr>
<td>Wales</td>
<td>3 (2.1%)</td>
</tr>
<tr>
<td>East of England</td>
<td>4 (2.8%)</td>
</tr>
<tr>
<td>London</td>
<td>7 (4.9%)</td>
</tr>
<tr>
<td>East Midlands</td>
<td>18 (12.7%)</td>
</tr>
<tr>
<td>West Midlands</td>
<td>18 (12.7%)</td>
</tr>
<tr>
<td>North East of England</td>
<td>18 (12.7%)</td>
</tr>
<tr>
<td>North West of England</td>
<td>19 (13.4%)</td>
</tr>
<tr>
<td>South East England</td>
<td>16 (11.3%)</td>
</tr>
</tbody>
</table>
South West England 15 (10.6%)
Yorkshire and Humber 5 (3.5%)

Table 5 shows the types of services in which the respondents were employed. The majority worked in an LA embedded Educational Psychology Service (EPS) and 63 (44.4%) worked in a partially traded service. EPs employed in other ways included, working for a social enterprise, working as independent practitioners or being employed directly by a school.

Table 5. Type of service in which EPs are employed

<table>
<thead>
<tr>
<th>Service type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Authority embedded</td>
<td>31 (21.8%)</td>
</tr>
<tr>
<td>Partially traded</td>
<td>63 (44.4%)</td>
</tr>
<tr>
<td>Fully traded</td>
<td>27 (19%)</td>
</tr>
<tr>
<td>National service (Eire)</td>
<td>12 (8.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>9 (6.3%)</td>
</tr>
</tbody>
</table>

Which evidence-based interventions are EPs likely to be involved with implementing?

EPs in the UK and Ireland reported that on average (median), 30% of their total caseload involved them implementing interventions for students with ASD although there was considerable variation in practice (SD = 21.79).

The mean rating of the extent to which EPs were involved with implementing individual EBIs is shown in Table 6 in addition to the percentage of EPs in the sample who were unfamiliar with each intervention.
Table 6. The extent to which EPs are involved with implementing evidence-based interventions for students with ASD.

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Mean (SD)</th>
<th>% not familiar with intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual support</td>
<td>4.20 (0.93)</td>
<td>2</td>
</tr>
<tr>
<td>Social narratives/stories</td>
<td>3.87 (0.79)</td>
<td>1</td>
</tr>
<tr>
<td>Reinforcement</td>
<td>3.72 (0.98)</td>
<td>2</td>
</tr>
<tr>
<td>Antecedent-based intervention</td>
<td>3.69 (.098)</td>
<td>1</td>
</tr>
<tr>
<td>Prompting</td>
<td>3.69 (0.95)</td>
<td>0</td>
</tr>
<tr>
<td>Social skills training</td>
<td>3.64 (0.87)</td>
<td>0</td>
</tr>
<tr>
<td>Modelling</td>
<td>3.49 (0.95)</td>
<td>3</td>
</tr>
<tr>
<td>Multi-sensory</td>
<td>3.24 (1.16)</td>
<td>1</td>
</tr>
<tr>
<td>Structured play group</td>
<td>3.13 (1.16)</td>
<td>2</td>
</tr>
<tr>
<td>Naturalistic intervention</td>
<td>3.13 (1.17)</td>
<td>22</td>
</tr>
<tr>
<td>Picture Exchange Communication System</td>
<td>3.04 (1.07)</td>
<td>2</td>
</tr>
<tr>
<td>Functional behaviour assessment</td>
<td>3.03 (1.23)</td>
<td>8</td>
</tr>
<tr>
<td>Play-based interventions</td>
<td>2.98 (1.13)</td>
<td>3</td>
</tr>
<tr>
<td>Self-management</td>
<td>2.97 (0.98)</td>
<td>7.9</td>
</tr>
<tr>
<td>Joint attention interventions</td>
<td>2.91 (1.14)</td>
<td>5.9</td>
</tr>
<tr>
<td>Scripting</td>
<td>2.89 (1.12)</td>
<td>17.2</td>
</tr>
<tr>
<td>Parent-implemented intervention</td>
<td>2.86 (1.02)</td>
<td>3.9</td>
</tr>
<tr>
<td>Task analysis</td>
<td>2.85 (1.18)</td>
<td>11.9</td>
</tr>
<tr>
<td>Cognitive behavioural intervention</td>
<td>2.84 (1.04)</td>
<td>3</td>
</tr>
<tr>
<td>Response interruption/ redirection</td>
<td>2.76 (1.10)</td>
<td>12</td>
</tr>
<tr>
<td>Intervention</td>
<td>Rating Scale</td>
<td>Effect Size</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Differential reinforcement</td>
<td>2.74 (1.14)</td>
<td>10.1</td>
</tr>
<tr>
<td>Peer-mediated instruction and intervention</td>
<td>2.68 (1.10)</td>
<td>3.9</td>
</tr>
<tr>
<td>Functional communication training</td>
<td>2.58 (1.07)</td>
<td>24.8</td>
</tr>
<tr>
<td>Discrete trial teaching</td>
<td>2.49 (1.24)</td>
<td>23.8</td>
</tr>
<tr>
<td>Exercise</td>
<td>2.41 (1.07)</td>
<td>9</td>
</tr>
<tr>
<td>Pivotal response training</td>
<td>2.37 (1.23)</td>
<td>41</td>
</tr>
<tr>
<td>LEGO™ therapy</td>
<td>2.31 (1.21)</td>
<td>10</td>
</tr>
<tr>
<td>Technology-aided instruction and intervention</td>
<td>2.25 (1.09)</td>
<td>9.8</td>
</tr>
<tr>
<td>Extinction</td>
<td>2.16 (1.12)</td>
<td>25.7</td>
</tr>
<tr>
<td>Time delay</td>
<td>2.10 (1.12)</td>
<td>27.3</td>
</tr>
<tr>
<td>Video modelling</td>
<td>1.63 (0.84)</td>
<td>23.5</td>
</tr>
</tbody>
</table>

Note. Rating scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.

Across the sample, EPs most commonly used visual support, social narratives/stories, reinforcement, antecedent-based intervention, prompting, and social skills training. The least commonly used interventions were discrete trial teaching (DTT), exercise, pivotal response training (PRT), LEGO® Therapy, technology-aided instruction and intervention, extinction, time delay, and video modelling. The interventions EPs were least likely to be using were also those that EPs reported being least familiar with.

When asked to specify any other interventions that they were involved in implementing, EPs specified a range of models, approaches and programmes. The most frequently mentioned were Social Communication, Emotional Regulation and
Transactional Support (SCERTS; Prizant, Wetherby, Rubin, Laurent, & Rydell, 2005), Treatment and Education of Autistic and Communication related handicapped Children (TEACCH; Mesibov, Shea, & Schopler, 2005), the National Autistic Society’s EarlyBird and EarlyBird Plus (Shields, 2001), and Attention Autism (Davies, 2013).

EPs in this study most commonly gained information about ASD interventions from their colleagues or the internet. They were also likely to gain this information from journal articles or reports.

*Which factors influence EPs’ decision-making in relation to ASD interventions?*

The mean ratings of the extent to which EPs’ judgements about interventions were influenced by each factor related to decision-making are shown in Table 7. On average, EPs reported that their decision-making was most frequently influenced by individual child needs and the school context. EPs identified ‘other’ factors which influenced their decisions to recommend interventions. These included teachers’ views, school personnel’s understanding of ASD, and the availability of EP time allocation.
Table 7. Mean ratings of factors influencing EPs’ decision-making regarding choosing interventions

<table>
<thead>
<tr>
<th>Decision</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual child needs</td>
<td>4.80 (0.41)</td>
</tr>
<tr>
<td>School context</td>
<td>4.59 (0.52)</td>
</tr>
<tr>
<td>Children’s views</td>
<td>4.26 (0.71)</td>
</tr>
<tr>
<td>Parents’ views</td>
<td>4.25 (0.68)</td>
</tr>
<tr>
<td>Evidence base</td>
<td>4.19 (0.74)</td>
</tr>
<tr>
<td>Experience of intervention as an EP</td>
<td>3.99 (0.77)</td>
</tr>
<tr>
<td>Ease of implementation</td>
<td>3.65 (0.70)</td>
</tr>
<tr>
<td>Local policies and expectations</td>
<td>3.09 (1.10)</td>
</tr>
<tr>
<td>EPS team approach</td>
<td>2.96 (1.12)</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>2.65 (1.87)</td>
</tr>
</tbody>
</table>

*Note. Rating scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.*

Data about how these factors influenced EPs’ decision-making in relation to recommending interventions were analysed using content analysis. Two broad areas were identified from the data: additional factors influencing EP decision-making and EPs’ approach to intervention-planning. Data relating to additional factors were coded into simple categories as shown in Table 8. These factors were identified from two sources, an ‘other’ category in the closed question described above and an open-ended question about decision making factors’. As EPs’ approach to intervention-planning reflected a more complex and ongoing process, each category is summarised in Table 9 and some illustrative quotes are provided.
Table 8. Further decision-making factors identified by participants

<table>
<thead>
<tr>
<th>Decision-making factors</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual needs of the child</td>
<td>13</td>
</tr>
<tr>
<td>Evidence base</td>
<td>9</td>
</tr>
<tr>
<td>School context - Staff ability, skills and knowledge</td>
<td>8</td>
</tr>
<tr>
<td>School context – Staff motivation and perception of intervention</td>
<td>4</td>
</tr>
<tr>
<td>Teacher views</td>
<td>3</td>
</tr>
<tr>
<td>School context - Staff training</td>
<td>3</td>
</tr>
<tr>
<td>School context – Staff capacity</td>
<td>3</td>
</tr>
<tr>
<td>Staff understanding of ASD</td>
<td>2</td>
</tr>
<tr>
<td>School context – Intervention familiarity</td>
<td>2</td>
</tr>
<tr>
<td>EP’s familiarity with an intervention</td>
<td>2</td>
</tr>
<tr>
<td>School context – EP time allocation restraints</td>
<td>2</td>
</tr>
</tbody>
</table>

Note.  
- a Factor specified as ‘other’ in the closed question.  
- b Factor specified in response to an open-ended question.  
- c Factor specified as ‘other’ and as a response to an open-ended question.
Table 9. EPs’ approach to intervention-planning

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>36</td>
<td>Interventions are always planned in collaboration with school staff and parents so their skill, knowledge, and knowledge of the child will be the biggest influence. For myself, the main thing to consider when selecting an intervention is the joint understanding of how and why it will be used.</td>
</tr>
<tr>
<td>Personalisation</td>
<td>9</td>
<td>Developing an individualised and do-able plan is key. Child's views, interests and hopes are first in thinking about interventions.</td>
</tr>
<tr>
<td>Developing school capacity</td>
<td>6</td>
<td>I will start where they are and work in a collaborative manner to ensure all feel involved and empowered so the interventions may develop as confidence grows. This depends largely on contextual factors and how the adults involved perceive the intervention and construct their ability to deliver the</td>
</tr>
</tbody>
</table>
intervention.

Assessment 5 Triangulation of factors and information to inform intervention.

Assessment will inform the intervention selected. The priority needs for the pupil based on needs identified.

**Collaboration**

Collaboration was a main category in EPs’ approach to intervention-planning. EPs reported that their approach to intervention-planning started with consultation and was conducted in collaboration with students, their parents and key adults. EPs took into account the perspectives of the student and sought to develop a shared understanding about why interventions may be used and develop agreed actions.

**Personalisation**

Personalisation was a main category in EPs’ approach to intervention-planning. To ensure interventions were appropriate for individuals, EPs focused on students’ individual characteristics and their strengths and weaknesses and experiences of being a student with ASD.

**Developing school capacity**

Developing school capacity was a small but important category in EPs’ approach to intervention-planning. Working in collaboration with school personnel allowed for the exploration of their perceptions of an intervention in addition to developing a
shared understanding of how and why an intervention will be used. EPs reported that they aimed to empower those who will be delivering the interventions by increasing their confidence in their ability to deliver them.

**Assessment informed intervention.**
Assessment informed intervention was a much smaller but still important category in EPs’ approach to intervention-planning. EPs reported that they used the outcomes of triangulated assessment data, including “assess, plan, do, review” cycles and data gathered from school, parents and the students themselves to identify the priority needs for students which would inform the selection of interventions.

**Discussion**
This study surveyed EPs in the UK and Ireland in order to investigate the extent to which they are using evidence-based, focused interventions for students with ASD.

**Research question 1: To what extent are EPs in the UK and Ireland using focused EBIs for students with ASD?**
EPs in the UK and Ireland reported that on average, 30% of their total caseload involved them in the implementation of interventions for students with ASD.

EPs reported that they were sometimes or often involved with delivering almost three quarters of the 31 identified EBIs. The EBIs which EPs used most often were visual supports, social stories, reinforcement, antecedent-based interventions, prompting, and social skills training. These interventions used most frequently by EPs tended to be interventions which can be implemented by the class teacher or classroom support assistants with little additional support and little need for technical training and as such can be easily integrated into the school day in mainstream settings (Bond, Symes, Hebron, Humphrey, Morewood, et al., 2016).
Those interventions with which EPs are never or rarely involved with implementing included: DTT, exercise, PRT, LEGO™ therapy, technology-aided instruction and intervention, extinction, time delay, and video modelling. These interventions could be more difficult to implement in school-based settings as they may require a higher level of individual support from an adult who is highly trained (Rakos, 2006; Richard L Simpson, 2003) with more technical knowledge or resourcing. It may be the case that the EPs who responded to this survey may be more likely to encounter students with ASD who can manage in mainstream schools with more general as opposed to more specialised interventions. Additionally, those practices which use more behaviourist techniques such as operant conditioning have been found to be less favourable to parents (Callahan, Henson, & Cowan, 2008) and so may be less likely to be implemented.

When asked to specify any other interventions that they are involved in implementing, EPs specified a range of models, approaches and programmes as opposed to focused interventions. One of these models, TEACCH (Mesibov et al., 2005) can be defined as evidence-based as it has been subject to efficacy trials and now has empirical support. Other approaches are defined as evidence-supported as they incorporate evidence-based strategies but the programmes themselves have not been subject to efficacy investigations (Wong et al., 2013); for example, SCERTS (Prizant et al., 2005) and DIR Floortime (Greenspan, Wieder, & Hollander, 2007). EPs were also involved in delivering support programmes for parents and carers. Such programmes included Barnardo’s Cygnet Programme and the National Autistic Society’s EarlyBird Programmes. This demonstrates that in addition to focused interventions and comprehensive treatment models, EPs are also involved in the implementation of interventions which target the adults around children with ASD.
It can be concluded from this research that EPs are involved with implementing focused interventions and comprehensive programmes which are evidence-based or evidence-supported. This is contrary to Stahmer, Collings, & Palinkas (2005) who report that community practice of ASD interventionists generally rely on unsupported techniques. However; the findings of Stahmer et al. (2005) were based on four focus groups with 22 early intervention providers in the Early Years. They also defined EBIs as those interventions identified in an early review by the National Research Council (2001). These factors could account for some of the differences between their findings and those in the current study.

