EDUCATIONAL PSYCHOLOGISTS’ ASSESSMENT PRACTICES FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

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

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SCHOOL OF ENVIRONMENT, EDUCATION AND DEVELOPMENT
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Abstract

As the prevalence of Autism Spectrum Disorder (ASD) increases, School Psychologists (SPs) and Educational Psychologists (EPs) have an increasing role in assessing children with ASD. The systematic literature review aimed to provide an overview of the tools and processes EPs and SPs are using to assess children with ASD or possible ASD. Studies published between 1996-2016 were identified from four databases. Eight studies met the inclusion criteria, and were analysed using quality and relevance frameworks. Six studies were included in the final review. Commonly used tools are identified and discussed. The SLR drew some tentative conclusions around the range of tools used by SPs in the US. The small and dated UK sample means that limited conclusions can be drawn about current EP practice.

Due to the gap in current knowledge around how EPs assess children with ASD or possible ASD, a questionnaire was developed and distributed to EP professionals in the UK and Ireland in order to gain an up to date picture. Data from 161 participants were used in the analysis. Analysis of the quantitative data involved descriptive statistics and content analysis was used to analyse the qualitative responses. Frequently used tools and the factors that seem to influence decision making around the choice of assessment are discussed. Implications for EPs’ assessment practices and directions for future research are discussed.

Having considered evidence based practice and practice based evidence, the final paper discusses dissemination of evidence to professional practice. A strategy for disseminating the findings of the empirical study to the profession is outlined.

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May 2017
Declaration

I declare that no portion of the work referred to in the 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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Acknowledgement

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I would like to thank all of those who took part in this study and made the research possible.

I would like to express my sincere gratitude to my academic tutor, Caroline Bond for her continuous support and encouragement over the past three years. Without her guidance and patience, it would have not been possible to conduct this research. I would also like to thank Jeremy Oldfield for his invaluable advice.
Thesis Introduction

The purpose of this section is to outline the overall strategy of the thesis, including the preliminary exploratory work and the aims and research questions of each paper of the thesis. This section will also cover the researcher’s professional background, relevant experience, rationale for engagement and axiological stance. Finally, this section will consider the positioning for data access and consideration of the researcher’s ontological and epistemological stance.

Preliminary Work

The researcher conducted an exploratory survey in one local authority in order to understand how EPs undertake assessment and intervention practices for children with ASD. A focus group was used as the survey method and provided an in-depth exploration of the EPs’ assessment and intervention practices. A pen portrait of the local authority was produced to provide the researcher with a rich background about the local authority and the service. A purposive convenience sample of four EPs in the Local Authority Educational Psychology Service (EPS) participated in the study. The focus group generated a great deal of rich data and the use of thematic analysis led to the identification of five themes. The themes were: identification; assessment tools and processes; building capacity; intervention; and working with parents. Findings from this preliminary study therefore indicated that the EPs were involved in the assessment of children with ASD. They assessed the child’s needs within the school context through the process of consultation. This involved understanding the function of behaviour, looking at the whole environment, how the child is coping in school, and what support is in place. EPs reported
gathering information from parents and school in order to generate a holistic view of the child. They used various formal and informal assessment tools.

The preliminary research was an in-depth exploration in one EPS in the North West of England, which has particular characteristics. For example: it is a partially traded service; serving a disadvantaged LA; with a keen interest in ASD with two PEPs with ASD specialisms; using a consultation model of service delivery. It is therefore possible that these findings were not be generalisable to other LAs in the rest of the UK, who are likely to have different models of service delivery, different agendas, and different EP specialisms. The study concluded that future research should uncover a more representative picture (e.g. larger, national population of EPs) which might enable the profession to share best practice and that future research might consider differences between the practices of EPs in the UK and SPs in America and other countries.

**Thesis outline with study aims/research questions**

The aim of this thesis was therefore to capture the bigger picture of ASD assessment practice within the profession, consider what guidance is available and how practice fits with guidance. The aim was to contribute to the development of practice within the profession.

The aim of the first paper was to identify what the existing literature tells us about EP and SP ASD assessment practices and any common themes relating to the assessment tools and practices EPs and SPs are using. The role and work context of EPs in the UK and SPs in the US may shape the tools used and it is unclear what types of tools and processes EPs/SPs are using. The research question for paper 1 was: *What range of tools and approaches are EPs and SPs commonly using in their*
psychological assessment for school-aged children with ASD? The SLR identified some commonly used tools/approaches. Tentative conclusions could be drawn around the range of tools used by SPs in the US. The small and dated UK sample meant that limited conclusions could be drawn about current EP practice. The study and preliminary research indicated that there is therefore a need for a national survey to provide a more up to date and thorough study of EP practices in the UK. There is also a need for high quality qualitative data from both the UK and US which considers the decision making process and the contextual factors that shape practice.

As a paucity of research uncovering the role of the EP in the assessment of children with ASD in the UK was identified, the second paper aimed to fill this research gap. The aim was to capture a bigger, more up to date picture of practice within the profession (and consider how this fits with guidance). Paper two therefore focused on EPs in the UK and Ireland (as the EP role is similar in both) with the aim of enhancing our understanding of how EPs contribute to the assessment for children with ASD or possible ASD. The paper also aimed to uncover some of the factors which influence these assessment practices. The research questions of paper two were: How are EPs involved in assessing children with ASD or possible ASD? and What factors influence EPs’ assessment of children with ASD or possible ASD? The preliminary work influenced the development of the questionnaire.