**Research question 2: Which factors influence EPs’ decision-making in relation to ASD interventions?**

The content analysis identified that EP’s approach to intervention-planning covered four main areas: collaboration, assessment informed intervention, personalisation, and developing school capacity. Within these areas, EPs’ decision-making in relation to interventions for students with ASD was influenced by a number of factors in addition to the interventions’ evidence base. The most frequently cited factor was *the individual needs of the student*. EPs reported that they identified individual students’ needs through the use of assessments. Another frequently cited factor was *the views and perspectives of the students, their families and their teachers*. These views were collected through consultation and were used to triangulate assessment data. *The school context* in which the intervention is to be implemented was another main factor influencing EPs’ decision-making. EPs identified a number of contextual variables that would influence their decision-making and these included: the capacity of school personnel to deliver an intervention; the ability, skills and knowledge of school personnel; their level of
training in specific interventions; and school personnel’s perception of an intervention in addition to their motivation to deliver it.

The model of EBP supported by Spring et al. (2008) states that there are three overlapping elements involved in psychosocial intervention decision-making: best available evidence; client characteristics, values and preferences; and resources. This model also takes into consideration the environmental context. EPs’ approach to intervention-planning and the factors they consider when making intervention decisions broadly align with this model (See Figure 1). While the model of EBP lends a good structure to describe EP’s approach to intervention-planning, not all of the findings of this study fit within this model. For example, the role of the EP in developing school capacity to deliver EBIs may be reflective of differences in the role of an EP in comparison to other professionals following EBP models.

Figure 2. An adapted model of EBP proposed by the Council for Training on Evidence-BasedBehavioural Practice (Spring et al., 2008)
Best available evidence

Best available evidence is thought to be found in systematic literature reviews, meta-analyses and randomised control trials (Frederickson, 2002). In relation to ASD interventions, there have been a number of systematic reviews of the intervention literature as a whole (e.g. Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). Although EPs in this study reported that they obtained information about interventions from reports and peer-reviewed journal articles, they were more likely to obtain this information from their colleagues or the internet.

Client characteristics

The best available evidence must be ‘contextualised’ by client characteristics (Spring et al., 2008) and professionals should use their expertise in considering an intervention alongside the child and family’s, circumstances, preferences and values (Munro, 2011). EPs in this study assessed students’ individual needs to inform intervention-planning and considered the perspectives of students, families and teachers to create shared outcomes.

Resources

When approaching intervention-planning, a judgement needs to be made about the resources currently available to deliver the intervention (Spring et al., 2008). EPs in this study most frequently mentioned financial resources, time allocation constraints and access to available, trained practitioners as factors which influence their intervention-planning.

Context

Contextual factors are critical to the adoption of EBIs (Dingfelder & Mandell, 2011) and variables at different contextual levels can interact to affect the ways in which
interventions are implemented (Domitrovich et al., 2008). At the macro level, EPs’ intervention-planning was influenced by school’s financial position and their allocation of EP time. At the school level EPs intervention-planning was influenced by organisational factors such as resources and availability of trained professionals. At the individual level, EPs were influenced by staff perceptions of interventions and their motivation to deliver them.

**EBP in the UK and Ireland.**
This survey has identified that, like their US counterparts (Sansosti & Sansosti, 2013), EPs in the UK and Ireland are using many of those interventions which are considered to be evidence-based. As EPs in the UK and Ireland are not legally bound to implement EBIs in school settings, this allows EPs to consider a wide range of factors when planning interventions besides the interventions’ evidence-base. This study demonstrates that while EPs are pragmatic in their approach to intervention-planning, their approach aligns well with models of EBP.

**Implications of this study for EP practice**
This study demonstrates that EPs are involved with using many of the interventions for students with ASD that are considered to be evidence-based. However, there are many interventions for ASD which EPs are not regularly involved with using, although it is unclear why this might be. An implication for EP practice is that in order to be offering students with ASD the best possible opportunities to meet individualised outcomes, EPs need to ensure they are familiar with EBI research for ASD through independent research or CPD in specific interventions. This study also has implications for the role of the EP and EPS in that they may be best placed to use research to support schools, through the development of frameworks, to support
informed decision-making about selecting, implementing and evaluating interventions for individuals and groups of children with ASD (Magyar & Pandolfi, 2012).

Limitations of this study and future research
This survey was completed with a relatively small, self-selecting sample of EP practitioners. Future research could be conducted with a larger sample of EPs which may enable further analysis into whether factors such as experience, training and specialisms have an effect on EPs’ intervention practice.

Although this study identified those EBIs with which EPs were familiar and regularly involved with implementing, it was beyond the scope of this study to investigate why EPs were not frequently involved with implementing some of the EBIs identified by systematic reviews. Identifying why EPs are not involved with using some EBIs would be useful so that ways of overcoming barriers can be identified if needed.

One of the limitations of the questionnaire design was the response format to the questions relating to frequency; for example EPs rated how frequently they were involved with implementing specific interventions on a Likert scale using the terms never, rarely, sometimes, often, and always. In this study, EPs were ‘sometimes’ involved in implementing 55% of the interventions listed in the questionnaire. As no context was given to the terms used, one EP may interpret ‘sometimes’ differently to another EP. As this study was an exploratory study, the information gained is useful in determining the extent to which EPs’ practice is aligned with the evidence base; however, it will be important for future research to look more qualitatively at EPs’ use of interventions and when they are more likely to use one intervention over another and for which reasons.
This study used a content analysis approach to analysing the qualitative data from the survey and as a result, the findings regarding EPs approach to intervention-planning are preliminary. These findings, however, are a helpful starting point for further qualitative research into EPs’ approach to intervention-planning for students with ASD. This study suggests that EPs’ approach to intervention incorporates many of the elements of EBP. Follow up research including focus groups or in depth interviews would allow for a richer picture of EPs’ approach to intervention-planning to be developed in addition to a model for professional EBP in relation to EPs’ intervention practices.

Conclusion
This study surveyed EPs’ intervention practices for students with ASD. It was found that EPs are using many of the EBIs identified by recent systematic literature reviews; however, there are a quarter of EBIs that EPs are rarely using and a number with which EPs report being unfamiliar; further research to understand the reasons for this would be informative. In addition to the best available evidence for an intervention, EPs reported that there were other factors which influenced their decisions to recommend or implement an intervention. These factors were broadly consistent with models of EBP and included: individual students’ needs, values and preferences; available resources; and school context.
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Paper Three:

The Dissemination of Evidence to Professional Practice
This paper about the dissemination of evidence to professional practice will address four areas. First, it will provide an overview of the concepts of evidence-based practice (EBP) and practice-based evidence (PBE). Second, this paper will give an overview of effective dissemination research. Third, implications for individual educational psychologists’ (EPs’) roles, Educational Psychology Services (EPSs) and future research based on the findings of this thesis will be summarised. Finally, a strategy for disseminating the findings will be outlined alongside a strategy for evaluating the impact of the dissemination.

Section 1: Evidence-based practice and practice-based evidence

Evidence-based practice.
EBP has been described as “a movement within psychology and education to identify, disseminate, and promote the adoption of practices with demonstrated research support” (Kratochwill, 2007, p.829). School psychologists (SPs) are facing increasing demands to use evidence-based practices, particularly evidence-based interventions (EBIs) (Sansosti & Sansosti, 2013). In the US, schools are legally required to implement interventions which are strongly supported by scientific research whenever possible. This means that there is evidence of the efficacy of the intervention which has been gained through well-conducted research using an appropriate design, the use of high quality data analysis and published in peer reviewed journals (IDEA, 2004). In the UK, although the impetus to recommend EBIs is not driven by law, EBP is gaining increasing advocacy (Durbin & Nelson,
Emanating from medical practice, EBP has been described as an approach to intervention implementation consisting of three elements: best available evidence, professional expertise in deciding whether this evidence applies to individual clients, and client’s preferences (Sackett et al., 1996). Closely paralleling this medical definition of EBP, the American Psychological Association Presidential Task Force on EBP (APA, 2006) defined EBP as “the integration of best available research with clinical expertise in the context of patient characteristics, culture, and preferences” (p. 271). This definition expands on client preference by including patient characteristics. Based on this conceptualisation of EBP, the Council for Training on Evidence-Based Behavioural Practice (EBBP) proposed a model of decision-making for choosing psychosocial interventions (Spring et al., 2008). This model consists of the integration of 3 elements which is managed in a manner that is suitable to the environment or organisational context. These three elements are: best available evidence; client characteristics, values and preferences; and resources including practitioner expertise (Figure 3).
Figure 3. An adapted model of EBP proposed by the Council for Training on Evidence-Based Behavioural Practice (Spring et al., 2008).

The model of EBP advocated by Spring et al. (2008) follows a five-step process: ask; acquire; appraise; apply; analyse and adjust. The first step involves asking an appropriate question e.g. which interventions are effective for developing the social initiation skills of a 6-year-old child with ASD. Next a literature search is conducted to acquire the best available evidence to answer the question. The literature is then appraised and the best available evidence is identified. As part of this process, the practitioner will consider the resources available to deliver the intervention in the intended context including skilled practitioners. The client’s characteristics, values and preferences are considered by the practitioner through collaboration. The intervention is then selected using the information gathered and applied for an appropriate amount of time. After the intervention has been
implemented, the practitioner will evaluate the intervention and the progress made towards meeting identified outcomes. As a result of this evaluation any necessary adjustments can be made in collaboration with all stakeholders.

The element of client characteristics, values and preferences is an important factor for EPs to consider in their intervention practice yet a review of the intervention evaluation literature has revealed that children’s perceptions of interventions are very rarely measured. In fact, only one intervention evaluation study in the systematic literature review in this thesis measured the social validity of an intervention from the student’s perspective (Wilkinson, 2005). People with ASD have strong views about ASD interventions and approaches (Williams, 1996). Although EPs may be working with students who do not yet have enough experience to form opinions about certain interventions, EPs could make the opinions of others accessible to students, families and schools. EPs are well-placed to mediate and balance the different perspectives on ASD interventions.

The traditional process of intervention development involves: identifying the problem to be addressed, conducting efficacy studies to see how efficacious an intervention is under well-controlled conditions, conducting effectiveness trials in more naturalistic settings, and then broad dissemination of the validated intervention (Lendrum & Humphrey, 2012). In EBP, there is a hierarchy of acceptable methodologies in intervention evaluation research with randomised control trials (RCTs) representing the gold standard at the apex (Slavin, 2002). For professionals working in school settings, there are concerns that in relying on RCT research, information about interventions from other methodologies will be missed such as the barriers and facilitators to intervention uptake in schools (Kratochwill, 2007). There are also concerns about how the findings from RCT studies transfers to real world
settings (Frederickson, 2002). There are other methodologies besides RCTs which contribute to the knowledge base about EBIs such as single-case experimental (SCE) designs (Kratochwill, 2007). The majority of the research into interventions for students with ASD has taken on a SCE design approach (Bond, Symes, Hebron, Humphrey, & Morewood, 2016; Wong et al., 2013). SCEs may be more relevant to EPs due to the ideographic nature of the problems they encounter in practice (Frederickson, 2002; Mcmillan & Morley, 2010) particularly in relation to ASD. However, many of these studies, including those in the systematic literature review in this thesis, have limited contextual information making generalisation difficult. Furthermore, many of the interventions being evaluated fail to measure the social validity of the interventions and this could in part be due to the fact that the interventions were implemented by researchers as opposed to school-based professionals.

Evidence for an intervention needs to be robust and have integrity; however, the level of methodological rigour required for an intervention to be classified as evidence-based, especially in relation to participant samples and their heterogeneity in diagnostic variance, raises concerns about the applicability of this evidence in practice (Mcmillan & Morley, 2010) especially in relation to children and young people with ASD (Dingfelder & Mandell, 2011). In their discussion of dissemination of research findings, Dingfelder and Mandell (2011) note that those children with ASD who take part in efficacy studies have less heterogeneity than a typical community sample and also tend to be from white middle-class populations. The systematic literature review in this study found that the participants often tend to be around 9 years old and there was little discussion about how applicable these interventions may be for older students. Furthermore, professionals’ ability to make
judgements about what will work in disparate contexts are restricted by EBP (Biesta, 2007) as an intervention evaluation which does not take into consideration the context in which the intervention will be implemented or the perspectives of those who will implementing the intervention has little utility in practice (Lendrum & Humphrey, 2012). Practice-based evidence (PBE) has been described as a way to bridge this research-practice gap (Barkham, Hardy, & Mellor-Clark, 2010).

**Practice-based evidence**

Intervention research generally takes an established route. The development of interventions, as described by Lendrum and Humphrey (2012), indicates that an intervention goes from highly controlled studies (efficacy studies) to studies which take place in more natural, yet still controlled, settings (effectiveness studies). Effectiveness studies refer to the implementation of interventions in real-world contexts in the way in which they were tested during efficacy trials. PBE differs from effectiveness research in that it takes a bottom-up approach beginning with the work of practitioners and then building up an evidence base (Lendrum & Humphrey, 2012; Lieberman et al., 2010). According to Lieberman et al. (2010) “PBE offers a bottom-up, field demonstrated, effective approach that expands, enhances and enriches the growing repertoire of effective practice models” (p. 5). As PBE mirrors routine practice (Barkham et al., 2010), it may be more aligned with the idiographic nature of EP work (Nuttall & Woods, 2013).

PBE allows practitioners to generate knowledge about interventions as opposed to only being consumers of EBP (Fox, 2003). Fox (2003) identified 3 propositions for generating PBE. First, research activity is context dependent and emerges from local contexts. Second, research activity embraces different
methodological approaches in order to capture rich experiences. Third, theories which are generated should have practical application and improve practice.

As has previously been mentioned, SCE designs have been identified as one way of addressing the tension between EBP and PBE. Mcmillan and Morley (2010) argue that SCE designs offer the methodological rigor required by EBP yet still retain the focus on the individual case ensuring the relevance of the research to practice. SCE designs are common in ASD intervention evaluation research; however, this research has been criticised for a lack of focus on factors related to implementation in school-based settings (Kasari & Smith, 2013). Simpson, Mundschenk, and Heflin (2011) advocate that a variety of methodological approaches to intervention evaluation research should be employed to validate practices. It makes sense that these approaches include case studies and action research in order to capture evidence from practice. In reviewing what is published by the profession and for the profession (section one of this thesis), between 2005 and 2015 only 12 studies were published in school and educational psychology journals, matching the inclusion criteria, which evaluated a school-based intervention for ASD. This indicates that most psychologists working in schools are not currently engaged in ASD PBE or if they are, they are not disseminating their findings.

The systematic literature review in this thesis highlighted a lack of qualitative studies as a weakness of research published in school and educational psychology journals in relation to ASD interventions. This is not surprising considering the most recent review of EBIs for young people with ASD included no qualitative studies and only one mixed methods study out of 85 studies (Bond, Symes, Hebron, Humphrey, Morewood, et al., 2016). Although the quality of qualitative studies in the ASD field is often low (Bölte, 2014), qualitative studies have the potential to
give EPs a different perspective on the processes involved in implementing interventions for ASD in educational settings (Bond, Symes, Hebron, Humphrey, Morewood, et al., 2016). This is certainly a gap in the ASD intervention research which could be addressed through PBE.

Section 2: The effective dissemination of research: Outcomes and impact

The dissemination of research into practice is high on the agenda in the UK (Wilson, Petticrew, Calnan, & Nazareth, 2010). Dissemination has been defined 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.’ (Wilson et al., 2010, p. 2)

In their cross disciplinary systematic literature review, Wilson et al. (2010) identified 33 frameworks which can be used by researchers to guide dissemination many of which were underpinned by one of three theoretical approaches; persuasive communication, social marketing, and more frequently diffusion of innovations theory.

According to diffusion of innovations theory, diffusion is the process by which innovations are communicated to the members of a social system over time (Rogers, 2003). This process has four stages: dissemination, adaptation, implementation and maintenance. At the dissemination stage practitioners are made aware of
interventions and are encouraged to adopt them. At the adoption stage, practitioners consider interventions and make a decision about whether or not they will adopt and implement the intervention. According to Forman, Olin, Hoagwood, Crowe, and Saka (2009), support from teachers and principals was the main facilitator to intervention adoption. Interventions were more likely to be used in a school setting where teachers volunteered to be primary implementers of the intervention or were willing to train other teachers. The main barriers to intervention adoption and implementation identified by Forman et al. (2009) was schools personnel’s perception of an intervention and the inflexibility of teachers’ approach to teaching. A survey about EBIs for emotional and behavioural difficulties found that the majority of teachers were unable to identify the interventions on the list (Stormont, Reinke, & Herman, 2011). It was concluded by Stormont et al. (2011) that EBIs cannot be implemented in schools unless those who are implementing them are informed that they exist.

During the implementation stage practitioners implement the intervention over time and finally, during the maintenance stage, practitioners make a decision whether to discontinue the use of the intervention or to ‘institutionalise’ it (Dingfelder & Mandell, 2011). However, it has been shown that when interventions are chosen by schools and implemented, their use is discontinued relatively quickly (Dartnow & Stringfield, 2000). In the longitudinal study by (Dartnow & Stringfield, 2000) out of 13 schools implementing a reform design chosen by the school, only one was continuing to implement this at the end of the third year.

These stages of diffusion can be affected by a number of variables. These include: whether an intervention is seen as better than another intervention; whether the intervention fits with the values and beliefs of the adopters and the organisational
values and capacity to deliver the intervention; and whether the intervention is perceived to be difficult to implement (Dingfelder & Mandell, 2011).

In relation to ASD, there has been limited research around how findings should be disseminated (Yudell et al., 2013). Dissemination of accurate information about interventions is important to avoid misinformation from going viral. For example, there has been controversy in recent years over inaccurate claims of a causal link between vaccinations and autism (Baker, 2008). There have also been claims made about the efficacy of interventions such as early intensive behavioural interventions informed by Applied Behaviour Analysis (ABA) which are not substantiated (Ospina et al., 2008). In the review of behavioural and developmental interventions for ASD, Ospina et al. (2008) concluded that although intensive behavioural therapy (Lovaas, 1987) has the potential to improve core symptoms of ASD when compared with special education, the findings are based on methodologically weak studies with very small sample sizes and relatively short-term follow-up periods. Other interventions such as equine assisted interventions are increasing in popularity; however, there is currently very little research into the efficacy of this intervention with students with ASD (García-Gómez, López-Risco, Rubio-Jiménez, Barona-Guerrero, & García-Peña, 2014).

The propagation of interventions for students with ASD based on weak evidence could perhaps be due to the social marketing approach of dissemination. This increases the rhetoric in the public domain around the effectiveness of certain treatments in practice and then there is the potential for these programmes to be championed by parents (Schreibman, 2000) over interventions which have been verified as efficacious. In discussing why innovations in psychotherapy may not be adopted, Freedman (2002) discusses how perceptions of interventions are influenced
more by ‘neighbours’ than the evidence base. “…social forces consistently trump unvarnished effectiveness. Well-equipped marketers for change “agents” can tip the balance substantially, but they must accurately target these same social pressure points in order to succeed” (Freedman, 2002, p. 1539).

It has previously been argued that there has been little research into the dissemination and uptake of EBIs in school settings (Silverman, Kurtines, & Hoagwood, 2004). In relation to ASD, there has been limited research around how findings should be disseminated (Yudell et al., 2013). It has been argued that researchers should partner with schools to facilitate adoption and implementation of interventions in addition to collaborating with schools to ensure interventions are addressing their needs and can be implemented within their context (Dingfelder & Mandell, 2011). Recently, models for developing and evaluating autism interventions with stakeholders have begun to be developed. These models emphasise an iterative process in the development and evaluation of interventions (Dykstra Steinbrenner et al., 2015).

**Implementation**

In relation to ASD, although reviews such as Wong et al. (2013) provide an overview of empirically tested interventions, there has been limited consideration of school-based implementation. Implementing an intervention in a school setting adopting the methods used in efficacy trials may not be feasible (Kratochwill, 2007). This gap between intervention research and intervention practice has been observed by Kasari and Smith (2013) who point to the need for researchers to collaborate with schools in order to understand how effective ASD interventions can be developed which are responsive to the needs of schools and families.
There is increasing importance placed on the collection of implementation data in the UK; however there is little understanding of its role in the effectiveness of school-based interventions (Lendrum & Humphrey, 2012). Durlak and DuPre, (2008) identified 23 factors, affecting intervention implementation which can be considered at five levels: community level factors, provider characteristics, characteristics of the innovation, factors relevant to the prevention delivery system (organizational functioning), and factors related to the prevention support system (training and technical assistance). Durlak and DuPre, (2008) then compared their findings with other reviews and found that there were 11 common factors which affected intervention implementation across all studies, these were: funding, positive work climate, shared decision making, co-ordination with other agencies, formulation of tasks, leadership, programme champions, administrator support, providers’ skill and proficiency, and training and technical assistance.

Kasari and Smith (2013) have identified 3 broad reasons why ASD EBIs may not be implemented in schools and these include the intervention characteristics, the context in which the intervention is to be adopted, and the process of implementation. In relation to intervention characteristics, it is argued that interventions which are not manualised suffer from not identifying essential features of interventions or the order in which intervention components are to be delivered. In relation to context, Kasari and Smith (2013) argue that most intervention evaluation studies tend to be conducted in clinical settings or in settings which do not exactly replicate school settings. Once an intervention arrives in a school setting, school personnel may be unwilling to change their current practices until the effectiveness of an intervention has been proven. In relation to the process of implementation, implementing efficacious interventions in schools can be
challenging due to their cost, how intensive they are and how complicated they are to deliver. In addition to this, the variability between schools makes them more complex locations than clinical settings in terms of the different types of pupils in each setting, the diversity of the backgrounds and theoretical positions of school-based staff, and the different amounts of resources they may have.

In summary, the dissemination of interventions for students with ASD relies on the research findings being conveyed to the appropriate professionals in educational settings who have the skills, knowledge and motivation to champion the interventions in their context. Accurate information based on methodologically sound research, which includes information about factors impeding or facilitating implementation in well-described school contexts, would be helpful in supporting school personnel to make decisions about whether to adopt particular interventions for students with ASD. Information on the social validity of the interventions would also enable school personnel to make informed decisions about the feasibility of delivering interventions in their context. This will increase the likelihood that EBIs will be implemented by teachers in school settings.

**Section 3: Policy/practice/research/implications of this research**

The research described in this thesis has implications at three levels: the individual professional level (role of the EP/individual practice), the wider organisational level (EPS policy and practice), and the wider professional level (national policy and implications for further research).
**Implications for individual EPs**

The research presented in this thesis acknowledges that EPs are familiar with and are implementing many interventions considered to be evidence based; however, there are some EBIs with which EPs are not familiar. An implication of this is that in order to be offering students with ASD the best opportunities to meet outcomes, EPs must be familiar with the range of interventions available. EPs are required to maintain their own continued professional development (CPD) (Health and Care Professions Council, 2015) and acquiring further training on those interventions with which they are less familiar will equip EPs to better support their schools. As there is a proliferation of ASD interventions, it will not be feasible for EPs to engage in CPD covering all of these so it will also be important for EPs to know where to find information about EBIs for ASD such as the Research Autism website.

According to Durbin and Nelson (2014) teaching is not an evidence-based practice. Teachers lack confidence in identifying and delivering interventions for students with ASD (Gilmour, 2010). There may be a number of reasons for this including the accessibility of research to teachers (Nelson, Leffler, & Hansen, 2009). Although it seems obvious that research findings should be disseminated in ways which are useable by education settings (Nutley, Walter, & Davies, 2003), this may not be the case. Writing about the role of the Resource Teacher: Learning Behaviour (RTLB) in New Zealand, Foster (2014) proposes that that an RTLB could take on the form of a purveyor or mediator between the research and teachers in the classroom. This is also a role for which the EP in the UK is ideally situated. The EP can support teachers to use the research literature in conjunction with their knowledge of the individual needs of students and the school context in order to select and implement interventions.
Implications for educational psychology services

In order to support EPs in supporting their schools to implement and evaluate interventions for children with ASD, EPSs could develop an intervention framework which informs decision making. Magyar and Pandolfi (2012) discuss the use of a multi-tiered problem-solving (MTPS) model which consists of four components: a standardized assessment protocol to identify intervention needs, EBI protocols to target areas of need, a professional development protocol to support the building of capacity in the setting, and a monitoring protocol to ensure treatment integrity.

There is also an implication for EPSs to provide planned and targeted training for the psychologists within their service. At the moment, there are currently several known projects in the North West of England in which EPs have received training in different ASD interventions as part of their CPD. In one Local Authority, EPs have received training on LEGO®- Based Therapy which was identified as having ‘some evidence’. This has equipped them to implement LEGO®- Based Therapy with groups of children or to provide training for school personnel on how to deliver LEGO®- Based Therapy themselves.

EPSs can also support schools in identifying gaps in their approach to educating students with ASD through using audit and self-evaluation tools such as the Autism Standards developed by Autism Education Trust (2016). This will enable schools to identify resources, strategies and interventions that would enable them to provide better opportunities for students with ASD.

Implications for further research

The findings from this survey are preliminary and it is recommended that further research is conducted to investigate the barriers to EPs’ implementation of EBIs for
students with ASD. The findings of this thesis are also a helpful starting point for further qualitative research into EPs’ approach to intervention planning.

Additionally, this survey found that 30% of EPs caseload required them to be involved with implementing interventions for students with ASD. It will be helpful for the EP profession and for students, families and schools if EPs used this as an opportunity to engage in PBE. The systematic literature review in this thesis highlighted that there are several gaps in the research which is published by and for the profession of educational psychology. One of these is that there is a need for ASD intervention evaluation research in which the intervention is delivered by school-based practitioners as opposed to the researchers. EPs are ideally situated to engage in PBE research using this approach and providing staff implementing the interventions with training, supervision, and support in collecting and analysing data. However, given the increase in statutory work facing EPs due to legislative changes (Department for Education, 2014), EPs will have competing demands on their time. As a result trainee EPs enrolled in Doctorate training may be best placed to engage in PBE using SCE designs to evaluate interventions delivered by school staff. An additional gap in the research highlighted by the systematic literature review in this thesis is the lack of measurement of social validity and the investigation of implementation issues. These are important factors which school-based professionals and EPs can take into consideration when planning interventions and so it is important for schools to be aware of these factors so that they can make fully informed decisions when adopting EBIs.
Section 4: Promoting and evaluating the dissemination and impact of this research

- A strategy for promoting and evaluating the dissemination and impact of this research

Dissemination is a key component of EBP and in order to ensure effective dissemination, it is recommended that researchers consider the target audience, how to reach that audience, and the time frame within which dissemination will take place (Bradley & McSherry, 2009). The primary target audience for the findings of this thesis are EPs in the UK and Ireland and as such, they will be the focus of this dissemination strategy.

The purpose of disseminating the findings of the current research to EPs is to encourage them to reflect on their professional practice and consider the implications of the findings. The primary dissemination technique for academic researchers is through journal publication (Bradley & McSherry, 2009). The systematic literature review for this thesis has been submitted to a journal, Psychology in the Schools, for consideration for publication. The empirical research contained in this thesis has been written for publication in Educational Psychology in Practice, a journal published by the Association of Educational Psychologists (AEP). This journal is circulated to all members of the association and is therefore widely read by EPs.

However, as Bradley and McSherry (2009) point out, journals are ineffective for influencing practice. As a result, the dissemination strategy for the findings of this thesis will take into account the assertion of Freemantle and Watt (1994) that effective dissemination requires multiple methods of communication. See Table 10 for an overview of the dissemination strategy.
<table>
<thead>
<tr>
<th>Level of dissemination</th>
<th>Month of dissemination</th>
<th>Dissemination activity</th>
<th>How will dissemination impact be measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research site (participants)</td>
<td>July 2017</td>
<td>Disseminated to EPs through the EPNET email forum.</td>
<td>The amount of times the document has been accessed can be measured.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dissemination on social media</td>
</tr>
<tr>
<td>Local (EPS)</td>
<td>September 2017</td>
<td>In-service training to be offered in the researcher’s EPS at the request of senior EPs.</td>
<td>Attendance at the information giving event can be measured and the ongoing training of those who attended can be monitored with their permission.</td>
</tr>
<tr>
<td>Regional (North West)</td>
<td>December 2017</td>
<td>Seminar delivery at the North West Continued Professional Development Conference.</td>
<td>Attendance at the seminar during the conference can be measured. Feedback from delegates can be recorded.</td>
</tr>
<tr>
<td>Event</td>
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<td>Description</td>
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<tr>
<td>National/international</td>
<td>July 2017</td>
<td>Intended publication of the systematic literature review in the Journal Psychology in the Schools.</td>
<td>Impact can be measured through the number of times the article is accessed or cited by other authors.</td>
</tr>
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<tr>
<td>July 2017</td>
<td></td>
<td>Intended publication for the survey of EPs’ intervention practices in the Journal Educational Psychology in Practice</td>
<td>Impact can measured through the number of times the article is accessed or cited by other authors.</td>
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<tr>
<td>July 2017</td>
<td></td>
<td>Symposium presentation at the International School Psychology Association Conference in Manchester.</td>
<td>Attendance at the symposium during the conference can be measured. Feedback from delegates can be recorded.</td>
</tr>
</tbody>
</table>

At the participant level, feedback will be given to those participants who completed the survey by producing a summary of the main findings and distributing a link to the document to EPs via EPNET. It is also hoped to reach EPs through social media such as Twitter by providing a link to the owner of the official twitter
account of the AEP which will forward those who click on it to a summary of the findings.

At the local level, CPD can be provided by the researcher to the EPS in which colleague EPs have requested further information about EBIs with which they are less familiar. This will enhance their familiarity with EBIs for ASD and encourage them to seek out further training.

At a regional level, the researcher plans to present the findings from the survey at the annual North West CPD conference. This is a conference organised by EPs for EPs. At a national/international level, the researcher has agreed to present the findings of the survey as part of a symposium at the International School Psychology Association conference in July 2017. The conference theme is “Supporting vulnerable children and young people in an uncertain world” and this research in conjunction with the research currently being carried out by the researcher’s colleagues fits well with this theme. The audience at this conference includes practicing and academic EPs and SPs from national and international settings.

The findings from the systematic literature review have been submitted to the journal Psychology in the Schools for peer-review. If the manuscript is successfully published it will add to the increasing demand from researchers and practitioners for a focus on implementation issues when scientist-practitioners are publishing research. It will also add to the increasing demand for intervention evaluation research which focuses on interventions delivered by school-based staff to increase the ecological and social validity of the research. The empirical study, surveying EPs’ intervention practices for students with ASD will be submitted to the journal Educational Psychology in Practice. This is a professionally relevant journal in
which to disseminate the findings of the survey to EPs as it is the official journal of the Association of Educational Psychologists. The main contributors and readers of this journal are practicing EPs in the UK and its focus is on applied practice. It is distributed to all members of the AEP and as a result it is widely read by EPs.

**Conclusion**

This paper has considered EBIs as one element of an approach to EBP. The limitations of the research into EBIs for ASD have been noted in the literature and consequently much of the ASD intervention evaluation research has consisted of SCE designs. While this type of research limits generalisability, it is hoped that by using these designs and engaging in PBE, EPs can build up a bank of knowledge containing contextual information, data about the facilitators and barriers to implementation, and data about the social validity of interventions to those who will be implementing them in school settings. It is hoped that this research is found to be relevant to those EPs who are interested in bridging the research to practice gap in relation to ASD interventions and that it is a starting point for a discussion about EPs’ approach to intervention planning for children with ASD.
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10.1007/s10803-014-2351-z
Appendices

Appendix A: Author guidelines for the journal ‘Psychology in the Schools’.

Psychology in the Schools
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Edited By: David E. McIntosh
Impact Factor: 1.035
ISI Journal Citation Reports © Ranking: 2015: 34/57 (Psychology Educational)
Online ISSN: 1520-6807

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2. A recent study has shown the time period is longer (Cohen, 1997; Smith & Johnson, 2003).

A sampling of the most common entries in reference lists appears below. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page one. Hence, it is Psychology in the Schools, 41, 431–442, not Psychology in the Schools, 41(4), 431–442. Entries not exemplified below are modeled in the *Publication Manual*. Please note that the use of italics has been eliminated from the print publication (this is a departure from the *Publication Manual* style).

**Book:** Bradley-Johnson, S. (1994). Psychoeducational assessment of students who are visually impaired or blind: Infancy through high school (2nd ed.). Austin, TX: Pro-ed.


**Unpublished** Smith, A. (2001). Analyses of nonunion American
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Hello Dr. Robinson,

Apologies for the late response. We have an absolute page limit of 36pgs which should include all references, tables, figures, manuscript body, abstract and title page. Font size is 12pt as per APA format. Thank you for your questions and please do not hesitate to ask if you have more!

Darrah

Editorial Staff
Psychology in the Schools
jnlpsychscho@bsu.edu
Appendix B: Inter-rater reliability calculation.

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<td>Totals</td>
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<td>Inter-rater reliability score</td>
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Appendix C: Author Guidelines for the journal ‘Educational psychology in Practice’.

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Contents list
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  - Formatting and templates
  - References
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- Submitting your paper
- Publication charges
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Appendix D: Participant recruitment emails

Dear Colleagues,
As you may remember, trainees and staff from the University of Manchester Doctorate in Educational and Child Psychology programme invited you to participate in a survey to investigate the practices of EPs in relation to assessment and intervention with children and young people with autism in the UK and Ireland.

Due to an unfortunate technical error, an incomplete set of data was collected regarding ASD interventions. In order to ensure the integrity of the research a decision has been made to gather this information again. As such, this questionnaire may be familiar to those who have previously completed it; however, this time we are only asking EPs about their intervention practices so it should take less time to complete. We would welcome and appreciate the participation of all EPs, PEPs, TEPs and Assistant EPs in completing this questionnaire, including those who have previously submitted responses.

Participation in the study requires EPs to complete an anonymous on-line questionnaire which will take no longer than 15 minutes. The survey will be live from 09.12.16 until 31.01.17. This research has been approved by the National Educational Psychology Service (NEPS), Ireland and received ethical approval from the Manchester Institute of Education Research Integrity Committee.

Original email

Dear Colleagues
The University of Manchester is conducting a survey to investigate the assessment and intervention practices of EPs in the UK and Ireland. This survey is part of two doctoral theses looking at EPs' use of evidence-based assessments and interventions for children and Young People with ASD.

Participation in the study requires EPs and TEPs to take an anonymous on-line questionnaire which will take no longer than 25 minutes to complete. The survey will be live from 15.07.16 until 30.09.16. This research has been approved by the National Educational Psychology Service (NEPS), Ireland and received ethical approval from the Manchester Institute of Education Research Integrity Committee. If you would like to participate in the research please follow the link below.

If you would like to receive a paper version of the questionnaire, please email the research team at ASDresearch@manchester.ac.uk
We are keen for contributions from EPs at whatever their stage of career (including trainees) and those with and without ASD specialisms.

Caroline Bond, Lee Robinson and Shireen Sadreddini
Manchester Institute of Education
University of Manchester
Appendix E: Questionnaire

Educational Psychologists’ intervention practices with children with autism

Participant Information

1. Gender: ☐Male ☐Female

2. Professional role/Position: ☐Assistant EP ☐TEP Year 1 ☐TEP Year 2 ☐TEP Year 3 ☐EP ☐Senior EP ☐PEP ☐Associate EP ☐Choose not to say

3. Number of years working as a qualified EP: __________

4. Number of completed years in my current position: __________

5. Are you an ASD Specialist? ☐Yes ☐No (if yes please indicate the number of completed years __________)

6. Where do you currently work? (please circle your response)

Northern Ireland  Ireland  Wales  Scotland
England
Channel Islands  East of England  East Midlands  London  North West England  West Midlands
South East England  South West England  North East England  Yorkshire and Humber

7. How would you describe the area where you currently work? ☐Predominantly urban ☐Predominantly rural ☐Mixed urban/rural

8. Could you describe the type of service

☐LA ☐Partially ☐Fully ☐National ☐Other (specify ______

☐LA embedded ☐Traded ☐Fully traded ☐National service (Eire) ☐Other (specify ______
9. Size of service (no. of FTE EPs in service): ____________

10. Is there an ASD pathway in your area?  Yes  No

11. Is an EP part of the ASD Pathway? □ Yes  □ No  Is this your Role? □ Yes  □ No

12. What % of your caseload would you estimate has involved you assisting in the diagnosis of students with ASD/children who have difficulties consistent with ASD during the last school year?  %

13. When involved in the diagnosis of ASD which criteria do you consult? □ DSM-4  □ DSM-5  □ ICD-10  □ Other ________________
**Intervention strategies for children with who have difficulties consistent with autism**

1. What % of your caseload would you estimate has involved you assisting school staff in developing and reviewing interventions for students with ASD during the last school year?

%  

2. In identifying evidence-based practices, Wong et al (2013) found that interventions for children and young people with ASD focused on the 12 outcomes listed below. Please can you identify the extent to which you are involved in implementing interventions to meet each of the following outcomes? Please answer ‘Not familiar’ if you are not familiar with the outcome.

| Social outcomes (Skills needed to interact with others) | Not familiar | Never | Rarely | Sometimes | Often | Always |
| Communication outcomes (ability to express wants, needs, choices, feelings, or ideas) | | | | | | |
| Challenging/Interfering behaviour outcomes (Decreasing or eliminating behaviours that interfere with the individual’s ability to learn) | | | | | | |
| Joint attention outcomes (Behaviours needed for sharing interests and/or experiences) | | | | | | |
| Play-based outcomes (Use of toys or leisure materials) | | | | | | |
| Cognitive skills outcomes (problem solving, information processing, reasoning, theory of mind, memory, creativity) | | | | | | |
| School readiness outcomes (performance during a task not directly related to task content) | | | | | | |
| Pre-academic/academic skills outcomes (Performance on tasks typically taught and used in school settings) | | | | | | |
| Motor skills outcomes? (Movement or motion, including both fine and gross motor skills, or related to sensory system/sensory functioning) | | | | | | |
| Adaptive/self-help skills outcomes? (Independent living skills and personal care skills) | | | | | | |
3. The following evidence-based interventions have been identified as being evidence-based practices. Please identify the extent to which you have been involved in implementing the following evidence-based intervention practices for children with ASD. Please answer ‘Not familiar’ if you are not familiar with the intervention. (0= Not familiar, 1 = Never 2= Rarely 3= Sometimes 4= Often 5= Always)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement</td>
<td></td>
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<tr>
<td>Prompting</td>
<td></td>
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<tr>
<td>Antecedent-based intervention (modifications that are made to the environment/context in an attempt to change or shape a student’s behaviour)</td>
<td></td>
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<tr>
<td>Video modelling (a method of instruction that uses video recording and display equipment to provide a visual model of the targeted behavior or skill)</td>
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<tr>
<td>Differential reinforcement (receiving reinforcement when engaging in a specific desired behavior or a behavior that is physically impossible to do while exhibiting the inappropriate behavior or not engaging in the interfering behavior)</td>
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<tr>
<td>Parent-implemented intervention</td>
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<tr>
<td>Technology-aided instruction and intervention</td>
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<tr>
<td>Visual support</td>
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<tr>
<td>Social narratives/stories</td>
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<tr>
<td>Peer-mediated instruction and intervention</td>
<td></td>
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<tr>
<td>Social skills training</td>
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<tr>
<td>Discrete trial teaching (one-to-one instructional approach used to teach skills in a planned, controlled, and systematic manner)</td>
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<tr>
<td>Functional communication training</td>
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<tr>
<td>Intervention</td>
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<td>-------------------------------------</td>
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<tr>
<td>Time delay (a practice used to systematically fade the use of prompts during instructional activities)</td>
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<tr>
<td>Extinction (a strategy to reduce or eliminate a challenging behavior)</td>
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<tr>
<td>Functional behaviour assessment</td>
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<tr>
<td>Naturalistic intervention (a collection of practices including environmental arrangement and interaction techniques)</td>
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<tr>
<td>Response interruption/ redirection (introduction of a distractor when an interfering behavior is occurring to divert the learner’s attention away from the interfering behaviour)</td>
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<tr>
<td>Self-management</td>
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<tr>
<td>Scripting</td>
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<tr>
<td>Pivotal response training (Pivotal learning variables guide intervention practices to build on learner interests and initiative)</td>
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<tr>
<td>Task analysis</td>
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<tr>
<td>Exercise</td>
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<tr>
<td>Picture Exchange Communication System (PECS)</td>
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<tr>
<td>Modelling</td>
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<tr>
<td>Cognitive behavioural intervention</td>
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<tr>
<td>Structured play group (interventions using small groups to teach a broad range of outcomes)</td>
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<tr>
<td>Joint attention interventions</td>
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<tr>
<td>LEGO™ therapy</td>
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<tr>
<td>Play-based interventions (using direct instruction to train students with ASD in social skills during play activities with an adult or peer)</td>
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<tr>
<td>Multi-sensory</td>
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</table>
4. Please specify any interventions which you have been involved with implementing which have not been mentioned above.


5. How often have you worked collaboratively with the following professionals in implementing an intervention for children with ASD?

<table>
<thead>
<tr>
<th>Professional</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paediatricians</td>
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<tr>
<td>Speech &amp; Language therapists</td>
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<tr>
<td>Clinical psychologists</td>
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<tr>
<td>Psychiatrists</td>
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<tr>
<td>Teachers</td>
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<td>TAs</td>
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<td>SENCos</td>
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<td>Specialist teachers</td>
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<tr>
<td>Outreach teams</td>
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<tr>
<td>Family support</td>
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<tr>
<td>Other (please specify)</td>
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</table>
6. In the last year, which of these sources have informed your practice regarding interventions for ASD?

<table>
<thead>
<tr>
<th>Source</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</thead>
<tbody>
<tr>
<td>Journal articles</td>
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<td>Reports</td>
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<td>Conferences</td>
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<tr>
<td>CPD training courses</td>
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<tr>
<td>Colleagues</td>
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<tr>
<td>Internet</td>
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<tr>
<td>Professional membership publications (e.g. BPS, AEP)</td>
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<td>Charity organization (e.g. NAS)</td>
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<tr>
<td>University seminars</td>
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</table>

7. If you have found information about interventions for ASD from other sources not listed above, please specify them here.

______________________________________________________________________________________________________________________

8. To what extent do the following factors influence your decision making around your choice of intervention for children with ASD/children who have difficulties consistent with ASD?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</thead>
<tbody>
<tr>
<td>Evidence base</td>
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<tr>
<td>Individual child needs (pupil factors)</td>
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<tr>
<td>School context (ASD friendly, staff skills)</td>
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<tr>
<td>Experience of intervention as an EP</td>
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<tr>
<td>Ease of implementation</td>
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<tr>
<td>EPS team approach</td>
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<td>Local policies and expectations (e.g. LA)</td>
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<tr>
<td>Parents’ views</td>
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<tr>
<td>Children’s views</td>
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<tr>
<td>Other (please specify)</td>
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</table>
9. Please describe how the above factors influence your decision to recommend interventions.

__________________________________________________________________________________________

__________________________________________________________________________________________

__________________________________________________________________________________________

__________________________________________________________________________________________

10. On average, how often are you as an EP involved in evaluating a child’s progress to meeting the outcomes of their intervention?

☐ Daily  ☐ Fortnightly  ☐ Half-termly  ☐ Yearly

☐ Weekly  ☐ Monthly  ☐ Termly

11. How are you as an EP most likely to track progress?

☐ Yearly review  ☐ IEP review  ☐ CAF/EHAT review

☐ Consultation  ☐ Informal conversations  ☐ Other, please specify
12. Are there any other aspects of your work in relation to intervention with children with autism/children who have difficulties consistent with autism, that haven’t been covered?
Appendix F: Ethical approval application and confirmation from Manchester Institute of Education.

Manchester Institute of Education

<table>
<thead>
<tr>
<th>RIA reference</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date received</td>
<td>Date approved</td>
</tr>
</tbody>
</table>

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.

SECTION 1: Student Details /Identification of the person responsible for the research

<table>
<thead>
<tr>
<th>Name of Student:</th>
<th>Lee Robinson &amp; Shireen Sadreddini</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student ID (quoted on library/swipe card):</td>
<td>7337364 &amp; 7107055</td>
</tr>
</tbody>
</table>
| Email Address:           | Lee.robinson-3@postgrad.machester.ac.uk  
                           | Shireen.Sadreddini@postgrad.manchester.ac.uk |
| Name of Supervisor:      | Caroline Bond |
| Supervisor email:        | Caroline.bond@manchester.ac.uk |
| Programme (PhD, Prof Doc, MEd, PGCE, MSc, BA etc): | D.Ed.Ch.Psychol |
| Year of Study:           | Year 1 |
| Full/Part-time:          | Full |
| Title of Research Project: | Educational psychologists’ contributions to the assessments of and interventions with children with autism |
| Recruitment and Data Collection |
| Start Date:              | On receipt of confirmation of ethical approval |
| End Date:                | May 2017 |
| Location(s) where the project will be carried out: | England and Ireland |
| Student Signature:       | Lee Robinson & Shireen Sadreddini |
** 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).
RQ1: How do EPs contribute to assessments and interventions with children with difficulties consistent with ASD?
   a. How do EPs contribute to assessments?
   b. How do EPs contribute to interventions?

RQ2: To what extent does the context in which EPs work influence EPs’ practices in the assessment and intervention of children with difficulties consistent with ASD?
   a. What influences EPs’ contributions to assessments?
   b. What influences EPs’ contributions to interventions?

1.2 Academic justification

The majority of recent research into the EP role into assessment and intervention for children with autism is from the United States. The last piece of research to consider the role of the EP in autism assessment in the UK was by Waite and Wood’s in 1999. Since this study there have been significant developments in the role of the EP, legislation and ASD. Further research is therefore needed to uncover the practices and contribution of EPs to autism assessment and interventions in the UK in the present context.

2. Methodology

2.1 Project Design:

Please briefly outline the design and methodological approach of the project, including the theoretical framework that informs it.

The study proposes to use an online questionnaire in order to uncover EPs assessment and intervention practices. The questionnaire will include open and closed qualitative and quantitative questions. The researchers’ pilot studies (Robinson, 2015; Sadreddini, 2015) and previous literature (Waite & Woods, 1999; Sansosti & Sansosti, 2013) will be used to inform the questions for the questionnaire. The questionnaire will be piloted with four colleagues before sending it out nationally.

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 [x]
If Yes, describe how these are to be conducted (Append your interview guide):

2.2.2. Questionnaires

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>

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

This will be an online questionnaire. A link will be sent to participants via email and EPNet, an online forum for EPs. Paper copies of the questionnaire will be sent out by direct mail with freepost return. See appended draft questionnaire.

2.2.3. Observations

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>

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):

2.2.4. Diary

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>

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):

2.2.5. Intervention

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>

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):

2.2.6. Assessments

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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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

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</thead>
</table>

147
2.2.8. Does data collection use video or still image?  
Yes [ ]  No [x]  

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

2.2.9  Research Experience

Please state your experience in conducting these research interventions or assessments (where applicable) and methodologies outlined above - provide supporting evidence (e.g. course unit code).

- Both Lee and Shireen have attended lectures covering survey design

2.3  **Sampling**

What type of sampling method do you propose to use?

2.3.1. Statistical  
Yes [ ]  No [x]  

*If Yes, describe the type, your justification for taking this approach and proposed sample size:*

2.3.2. Other  
Yes [x]  No [ ]

Questionnaire: Representative sample of EPs and TEPs in the UK and Ireland. Participants will be recruited via email, EPNet (an online forum for EPs) and an advertisement in Association of Education Psychologists bulletin. A paper copy of the questionnaire will be sent to EP services. EPs working for charities such as the National Autistic Society will also be approached via email.

2.4  **Analysis method**

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

2.4.1. Quantitative analyses  
Yes [x]  No [ ]  

*If Yes, please give details:*
Quantitative questionnaire data will be subject to descriptive and correlational analysis

2.4.2. Qualitative analyses  
Yes [x]  No [ ]  

*If Yes, please give details:*
Qualitative questionnaire data will be subject to thematic analysis (Braun & Clark, 2006)
2.5 Ethical Issues

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

On the online questionnaire, the participant will be asked to confirm their intent to participate and their consent to allow their data to be used anonymously in publications. They will then be able to access the questionnaire. In continuing to complete the questionnaire consent will be assumed. A similar consent form will be attached to the postal version of the questionnaires. (See attached forms)

All data collected from the questionnaire will be directly relevant to the current study and that of another colleague carrying out research as part of a larger project. All data will be anonymised and names of individuals, services or local authorities will not be collected. Instead the questionnaire will ask for details about the size of the LA and the type of service they work in.

The researchers’ and supervisors’ contact details will be included in the questionnaire to ensure that any questions can be answered directly.

3. Participant Details

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

| number | 500 |
| sex    | Mixed |
| age group(s) | Mixed |
| Location(s) | England and Ireland |

3.2 Vulnerable groups

3.2.1. Will your project include participants from either of the following groups? (Tick as appropriate)

☐ 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.

N/A

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.

| DBS*      | Yes ☐ | No ☐ | NA ☒ |
| Other     | Yes ☐ | No ☐ | NA ☒ |
*NB: You will need a DBS application through the University. Any work related DBS clearance is not valid for your University research.

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 [□] NA [X]

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 [X]

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

Yes [□] NA [X]

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

<table>
<thead>
<tr>
<th>If NA, please explain why permission is not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate permission will be sought from the educational psychology service in Ireland.</td>
</tr>
</tbody>
</table>

4.2 **Participant recruitment**

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

| [X] Letters/ emails and follow up phone calls to organisations |
| [X] Posters / Advertisements |
| [X] Website/Internet (including Facebook/other social media) |
| [X] Known or named client groups (students, etc). |
| [X] Networks and recommendations |
| [X] 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.

Emails to EP services containing information about the study and a link to the questionnaire.

Direct mail to EP services with freepost return envelopes

An advertisement in the AEP bulletin

A message on EPNet (a forum for EPs)

EPs working for charities such as the National Autistic Society will also be approached via
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):

Indicate whether there is any existing relationship between yourself and the source/group of potential participants: participants may include colleagues working at the same EPS as the researcher.

4.2.3. How will you approach potential participants? (tick all that apply)

- Letter
- Email
- Website/internet (including Facebook/other social media site)
- Presentation at meeting or similar
- Other (describe here):

Through a message on EPNET (a forum for EPs)
Advertisement in the AEP bulletin

Append text of letters / emails / posters / advertisements / presentation etc
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?

Information giving will be undertaken through:

- Letter
- Email
- Website/internet (including Facebook/other social media site)
- Telephone
- Information sheet (covering headings in University template)
- Presentation at meeting or similar
- Other (describe here):

Append text of recruitment letters / emails / information sheet to this application

4.2.5 Information accessibility

Please confirm:

- I have supplied information relevant to each participating group
- 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.*

2 weeks. After two weeks a prompt email will be sent out to encourage participants to participate in the study. Access to the questionnaire will close after 4 weeks.

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.*

There are no incentives for taking part

4.2.8 Avoiding coercion
4.3. Consent

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

- X Implied consent - return/submission of completed questionnaire
- Written consent form matching University template
- Verbally (give details of how this will be recorded)
- Other method (give details here):

Append text of consent forms/consent taking procedure to this application.

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.

N/A

5. Participation in the research

5.1 Duration

How long will each participant be expected to take part in activities?
25 mins for the questionnaire

5.2 Benefits to participation

Are there any benefits to participation for participants (beyond incentive noted above)?
No

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?
No

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?
There are no foreseen adverse effects of this study

6.1.2 Safeguards
What precautions or measures have been taken to minimise or mitigate the risks identified above?
N/A

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?
Potential for conflicting ideas about general EP practice

6.2.2 Safeguards
What precautions or measures have been taken to minimise or mitigate the risks identified above?
Participants will be reminded that all responses to questions will be dealt with respectfully.

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:

6.4 Early termination of the research
6.4.1 Criteria
What are the criteria for electively stopping the research prematurely?
n/a
6.4.2 Please confirm, by ticking here, that:

- 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?

- Electronic transfer by email or computer networks
- Use of personal addresses, postcodes, faxes, e-mails or telephone numbers
- Publication of direct quotations from respondents
- Publication of data that might allow identification of individuals
- Use of audio/visual recording devices
- Sharing data with other organisations
- Export of data outside EU

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

- Manual files
- Home or other personal computers
- Laptop computers
- University computers
- Private company computers
- NHS computers

7.2 Confidentiality of personal data
If other arrangements apply please specify:

What measures have been put in place to ensure confidentiality of personal data? Give details of whether any encryption or other anonymisation procedures have been used and at what stage?

All files will be password protected on an encrypted data stick and hard copies will be kept securely in a locked draw. All data will be anonymised.

7.3 Research monitoring and auditing Please confirm:

The student researcher’s supervisor(s) will monitor the research

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:

- Fairly and lawfully processed
- Processed for limited purposes as outlined in this application and only used in the way(s) for which consent has been given.
- Adequate for the purpose, relevant and not excessive
- Accurate
- Not kept longer than necessary
- Processed in accordance with the participant’s rights
- Secure – **on an encrypted storage device**
- Only transferred to other settings with appropriate protection.

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

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

**n/a** 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

**x** 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:*

**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:*

**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 ☐
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)

☒ Peer reviewed scientific journals
☐ Book / Chapter contribution
☐ Published review (ESRC, Cochrane)
☐ Internal report
☒ Conference presentation
☒ 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)

☒ Written feedback to research participants
☐ Presentation to participants or relevant community groups
☐ Other e.g. Video/Website (describe here):

9. Research Sponsorship
9.1 External funding
Are you in receipt of any external funding for your study? (tick one)

☐ External Funding ☒ 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)

The University of Manchester

Other organisation

If not UoM, provide details of who will act as sponsor of the research and their insurance details

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:

- 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><strong>Total Number</strong></td>
<td></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>1</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>1</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>1</td>
</tr>
<tr>
<td>Consent taking – one for each participant type specified in Q3.1 (Consent form or alternative procedure)</td>
<td>1</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 C) completed</td>
<td>1</td>
</tr>
</tbody>
</table>

SECTION 3: MINOR AMENDMENT TO RESEARCH PROJECT

**Application for Approval of Minor Amendment**

Details of proposed amendment (please give as much detail as possible)

**Supervisor Declaration**

I agree that the amendment proposed does not change the character of this research.

---

1 Minor amendments are those that do not alter the character of the research or the participant groups
research or the participant groups.

I confirm that the research risk assessment for the study as MEDIUM remains.

<table>
<thead>
<tr>
<th>Supervisor’s signature*</th>
<th>Date.</th>
</tr>
</thead>
</table>

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.
Research Risk and Ethics Assessment
Manchester Institute of Education, University of Manchester

The Manchester Institute of Education is committed to developing and supporting the highest standards of research in education and its associated fields. The Research Risk and Ethics Assessment (RREA) resource has been created in order to maintain these high academic standards and associated codes of good research practice. The research portfolio within the Manchester Institute of Education (MIE) covers a wide range of fields and perspectives. Research within each of these areas places responsibilities of a differing nature on supervisors and students subject to course, level, focus and participants. The aim of the Research Risk and Ethics Assessment is to assist supervisors and students in assessing these factors.

The Manchester Institute of Education has determined three levels of Research Risk each of which has a number of associated criteria and have implications for the degree of ethical review required. In general, the research risk level is considered to be:

- **High** IF the research focuses on groups within society in need of special support, or where it may be non-standard, or if there is a possibility the research may be contentious in one or more ways.
- **Medium** IF the research follows standard procedures and established research methodologies and is considered non-contentious.
- **Low** IF the research is of a routine nature and is considered non-contentious

The form guides you in assessing the research against each of these risk levels in turn. Agreement to proceed with research at each of these levels is provided by an appropriate University Research Ethics Committee, a MIE Research Integrity Committee member, or by the supervisor/tutor respectively.

**How to complete the Research Risk and Ethics Assessment (RREA) form.**
This form should be completed, in consultation with the MIE Ethical Practice Policy Guidelines, by Manchester Institute of Education students and their supervisors in all cases, except where a pre-approved assignment template currently exists. A separate Fieldwork Risk Assessment (FRA) form must be completed if you will be making fieldwork visits but are not able to agree with ALL the criteria in the LOW Risk Fieldwork Statement (Section C). This is so you can plan how safety issues will be responded to during fieldwork visits. The FRA form is available on the MIE ethics intranet. Instructions on this and subsequent stages of the RREA process are provided within each of the following sections.

**ANY student**
- Section A – Summary of Research Proposal (page 1)
- Section B – Description of Research (page 2)
- Section C – LOW risk Fieldwork Declaration (page 3)
- Sections D.0-D.1 – Criteria for HIGH risk research (page 6)
- Section D.2 – Criteria for MEDIUM risk research (page 7)
- Section D.3 – Criteria for LOW risk research (page 8)

**LOW Risk UG / PGT / Doctorate Pilot studies/Research Papers only**

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1 A reasonable person would agree that the study includes no issues of public or private objection, or of a sensitive nature.
2 [http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/)
3 For courses with approved templates see: [http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/)
- Section E.1 – Criteria for LOW risk ethical approval (page 10)

Supervisors and tutor approvals of LOW risk student research
- Section E.2 – Supervisor confirmation that research matches LOW risk criteria (page 11)

Minor amendments to MEDIUM OR LOW risk approvals
- Section F.1 – Minor Amendments to MEDIUM OR LOW risk approvals (page 12)

It may be appropriate for supervisors and students to review and discuss responses to these questions together from the outset.

<table>
<thead>
<tr>
<th>Research Risk and Ethics Assessment</th>
</tr>
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<tbody>
<tr>
<td>Manchester Institute of Education, University of Manchester</td>
</tr>
</tbody>
</table>

To be completed by AEF administrator

<table>
<thead>
<tr>
<th>RIA reference</th>
<th>Date received</th>
<th>Date approved</th>
</tr>
</thead>
</table>

SECTION A - SUMMARY OF RESEARCH PROPOSAL
This section should be completed by the person undertaking the research.

| A1. Name of Person/Student: | Shireen Sadreddini  
|                           | Lee Robinson       |
| A2. Student ID (quoted on library/swipe card): | 7107055  
|                                                  | 7337364           |
| A3. Email Address: | Lee.robinson-3@postgrad.manchester.ac.uk  
|                      | Shireen.Sadreddini@postgrad.manchester.ac.uk |
| A4. Name of Supervisor: | Caroline Bond |
| A5. Supervisor email address: | caroline.bond@manchester.ac.uk |
| A6. Programme (e.g. PhD, MEd, MSc, PGCE, BA etc): | D.Ed.Ch.Psychol |
| A7. Year of Study | 1 |
| A8. Full/Part-time | Full |
| A9. Course Code/Study type (tick) | EDUC  
|                                      | Dissertation  
|                                      | Pilot Study  
|                                      | Assignment / Research Paper  
|                                      | ✔ |
| A11. Project Submission Date: | 2017 |
| A12. Fieldwork visit dates | Start Date:  
|                           | June 2015  
|                           | Completion Date:  
|                           | May 2017 |
| A13. Geographic location(s) where the project will be carried | England and Ireland |
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).

Principal Research Questions (RQs):

RQ1: How do EPs contribute to assessments and interventions with children with difficulties consistent with ASD?
   a. How do EPs contribute to assessments?
   b. How do EPs contribute to interventions?

RQ2: To what extent does the context in which EPs work influence EPs' practices in the assessment and intervention of children with difficulties consistent with ASD?
   a. What influences EPs' contributions to assessments?
   b. What influences EPs' contributions to interventions?

Academic justification:

The majority of recent research into the EP role into assessment and intervention for children with autism is from the United States. The most recent piece of research to
**Project Design:**

The proposed research will gather information about EPs assessment and intervention practices with children with autism. It will involve a large scale, national questionnaire.

The RQs are:

**RQ1:** How do EPs contribute to assessments and interventions with children with difficulties consistent with ASD?
  a. How do EPs contribute to assessments?
  b. How do EPs contribute to interventions?

**RQ2:** To what extent does the context in which EPs work influence EPs’ practices in the assessment and intervention of children with difficulties consistent with ASD?
  a. What influences EPs’ contributions to assessments?
  b. What influences EPs’ contributions to interventions?

**Data Collection Methods:**

The study proposes to use a postal and online questionnaire in order to uncover EPs assessment and intervention practices. The questionnaire will include open and closed qualitative and quantitative questions. The researchers’ pilot studies (Robinson, 2015; Sadreddini, 2015) and previous literature (Waite & Woods, 1999; Sansosti & Sansosti, 2013) will be used to inform the questions for the questionnaire. The questionnaire will be piloted with four colleagues before sending it out nationally.

**Sampling:**

Questionnaire: Representative sample of EPs and TEPs in the UK and Ireland. Participants will be invited to complete the online questionnaire through EPnet and through an advertisement in the Association of Educational Psychologists bulletin. EPs working for charities such as the National Autistic Society will also be approached via email. Postal questionnaires will also be mailed out to EP services. The questionnaire will be created online using a University of Manchester tool: [http://it.humanities.manchester.ac.uk/web/communications/onlinesurvey/index.html](http://it.humanities.manchester.ac.uk/web/communications/onlinesurvey/index.html) EP services will also be sent postal copies of the questionnaire with freepost return envelopes.

**Method(s) of Analysis:**

- Quantitative questionnaire data: Descriptive and correlational analysis
- Qualitative questionnaire data: Thematic analysis (Braun and Clarke, 2006)

One of the researchers will analyse the quantitative and qualitative data pertaining to RQ1a and RQ2a. The other researcher will analyse data pertaining to RQ1b and RQ2b. These two avenues of analysis will result in two separate thesis write-ups.

**NB:** If your research methods include collection of image or video data, you must complete the Video And Still image REsearch (VASTRE) document (regardless of research risk). See [http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/stillimageresearch/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/stillimageresearch/)
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. Total number of expected research participants. 500

- Number of different participant groups (e.g. Teacher, parents, pupils = 3 groups requiring differentiated information/consent sheets) 2

B5. The research will take place (tick all that apply):

- [ ] within the UK
- [ ] within the researcher’s home country if outside the UK
- [x] wholly or partly outside the UK and not in the home country of the researcher*

* You must complete a separate Fieldwork Risk Assessment form

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5 The person with learning difficulties has appropriate support within the setting from accredited support workers or family members.

6 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. LOW Risk Fieldwork Statement and Declaration

If you are making fieldwork visits, BUT CANNOT TICK ALL the low risk fieldwork criteria in the Statement below, YOU MUST COMPLETE THE SEPARATE FIELDWORK RISK ASSESSMENT (FRA) FORM.

C.1 Fieldwork visits7 (If you will not make any fieldwork visits, tick the alternative items in C.2)

Fieldwork Statement
I confirm:

- I will not travel outside the UK or my home nation.
- I will not visit any country where the Foreign and Commonwealth Office has issued a warning against travel8
- 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 me and offer no discernable risk.
- I will not travel through, or work in research locations which have known hazards to health or safety such as unlit areas, derelict areas, cliffs, or local endemic diseases.
- I will carry only necessary personal items when travelling to, and within, research locations.
- no specific vaccinations are required / I have had specific vaccinations required to undertake this research.
- first aid provision and a trained first aider are available where appropriate.
- I will only operate machinery / electrical equipment / workplace vehicles, or handle / work with animals, at the research location(s) where I have clear competence to do so / will be under close supervision from a qualified person.
- the fieldwork will be carried out within normal working hours9 at a time convenient to participants.
- I will not give out personal telephone information to participants, or owners of secondary data resources, in relation to the research project
- I am fully aware of, and sensitive to cultural and religious practices of participant groups, and will act accordingly.
- this research will not involve fieldwork visits to private homes, other than to those of friends or relatives.
- this research will not involve fieldwork visits to organisations’ premises, other than those with which I have an existing established relationship through placement, employment or volunteering.
- I will provide a regularly updated fieldwork visit schedule to a nominated University contact, unless visits only involve travel to the homes of friends or relatives.

---

7 Fieldwork visits involve travel to research locations off campus to collect data.
8 This can be checked on this website http://www.fco.gov.uk/en/travel-and-living-abroad/travel-advice-by-country/.
9 For example, in the UK normal working hours are between 8am and 6pm Mon-Fri inclusive.
I will carry a Manchester Institute of Education Emergency Contact Information Card during all fieldwork visits, unless visits only involve travel to the homes of friends or relatives.

OR

I am making fieldwork visits but I am unable to tick ALL the criteria above, I have therefore completed a separate full Fieldwork Risk Assessment (FRA). Go to Section D page 6
C.2 No Fieldwork visits

Fieldwork Statement
I confirm:

- [x] this research does not involve fieldwork visits of any kind
- [x] I will not give out personal telephone information to participants, or owners of secondary data resources, in relation to the research project

LOW Risk Fieldwork Declaration:

C.3 Student Declaration:

By signing this declaration, I declare that the completed statement above is accurate to the best of my knowledge and that I will complete any actions that I have indicated I will complete.

Signature:
Lee Robinson
Shireen Sadreddini

Name (in capitals): LEE ROBINSON SHIREEN SADREDDINI Date: 4/05/15

C.4 Supervisor Declaration:

By signing this declaration, I confirm that I have reviewed the health and safety aspects of this research with this student and that the completed statement above is accurate to the best of my knowledge.

Signature:

Name (in capitals): Date:

Students and Supervisors please complete C.3 / C.4 respectively
SECTION D – RESEARCH RISK ASSESSMENT
The following sections should be completed by the person undertaking the research in discussion with their supervisor/tutor.

D.0 – Criteria for research classified as HIGH RISK – Health Research Authority (HRA) review

☐ 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 HRA 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 HRA operated Integrated Research Application System (IRAS).

D.1 – Criteria for research classified as HIGH RISK (tick any that apply)

I 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 participants at personal risk
☐ requires participant informed consent and/or withdrawal procedures which are not consistent with accepted University practice
☐ addresses an area where access to personal records (e.g. medical), in collaboration with an authorised person, is not possible
☐ involves 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.

If ONE OR MORE of the HIGH risk criteria have been selected DO NOT COMPLETE FURTHER SECTIONS OF THIS FORM. Ethical approval must be sought from a UREC committee. In all other cases, go on to Section D.2.

ACTIONS – HIGH RISK RESEARCH

1. You and your supervisor should first agree this risk assessment.
2. You should then complete the University Research Ethics Committee (UREC) form (available on the MIE (RIC) ethics intranet site) and all supporting documents, and give these to your supervisor for review and feedback.

For full details see http://www.hra.nhs.uk/resources/applying-for-reviews/
http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/

Supporting documents include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.
3. When satisfied with the application, your supervisor will submit:
1. This completed RREA form
2. Your completed UREC form – appending ALL supporting documents.
3. Your completed and approved Fieldwork Risk Assessment (FRA) form - where indicated

These documents should be submitted by your supervisor to:
Ethics.Education@manchester.ac.uk

In doing so, supervisors confirm that they have agreed the assessed risk level and that the documents are complete and correct. The Ethics Administrator will arrange School authorisation for your documents to be submitted to UREC.

D.2 – Criteria for research classified as MEDIUM RISK (tick any that apply)

I confirm that this:

- is research involving children or other vulnerable groups which involves direct contact with participants\(^{13}\).
- 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 research which involves substantial direct contact\(^{14}\) with adults in non-professional roles (eg parents).
- is research which focuses on data collection from professionals responding to questions outside of their professional concerns.
- is research with practitioners involving topics of a sensitive nature which are not personal to these participants.
- involves visits to site(s) where a specific risk to participants has been identified, and the researcher may not be closely supervised throughout

If ONE OR MORE of the MEDIUM risk criteria have been selected, DO NOT COMPLETE FURTHER SECTIONS OF THIS FORM. Ethical approval must be sought from the Manchester Institute of Education (MIE) Research Integrity Committee (RIC). In all other cases, go on to Section D.3.

**ACTIONS – MEDIUM RISK RESEARCH**

1. You and your supervisor should first agree this risk assessment.
2. You should then complete the MIE Ethical Approval Application form (available on the MIE Ethics Intranet)\(^{15}\) and all supporting documents\(^{16}\), and give these to your supervisor for review and feedback.

---

\(^{13}\) This does not include research in locations where children are present if they are not the focus of the research.

\(^{14}\) 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.

\(^{15}\) This document and guidance can downloaded from http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/

\(^{16}\) ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.
3. When satisfied with the application, your supervisor will submit:
   1. This completed RREA form
   2. Your completed MIE form – appending ALL supporting documents.
   3. Your completed and approved Fieldwork Risk Assessment (FRA) form - where indicated

These documents should be submitted by your supervisor to:
Ethics.Education@manchester.ac.uk
In doing so, supervisors confirm that they have agreed the assessed risk level and that the documents are complete and correct. The Ethics Administrator will arrange review of your documents to be undertaken by a member of the MIE Research Integrity Committee and approval against our UREC Ethics Templates.
D3 – Criteria for research classified as LOW RISK

D 3.1  NO human participants
I confirm that this research (tick as appropriate):

- 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 D3.1 above, and D3.2 does not apply, you should now complete section D3.3 below.

D3.2  Human participants
I confirm that this (tick as appropriate):

- research does not constitute high nor medium risk to the participants, as indicated by the criteria provided in sections D.0, D.1 and D.2 respectively.
- 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 research on my practice (involving data collection on issues relating to my professional role, or for comparison against national or other targets or standards) in a setting where I am employed or on a placement.
- is research on the professional practice of others in professional roles and is conducted in my work / placement 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 research using a questionnaire completed and returned by participants who will have no direct contact with me.
- is part of a research methods course and participant groups are limited to peers, colleagues, family members and friends.
- is a Pilot Study

D 3.3  Research context
I confirm (tick as appropriate):

- I am not in a position to coerce potential participants/secondary data owners
- the research involves no vulnerable group (as indicated in question B3).

---

17 A reasonable person would agree that the study includes no issues of public or private objection, or of a sensitive nature.
If ONE OR MORE of the LOW risk criteria above have been selected, **ethical approval must be sought from the Manchester Institute of Education (MIE) Research Integrity Committee (RIC).**

**ACTIONS – LOW RISK DOCTORAL RESEARCH**

1. You and your supervisor should first agree this risk assessment.
2. You should then complete the MIE Ethical Approval Application form (available on the MIE Ethics Intranet)[18] and all supporting documents[19], and give these to your supervisor for review and feedback.
3. When satisfied with the application, your supervisor will submit:
   1. This completed RREA form
   2. Your completed MIE form – appending ALL supporting documents.
   3. Your completed and approved Fieldwork Risk Assessment (FRA) form - where indicated

These documents should be submitted by your supervisor to: Ethics.Education@manchester.ac.uk

In doing so, supervisors confirm that they have agreed the assessed risk level and that the documents are complete and correct. The Ethics Administrator will arrange review of your documents to be completed by a member of the MIE Research Integrity Committee for approval against our UREC Templates.

---

[18] This document and guidance can downloaded from [http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/)

[19] ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.
SECTION E. Ethical Approval Application for LOW risk research
UG / PGT Research OR Doctorate Pilot Studies/Research Papers
Section E.1 to be completed by students. Section E.2 to be completed by supervisors/tutors

E. 1 Research ethics criteria
Tick as appropriate and/or indicate NA against items in bold where they do not apply to this research.
I confirm:

Codes of Practice
✓ I have read and understood the Manchester Institute of Education Ethical Practice and Policy Guidelines
✓ I will abide by the Manchester Institute of Education’s Ethical Protocol detailed therein
✓ I am aware of and will abide by any organisation’s codes of conduct relevant to this research

Researcher skills/checks
✓ all necessary training procedures for this research have been completed
✓ all appropriate permissions have been obtained to use any database or resource to be analysed in Secondary research
✓ all relevant enhanced DBS or other checks have been completed
✓ I will inform the Ethics Administrator if my DBS (or related) status changes
✓ permission to be on the site to conduct research has been received

Rights of participants
✓ participant information sheets (PIS), consent forms, questionnaires, and all other documentation relevant to this research have been discussed with supervisor/tutor named in A.5
✓ PIS and consent forms have been confirmed with the supervisor named in A.5, as covering required headings illustrated in the MIE Participant Information and consent templates, AND that they are written in an accessible way for each proposed participant group.
✓ I understand the Data Protection Act and the University Data Protection Policy and all data will be handled confidentially and securely, including storage on encrypted devices.

Research Integrity
✓ no data will be collected before ethical approval of the study is confirmed by my supervisor/tutor
✓ I will immediately report any issues arising during the course of the study that conflict with the MIE protocol, to my supervisor who has signed the ethics approval, and suspend data collection pending advice from that supervisor/tutor
I will report any proposed deviation from the research specification outlined in this assessment to my supervisor/tutor to update the current assessment or clarify any need for further approvals BEFORE such changes are made.

Research output

- the only publication/output from this research on my practice or research methods study will be my assignment or dissertation.
- the only publication/output from this research on professional practice / market research / questionnaire survey will be my assignment or dissertation unless consent has been obtained from participants for further dissemination.

ACTION: LOW RISK RESEARCH

1. You should email your final, completed RREA form (with ALL required supporting documents appended to it, including your research proposal, or equivalent document giving full details of the research) to your supervisor.
2. Your supervisor will first agree that this is LOW risk research. They will then, confirm that your proposed research matches our LOW RISK ethics criteria and that in doing so, that it is approved under our UREC ethics templates.
3. Your supervisor will send you an email to confirm this assessment.
4. The ethics administrator will send formal confirmation of approval once all relevant documents have been received.

E.2 Supervisor confirmation that research matches LOW risk criteria above.

When satisfied that the assessment is correct, supervisors should complete this section.

SUPERVISOR ACTION: LOW RISK RESEARCH

1. Confirm items in bold by ticking or marking as NA if not applicable to this research, and one or more of the specific research criteria as appropriate.

I confirm:

- This submission has been discussed and agreed with the student undertaking the research.
- The student has had appropriate training and has the skills to undertake this study, or has close, qualified supervision in place.
- The research activities outlined in the proposal involve no substantive risks to the student researcher or potential participants.

AND one or more of the following as appropriate:

- This research will not address issues of public or social objection, or of a sensitive nature.
- Information giving and consent taking processes follow Manchester Institute of Education guidance.
- Where fieldwork visits do not correspond to ALL items in the LOW Risk Fieldwork Declaration, a separate Fieldwork Risk Assessment form has been completed and approved.
- This secondary research assignment/project has appropriate resource or database access permissions.
- I will act as custodian for data used for any study that results in a publication (Masters/PhD dissertation or other output) and will arrange for archiving of data with MIE for a minimum period of 5 years.

Fieldwork visits involve travel to research locations off campus to collect data.
Confirm that the proposed research matches the low risk ethics criteria (indicated in E.1) and that the documents supplied are complete and correct.

<table>
<thead>
<tr>
<th>Please specify: Number submitted</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completed RREA form</td>
</tr>
<tr>
<td></td>
<td>Student research proposal, or equivalent, on which the assessment is based²¹</td>
</tr>
<tr>
<td></td>
<td>Completed and approved Fieldwork Risk Assessment form - where indicated</td>
</tr>
<tr>
<td>Supporting documents:</td>
<td>Draft questionnaire / interview topic guide / other data collection tools</td>
</tr>
<tr>
<td></td>
<td>Recruitment email / advertisement</td>
</tr>
<tr>
<td></td>
<td>Participant Information Sheet / page / letter (PIS) for each group</td>
</tr>
<tr>
<td></td>
<td>Consent form (or alternative) for each participant group</td>
</tr>
</tbody>
</table>

Supervisor’s signature: [ ] Date: [ ]

3. Submit for confirmation of Approval to ethics.education@manchester.ac.uk:
   To validate this confirmation of approval a full set of documents must be submitted electronically for archiving and audit.
   NB: The Ethics Administrator can only provide formal confirmation of ethical approval via email to both student and supervisor when a complete set of documents are supplied. Copies of all documents should be retained by the supervisor.

F.1 Minor²² amendments to LOW risk research design

Any minor amendment to low risk approved research submissions should be detailed below.

LOW risk research amendments should be checked and agreed by the supervisor as constituting a ‘minor’ change then signed-off below. Substantial changes to research will require a reassessment and revised ethical approvals. This revised copy of the RREA showing the approved amendments, and any amended/additional supporting documents, should be forwarded electronically to the ethics administrator at ethics.education@manchester.ac.uk.

The Ethics Administrator will provide formal acknowledgement of approval of the change by email. A copy should be retained by the supervisor.

²¹ For audit purposes, a person unfamiliar with the research outlined in Section B must be able to ascertain the full details of the student project, therefore the study proposal or an equivalent document giving full details (eg assignment description) is required.
²² Minor deviations from previously approved research submissions are defined as those which neither change the nature of the study nor deviate from any participatory research groups previously identified. Supervisors should contact a member of the MIE Research Integrity Committee for advice if in doubt.
To be completed if/when applicable:

| Minor amendment to assessed research agreed (1): |
| Details of amendment |

This section will record any applications made during the life time of the Project regarding minor changes from what was approved.

| Supervisor’s signature: | Date: |
Fwd: Ethics Approval Application - CONFIRMATION for Medium Risk

7 May 2017 at 18:11

To: Lee Robinson

From: Ethics Education <ethics.education@manchester.ac.uk>
Date: 16 September 2015 at 09:38
Subject: Ethics Approval Application - CONFIRMATION for Medium Risk
To: Lee Robinson <>, Shireen Sadreddini
Cc: Caroline Bond <>

Dear Lee and Shireen

Ref: PGR-7107055.7337364

Project Title: Educational Psychologists’ assessment and intervention practices for children with autism.

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 G: Ethics application and approval from National Psychology Service, Ireland

Approval for Research for non NEPS personnel

General principles/guidelines for Non NEPS personnel

Approval is required for all research carried out in NEPS. This includes research where there is no face-to-face interaction between researcher and participants (for example, postal questionnaire is, telephone interviews, and intranet surveys.)

No research on a person may be carried out without the informed, free, express, specific and documented consent of the person.

All researchers are obliged to protect their participants from possible harm, to preserve their dignity and rights, and to safeguard their anonymity and confidentiality.

Participants should not be deceived as to the nature and rationale of the research unless there are no alternative procedures available.

There should be no coercion or undue pressure in the recruitment of participants.

Participants must have the right to withdraw from any research, as any time without penalty and without providing reasons. Participants may also require that their data be withdrawn from the study.

Participants must be ensured that all information they give will be treated with confidentiality and that their anonymity will be respected at all times. Where relevant, participants should be told about where information about them will be stored, who will have access to it and what use will be made of it. Procedures for data storage must conform to the Data Protection Acts.

Researchers are obliged to monitor ongoing research for adverse effects on participants and to stop the research if there is any cause for concern about their health and well-being.

There is a duty of care on researchers to ameliorate any adverse effects of their research on participants (either personally or by referral to an appropriately qualified person). Normally, researchers should debrief participants at the end of the research in such a way that any harm caused can be discerned.

Special safeguards need to be in place for research with vulnerable populations including schoolchildren, people with learning or communication difficulties and people engaged in illegal or antisocial activities. Research with schoolchildren under the age of 18 also requires that parents or guardians be informed about the nature of the study and the option to withdraw their child from the study if they so wish.

Persons of diminished capacity to give informed consent should not be used in the research, if the research might as easily be carried out with other participants.
Students on placement in NEPS must be under the supervision of a member of the NEPS. It is the supervisor's responsibility to ensure that the student is aware of the relevant guidelines and of the need to observe them.
Getting approval for research in NEPS

On 8.06.11 the NEPS IMG decided to designate four areas as our key Research Directions for 2011 – 2016.

These are:

- Evaluation,
- Learning
- Mental Health and
- Assessment & Testing.

NB: Researchers within NEPS are now expected to stay within the research directions agreed by IMG. Research proposals from researchers outside of NEPS will also be expected to stay within these directions. Proposals that do not fit with our agreed directions, but do have some relevance to NEPS may be allowed distribution but will be flagged to colleagues as such for them to partake in or not as they see fit.

All research proposals for Research in NEPS must have ethical approval from the relevant supervising body, University or College before an application will be considered by the NEPS Research Advisory Committee.

NEPS’ Research Advisory Committee will consider all proposals for research in NEPS and will give a recommendation to the Internal Management Group regarding support for the proposal.

If in the opinion of the RAC, there are significant ethical implications to the proposal, despite the fact that ethical approval has been granted by a relevant supervising body, it may convene a separate sub-committee, with the option of drawing on additional expertise as necessary. Members of the sub-committee should be chosen on the basis of their suitability (e.g. research track record, knowledge of or training in ethics, expertise in particular methodologies)

Research proposals submitted for approval should be in written form, on the standard application form.

If the RAC believes they do not have sufficient information about a project proposal or if they have ethical concerns about the proposed methodology, they will refer these concerns back to the researcher and withhold approval until a resolution has been reached.

In order to encourage participation, if applicable, and to inspire the research ethic among NEPS colleagues all research abstracts for proposals that have been approved by NEPS will be made available to NEPS psychologists.

In addition all applicants will be expected to provide summaries of their completed research findings and contact details for the NEPS research data base.

Members of the RAC or any subcommittee should withdraw from consideration of any project in which they have a personal interest.

Procedures and Considerations
(A) Procedure

- Applicant completes application form and forwards both an electronic and hard copy of the completed form to NEPS RAC.
- RAC consider application, check for further detail if necessary, and make recommendation to IMG.
- IMG consider application with RAC recommendation and decide on acceptance or other.
- Proposals are assessed in the light of the following considerations

(B) Considerations

- In line with NEPS key Research Directions for 2011 – 2016
- Time implications of research on core NEPS work
- Level of NEPS staff involvement with proposal.
- Costs (financial) implications.
- Duration
- Relevance/value to NEPS policy and practice
- Intention to publish/present at conference etc.
- Supervision (University etc.) available to researcher
- Compliance with NEPS ethical standards (PSI code of ethics)

Please forward electronic and hard copy of completed approval form to:

Feargal_ONeill@education.gov.ie

Address:
Block C, Heritage Business Park, Mahon, Cork
Title of project: Educational Psychologists’ assessment and intervention practices for children with autism in the UK and Ireland.

Name of researcher(s): Shireen Sadreddini Lee Robinson, Trainee EPs, University of Manchester
Date 28.10.15

Name of Supervisor (for student research) Dr. Caroline Bond, University of Manchester

Purpose and rationale of project and relevance to NEPS:

The majority of recent research into the EP role into assessment and intervention for children with autism is from the United States. The most recent piece of research to consider the role of the EP in autism assessment in the UK was by Waite and Woods in 1999. Since this study there have been significant developments in the role of the EP, legislation and ASD diagnostic criteria. Further research is therefore needed to uncover the practices and contribution of EPs to autism assessment and interventions in the UK and Ireland in the present context.

The research questions for this study are:

RQ1: How do EPs contribute to assessments and interventions with children with difficulties consistent with ASD?
   a. How do EPs contribute to assessments?
   b. How do EPs contribute to interventions?

RQ2: To what extent does the context in which EPs work influence EPs’ practices in the assessment and intervention of children with difficulties consistent with ASD?
   a. What influences EPs’ contributions to assessments?
   b. What influences EPs’ contributions to interventions?

Brief description of methods and measurements:

The study proposes to use a postal and online questionnaire in order to uncover EPs assessment and intervention practices. The questionnaire will include open and closed qualitative and quantitative questions. The researchers’ pilot studies (Robinson, 2015; Sadreddini, 2015) and previous literature (Waite & Woods, 1999; Sansosti & Sansosti, 2013) will be used to inform the questions for the questionnaire. The questionnaire will be piloted with EP and TEP colleagues before sending it out nationally.

EP services will also be sent postal copies of the questionnaire with freepost return envelopes.

Method(s) of Analysis:
• Quantitative questionnaire data: Descriptive and correlational analysis
• Qualitative questionnaire data: Thematic analysis (Braun and Clarke, 2006)
One of the researchers will analyse the quantitative and qualitative data pertaining to RQ1a and RQ2a. The other researcher will analyse data pertaining to RQ1b and RQ2b. These two avenues of analysis will result in two separate thesis write-ups.

**Participants: recruitment methods, number, age, gender, inclusion/exclusion criteria**

- Representative sample of EPs and TEPs in the UK and Ireland
- Participants will be invited to complete the online questionnaire through EPnet an advertisement in the Association of Educational Psychologists bulletin and if possible through the NEPS national network. EPs working for charities such as the National Autistic Society will also be approached via email.
- Postal questionnaires will also be sent out to EP services.

**Consent and participant information arrangements, debriefing**

- Participant information and consent information will be given on the fist page of both the online and postal questionnaire. Here, participants will be informed that by submitting/returning their questionnaire responses, they are giving their informed consent to participate in the study.
- Contact details of the researchers and supervisor will be available at the end of the questionnaire to ensure that any questions can be answered directly.

<table>
<thead>
<tr>
<th>Is your research in line with NEPS key Research Directions for 2011 – 2016</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>X</td>
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<tr>
<th>Has your research proposal received ethical approval by a University or college?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>Will you describe the main experimental procedure to participants in advance, so that they are informed about what to expect?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>Will you tell participants that their participation is voluntary?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<td>x</td>
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<tr>
<th>Will you obtain written consent for participation?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<td>x</td>
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<th>If the research is observational, will you ask participants for their consent to being observed?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>Will you tell participants that they may withdraw from the research at any time and for any reason?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>If you’re using a questionnaire, will you give participants the option of omitting questions they do not wish to answer?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<tr>
<th>Will you debrief participants at the end of their participation?</th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
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<td>x</td>
<td></td>
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</table>
Do you agree to have your abstract, if your proposal is approved, openly available to NEPS colleagues?  

Do you agree to have a summary of your completed research, if your proposal is approved, openly available to NEPS colleagues?

If you have ticked NO to any of the above questions, please give an explanation on a separate sheet

Will your project involve deliberately misleading participants in any way?  

Is there any realistic risk of any participants experiencing either physical or psychological distress or discomfort? If yes please give details on a separate sheet and state what you will tell them to do if they should experience any problems (e.g. who they can contact for help).

Do you consider that this research has any significant ethical implication not covered by the questions above?

If you have ticked YES to any of the above questions, please give an explanation on a separate sheet

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Yes, assessment and intervention</th>
</tr>
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<tbody>
<tr>
<td>In line with NEPS key Research Directions for 2011 – 2016</td>
<td></td>
</tr>
<tr>
<td>Relevance/value to NEPS</td>
<td>The research will provide an up to date picture of EP assessment and intervention practices in Ireland and the UK.</td>
</tr>
<tr>
<td>NEPS Staff Time involved</td>
<td>25 minutes to complete the questionnaire</td>
</tr>
<tr>
<td>Costs (financial)</td>
<td>NA</td>
</tr>
<tr>
<td>Duration (including proposed starting date)</td>
<td>September 2015-May 2017</td>
</tr>
<tr>
<td>Ethical standards applied</td>
<td>Received University of Manchester ethical approval 15.9.2015</td>
</tr>
<tr>
<td>Intention to publish/present at conference</td>
<td>Journal publications, doctoral theses and relevant conferences.</td>
</tr>
<tr>
<td>Supervision (University etc.)</td>
<td>Caroline Bond, The University of Manchester</td>
</tr>
</tbody>
</table>
I declare the above to be true. I am familiar with the PSI Code of Professional Ethics and I agree to abide by it.

Signed:
Print name: Lee Robinson & Shireen Sadreddini
Date: 28.10.15

Please complete Research Disclaimer overleaf.
NEPS RESEARCH DISCLAIMER

I ______Shireen Sadreddini and Lee Robinson_ (name of researcher/trainee) intend to undertake research entitled_ Educational Psychologists’ assessment and intervention practices for children with autism in the UK and Ireland during the period ___September___2015   to _May____2017 . I am being supervised by __Caroline Bond__ (name of supervisor) in The University of Manchester__ (name of University or place of research). During this time I will conduct my research involving NEPS personnel using __a postal and on-line questionnnaire__ (a survey, a postal questionnaire, an on-line questionnaire, individual interviews (by phone/in person, other methods).

I acknowledge that the responses I may obtain will consist of the views of individual psychologists in relation to the research questions being asked. I acknowledge that the responses I may obtain are not representative of the view of NEPS as an organisation.

I agree that a statement to verify this fact must be included in my research report and any other documentation connected with my research and also at any reporting of the research at conferences, seminars, symposia etc. I also agree that my supervisor will guarantee that a summary of the research once completed will be forwarded to the NEPS Research Advisory Committee In addition I guarantee that a copy of any report of this research to be published will be forwarded to the NEPS Research Advisory Committee before its publication.

Signed: ___Shireen Sadreddini and Lee Robinson______________  (Name of researcher).
Date:  18.10.15

Signed: Dr Caroline Bond (Name of Supervisor).       Date: 28.10.15

Date sent to NEPS RAC :
Date received in NEPS RAC :

SUPERVISORS DISCLAIMER

I acknowledge that the responses from NEPS personnel that Lee Robinson and Shireen Sadreddini (Name of student) under my supervision as part of a Doctorate in Educational and Child Psychology (Name of qualification) during the period _1.9.2014 to 31.8.2017_, may be obtained during her/his research will consist of the views of individual psychologists in relation to the research questions being asked. I acknowledge that the responses to be obtained are not representative of the view of NEPS as an organisation.

I agree that a statement to verify this fact must be included in Lee Robinson and Shireen Sadreddini’s (name of student) research report and any other documentation connected with her/his research and also at any reporting of the research at conferences, seminars, symposia etc. I also guarantee that a summary of the research, once completed, will be forwarded to the NEPS Research Advisory Committee.
I also guarantee that a copy of any report of this research to be published will be forwarded to the NEPS Research Advisory Committee before its publication.

Signed:    Caroline Bond  (Name of Supervisor)
Date: 28.10.15

Date sent to NEPS RAC:
Date received in NEPS RAC:

Please send a hard copy of this application form and disclaimer document to:
Dr. Feargal O’Neill
Johnstown Business Park,
Waterford

Please send an electronic version to feargal_oneill@education.gov.ie

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RE: Research approval
1 message

O’Neill, Feargal <feargal_ONeill@education.gov.ie> To: Lee Robinson <

15 January 2016 at 12:18

Hi Lee,

I am pleased to tell you that your proposal has just been approved for NEPS support and all colleagues have been informed.

It took a little bit longer than normal to finalise the process due to the Xmas break.

If you need any further assistance please feel free to contact me as required.

Best wishes,

Feargal
Appendix H: Participant information sheet

Educational Psychologists’ intervention practices for children with autism

Participant Information Sheet
This questionnaire is part of a larger study into EPs’ assessment and intervention practices for children and young people with ASD. This questionnaire focuses only on intervention practices and is being redistributed due to a technical error. The researchers are keen to ensure the integrity of the research; as a result, a decision was made to gather the information again. As such, this questionnaire may be familiar to those who have previously completed it. We would welcome and appreciate the participation of all EPs, PEPs, TEPs and Assistant EPs in completing this questionnaire, including those who have previously submitted responses. Your time is very much appreciated.

You are being invited to take part in a research study as part of a thesis project exploring Educational Psychologists’ contributions to interventions for children with ASD/children who have difficulties consistent with ASD. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please 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?
Lee Robinson and Caroline Bond.

Manchester Institute of Education
The University of Manchester
Manchester
M13 9PL
UK

Title of the Research
Educational Psychologists’ intervention practices for children with ASD.

What is the aim of the research?
We hope to gain an insight into Educational Psychologists’ (EPs’) role in interventions for children with ASD/children who have difficulties consistent with ASD by gathering information about EPs’ practice in this area.

Why have I been chosen?
You have been chosen to take part in the study as an EP who has been involved in implementing interventions for children with ASD/difficulties consistent with ASD.

What would I be asked to do if I took part?
You will be asked to reflect on your current practice by completing an online
questionnaire that lasts no longer than 10-15 minutes after you have read this introduction.

**What happens to the data collected?**
All data collected from the questionnaire is anonymised and confidentiality is ensured. The data will be subject to statistical analysis. This data will be written in an anonymous form as part of the researcher’s thesis.

**How is confidentiality maintained?**
Names and locations of educational psychologists and educational psychology services will not be collected. All data is anonymous and stored securely.

**What happens if I do not want to take part or if I change my mind?**
It is up to you to decide whether or not to take part. By filling out and submitting this questionnaire your consent is assumed. If you decide to take part you are still free to withdraw at any time without giving a reason.

**What is the duration of the research?**
The questionnaire will take 10-15 minutes to complete after you have read this introduction.

**Where will the research be conducted?**
The questionnaire can be accessed from any device with an internet connection.

**Will the outcomes of the research be published?**
The data collected may be published in anonymous form in academic books or a peer-reviewed journal. Additionally, the outcomes of this research will also be included in the researcher’s Doctoral Thesis, which may be published after completion in 2017.

**Contact for further information**
Lee Robinson: lee.robinson@postgrad.manchester.ac.uk
Caroline Bond: caroline.bond@manchester.ac.uk

**What if something goes wrong?**
You should contact the supervisor named above in the first instance. 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

This research has been approved by NEPS and received ethical approval from the Manchester Institute of Education Research Integrity Committee on 15th September 2015.

This questionnaire consists of 2 pages: one about demographics and one about interventions.
I understand that my participation in the study is voluntary and I am free to withdraw at any time without giving a reason; I agree to the use of anonymous quotes; I agree that the data may be used to inform the researcher's doctoral thesis; I agree that any data collected may be published in anonymous form in academic books or journals; and I agree that any data collected may be used in future studies.

✔
### Appendix I: Inter-rating coding and percentage agreement.

Please describe how the above factors influence your decision to recommend interventions

<table>
<thead>
<tr>
<th>Qualitative data</th>
<th>LR initial code</th>
<th>SS initial code</th>
<th>Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>You need to feel confident that the adults working around the child have the necessary skills / knowledge first, so I will start where they are and work in a collaborative manner to ensure all feel involved and empowered so the interventions may develop as confidence grows</td>
<td>• Staff ability, skills &amp; knowledge</td>
<td>• EP confidence in key adults</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Collaboration</td>
<td>• Skills of key adults</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Empowering staff</td>
<td>• Knowledge of key adults</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Intervention development linked to confidence</td>
<td>• Collaborative working with key adults</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Empowering key adults</td>
<td>Y</td>
</tr>
<tr>
<td>Triangulation of factors and information to ensure a holistic approach that meets the needs of the child</td>
<td>• Triangulation</td>
<td>• Triangulation</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Assessment informed intervention</td>
<td>• Holistic approach</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Individual needs of the child</td>
<td>• Needs of the child</td>
<td></td>
</tr>
<tr>
<td>through Plan Do Review agreed action are set that fit best with the child, Family and school.</td>
<td>• Assess, plan, do, review</td>
<td>• Cycle of plan-do-review</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Collaboration</td>
<td>• Agreed actions</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• Joint understanding</td>
<td>• Child, family and school focused</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>• personalisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the resource of the children themselves and their peers can be greatly under-used and under-valued.</td>
<td>• Children and peers as a resource</td>
<td>• Child and peers resources</td>
<td>Y</td>
</tr>
<tr>
<td>The needs of the child or young person.</td>
<td>• Individual needs</td>
<td>• CYP needs</td>
<td>Y</td>
</tr>
<tr>
<td>the approach has to be manageable and sensible for the situation in front of me</td>
<td>• Realistic implementation</td>
<td>• Appropriateness</td>
<td>Y</td>
</tr>
</tbody>
</table>
Recommended interventions are largely based on a variety of systemic factors and the evidence base to meet the needs of the child. Though I am aware of Eps who do not look at the evidence base, for things such as ABA methods and techniques but whom have negative views, which are shared with others professionals.

<table>
<thead>
<tr>
<th>Systematic factors</th>
<th>Systemic factors</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual needs</td>
<td>Evidence base</td>
<td>Y</td>
</tr>
<tr>
<td>Not consulting evidence base</td>
<td>Negative views regardless of evidence base</td>
<td></td>
</tr>
</tbody>
</table>

Pupil voice is very important if the interventions is going to work

<table>
<thead>
<tr>
<th>Views of the child</th>
<th>Pupil views</th>
<th>Y</th>
</tr>
</thead>
</table>

OT in my area do not offer or deliver assessment of sensory needs and interventions therefore it tend to only touch on this In my advice Similarly Salt may not deliver intensive interaction approaches although they are useful

<table>
<thead>
<tr>
<th>Other professionals</th>
<th>Sensory needs of child</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory needs</td>
<td>Other professionals’ role</td>
<td></td>
</tr>
</tbody>
</table>

My aim is to help the child and skill up staff. I will only recommend an intervention if staff and parents have the capacity to complete it appropriately.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Staff skills</th>
<th>Child focused</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td></td>
<td>Staff skills</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capacity</td>
<td></td>
</tr>
</tbody>
</table>

may need to do some work pre- intervention so that supporting adults understand why the intervention is happening

<table>
<thead>
<tr>
<th>Staff training</th>
<th>Enhancing understanding of intervention purpose</th>
<th>Y</th>
</tr>
</thead>
</table>

It would be important to make interventions personalised and fit for purpose. There is little point in recommending interventions unless those implementing them have the skills and motivations to complete them successfully, so this is a

| Pupil-centred | Personalisation | Y |
|              |                  |   |
|              | Staff motivation | Y |
|              | Perceived barriers |   |
|              | Staff skills     | Y |

<table>
<thead>
<tr>
<th>Personalised intervention</th>
<th>Fit for purpose</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills of key adults</td>
<td>Motivation of key adults</td>
<td></td>
</tr>
<tr>
<td>Priority outcomes of key adults</td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

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consideration. Also, the priority outcomes for the CYP, families and school are all relevant

| It try to listen to the views of the child and their parents wherever possible. I also try to listen to the views of teacher and other significant members of school staff. | • Views of parents  
• Views of child  
• Views of school staff | • Parent and child view  
• School staff views | Y  
Y  
Y |
|---|---|---|
| It starts with the evidence base (I'm doing a part-time doctorate and have access to an online Aladdin's cave of treasures) together with what the young person has expressed they would like to be able to do. Then it's thinking about the educational and family context and putting together and talking through an intervention within that set of possibilities. | • Evidence base  
• Child-led outcomes  
• Context | • Evidence base  
• Child view  
• Context | Y  
Y  
Y |
| It is vital for the child/young person and their parents to be on board with interventions planned, as well as school to have the resources to implement any school based interventions and for home/school to work together and with other professionals where needed | • Collaboration  
• Views of parents  
• Views of child  
• School resources | • Links with motivation  
• Child and parents perspectives  
• Resources/capacity  
• Other professionals  
• Collaboration | Y  
Y  
Y  
Y |
| It is very important to know that there is an evidence base for the programme and to determine the ability and willingness of people on the ground to implement it. | • Staff motivation  
• Evidence base  
• Staff skills | • Evidence base  
• Ability and willingness/Motivation | Y  
Y  
Y |
It is mostly based on individual needs discovered by using the consultation approach

Interventions have to be evidence-based, informed by the individual child needs and the school context. Beyond that, the practicalities of the intervention in each context are important, so that the chances that it is implemented are higher. Parents’ and children’s views are taken into consideration and interventions are modified accordingly (parents as they know their child best and children as they are the centre of the involvement). I also tend to start with intervention that school is familiar with (as long as they are evidence-based) and perhaps already have in place for other children, as again this might increase the possibilities of implementation and success.

Interventions are always planned in collaboration with school staff and parents so their skill, knowledge, and knowledge of the child will be the biggest influence.

Information through initial consultations with all involved. Some interventions are provided by other teams within the L.A. School purchase and agreement to interventions

<table>
<thead>
<tr>
<th>Interventions</th>
<th>School context</th>
<th>Evidence base</th>
<th>Individual needs</th>
<th>Perceived facilitators</th>
<th>Views of parents and child</th>
<th>Modifying interventions</th>
<th>Staff capacity</th>
<th>Familiarity of intervention</th>
<th>Evidence base</th>
<th>Child’s needs</th>
<th>School context</th>
<th>Context</th>
<th>Parent/child views</th>
<th>Individualised</th>
<th>Familiarity</th>
<th>Evidence base</th>
<th>Focus on enhancing implementation/success of intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Collaboration</th>
<th>views of parents</th>
<th>Skills and knowledge of key adults</th>
<th>Knowledge of child</th>
<th>Collaboration</th>
<th>Skills and knowledge of key adults</th>
<th>Knowledge of child</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td>Y</td>
<td></td>
<td></td>
<td>---</td>
</tr>
</tbody>
</table>

| Interventions | Consultation | Other professionals | Staff capacity | finance | Consultation | Other professionals | Traded work | Capacity | |
|---------------|--------------|---------------------|---------------|---------|--------------|---------------------|--------------|----------|
| Y             | Y            | Y                   |               | Y       | Y            |                     |              | Y        |
and capacity for staff to support.

<table>
<thead>
<tr>
<th><strong>In recommending an approach I always consider the above factors as they are likely to impact upon the likelihood of a successful outcome - I will draw on different approaches based on the unique circumstances presented in each case.</strong></th>
<th><strong>Perceived facilitators</strong></th>
<th><strong>Case by case</strong></th>
<th><strong>Y</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Context specific</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I would use consultation to work with the people who know the child best in order to select an intervention that would best meet that child’s individual needs.</strong></th>
<th><strong>Consultation</strong></th>
<th><strong>Consultation</strong></th>
<th><strong>Y</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Views of others</td>
<td>• Child’s needs</td>
<td></td>
<td><strong>Y</strong></td>
</tr>
<tr>
<td>• Individual child needs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I will always where possible (usually KS2 and older) ask the child what they would like to work on and incorporate this into the intervention. I will also always ask parents.</strong></th>
<th><strong>Views of child</strong></th>
<th><strong>Child views</strong></th>
<th><strong>Y</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Child-led outcomes</td>
<td>• Parent views</td>
<td></td>
<td><strong>Y</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>I try to understand the perspectives of all actors before making recommendations</strong></th>
<th><strong>Perspectives of others</strong></th>
<th><strong>Views of key individuals</strong></th>
<th><strong>Y</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>I think it is important to consider the context in which the intervention is being trialled (i.e. the setting, the location, how it has worked in similar settings) as it is going to be difficult to implement something if someone doesn't agree/believe in the intervention. I prefer evidence based interventions however staff need to be trained so that these are delivered properly.</strong></th>
<th><strong>Context specific</strong></th>
<th><strong>Context</strong></th>
<th><strong>Y</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Adult perspectives</td>
<td>• Motivation/investment from key people</td>
<td></td>
<td><strong>Y</strong></td>
</tr>
<tr>
<td>• Barriers</td>
<td>• Evidence-base</td>
<td></td>
<td><strong>Y</strong></td>
</tr>
<tr>
<td>• Evidence base</td>
<td>• Staff training</td>
<td></td>
<td><strong>Y</strong></td>
</tr>
</tbody>
</table>
I prefer to triangulate data between parents, school and child to find the interventions I believe will work best to support young people with ASD.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triangulation</td>
<td>personalisation</td>
</tr>
<tr>
<td>Triangulate data from key individuals</td>
<td></td>
</tr>
</tbody>
</table>

I formulate intervention following consultation with the child and those who know them best.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation</td>
<td>Views of child</td>
</tr>
<tr>
<td>Consultation</td>
<td>Child view</td>
</tr>
</tbody>
</table>

I feel that the intervention agreed upon will depend mainly upon the questions around the child and the priority area of need, taken alongside the child's interests, abilities and types of activities they might enjoy engaging as well as the school's resources and capacity to implement such approaches. I also rely on my colleagues to support me with identifying different approaches which I may not be aware of.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint understanding</td>
<td>Pupil-centred</td>
</tr>
<tr>
<td>School resources</td>
<td>Colleague support</td>
</tr>
<tr>
<td>Purpose</td>
<td>Child centred/personalised</td>
</tr>
<tr>
<td>School resources/capacity</td>
<td>EP support/sharing knowledge</td>
</tr>
</tbody>
</table>

81 codes 77 codes 66 similar codes

Average number of codes = 79

66 out of an average of 79 codes

- 66 ÷ 79 = 0.8354
- 0.8354 x 100 = 84% agreement