The third paper considered the evidence-based practice and practice-based evidence and more specifically evidence-based assessment and ASD assessment. It also considered effective dissemination of research, the research implications, and a strategy for promoting and evaluating the dissemination of the current research.
**Researcher’s professional background/relevant experience**

The researcher had prior experience of working with children with ASD. The researcher worked in a Specialist Support School with secondary aged students with ASD and as an Applied Behaviour Analysis (ABA) tutor for a primary aged boy with ASD. As a result, the researcher was interested in how EPs work with young people with ASD.

The researcher was completing the doctorate in Educational and Child Psychology whilst completing the research. The researcher's experiences as a Trainee Educational Psychologist (TEP) sparked an interest in the area and influenced the research topic. The TEP initially became interested in the assessment and intervention practices of EPs in relation to ASD when it became evident, during practice placements, that there were no consistent practices across local authorities in the North West of England. Early on in the course, the TEP had a piece of casework for a child with possible ASD and queried how to approach the assessment. She sought supervision and found the discussion interesting (EPs reported approaching assessment in a variety of ways and they used a variety of tools in different ways). This led to an interest in the topic and the question ‘what are EPs doing around ASD assessment?’

The researcher decided to focus her research on assessment as she perceived that although central/key to the EP role (Fallon, Woods & Rooney, 2010), assessment is not frequently discussed in the EP literature. As a TEP, the researcher had a particular perspective on the topic which is likely to have influenced the research. The researcher was trying to find her own way of working with ASD queries. As with each topic on the course, the TEP researcher asked herself; “what
are others doing? what is the evidence base? what is best-practice and how can I integrate this into my way of working?” The researcher’s interest in these questions and her particular perspective therefore impacted on the research topic chosen.

**Axiological position**

The researcher considered her axiological stance in terms of how her internal value system influences her perceptions, decisions and actions. The researcher reflected on how her internal values impacted on the research in terms of the choice of research topic, the methods used, and how the findings are reported and discussed.

A primary belief of the researcher is that all children have the right to have assessment which helps to meet the child’s needs. Assessment impacts on identification of the child’s needs and also access to appropriate intervention. The researcher feels therefore that appropriate assessment is a fundamental step towards improving the outcomes/trajectory for children and young people with ASD.

A primary view of the researcher is that assessment is a core part of the EP role. As the prevalence of ASD increases, EPs will be increasingly involved in ASD assessment. There are lots of tools which exist to assess ASD but we are currently unaware of what is being used in the profession. EP practice is influenced by context and as a result, the researcher also feels that it is important to consider this. These views therefore impacted on the research topic, the data collected in the preliminary work and paper two (in particular the areas covered on the questionnaire) and the write up.

The researcher holds the view that consistent and accountable practice is important to the EP profession as a whole. Moving towards a consistent approach to ASD assessment as a profession is important and the researcher feels that this
requires some preliminary work around what EPs are already doing. The researcher feels therefore that understanding how EPs assess ASD/being more aware of ASD assessment practice is important to enable the profession to continue to develop best-practice. The researcher hopes that developing this understanding will contribute to the development of practice within the profession (e.g. the research will lead to more discussions at a practice level about what makes a ‘good assessment’, and could then lead to more discussions around a consistent approach).

**Positioning of the data**

The research was conducted by the TEP and colleagues in the Northwest of England. The TEP (‘insider researcher’) used known networks and contacts to recruit participants for paper two. This strategy may explain why the sample was skewed. It is possible that an external, non-EP researcher might have received a different response. It is possible that participants might have felt safer answering questions knowing that the research was being conducted by someone from within the profession who would be approaching the field with some knowledge of EP practice. Furthermore, some of the qualitative data from paper two indicated that participants were not keen on some of the questions or structure of the questionnaire but despite this had still completed it. It is possible that the respondents were more understanding and open to completing the questionnaire in order to support TEP research (i.e. they wanted to help).

It is important to note that this research was undertaken at a time when various national drivers for change were influencing EP practice. Many Educational Psychology Services (EPSs) were becoming partially or fully traded, meaning services were under pressure to produce income and that schools could now ‘buy in’
EP time. Some of the EPs who participated in the research reported working across a number of authorities, or in a combination of independent and LA work. At the time of the research, many services were understaffed (some EPs mentioned this in the questionnaire). It is possible that this may have impacted the response rate as EPs were perhaps under pressure/time constraints. One EP emailed and voiced frustration with the website logging her out and explained that she would not be able to complete it. It is also possible that these factors could have influenced EP ASD assessment practice (e.g. time was a factor in the contextual category in paper two).

**Ontological and epistemological position**

This section will consider both the researcher’s ontological (i.e. what constitutes reality and how can we understand existence) and epistemological stance (i.e. what constitutes valid knowledge and how can we obtain it?)

The researcher’s ontological and epistemological position is that of a critical realist. This was derived from both objective and subjective ontologies. This is most closely aligned to critical realism (Bhaskar, 2008). Critical realism represents a position that maintains that there exists an objectively, mind-independent reality (‘realist’), whilst acknowledging that our access to this objective reality is limited (‘critical’) due to the role of subjective experience (mediated by perception and cognition) (Kelly, Woolfson & Boyle, 2008). Critical realism denies that we can have any ‘objective’ or certain knowledge of the world, and accepts the possibility of alternative valid accounts of any phenomenon (Maxwell, 2012). We can therefore only partially know this reality. It therefore holds a realist ontology, but pairs that with an anti-realist (relativist) epistemology. The researcher wanted to get the closest possible estimation of reality (whilst acknowledging that it would not be perfect).
The researcher accepted from a critical realist point of view that there will be differences between EPs regarding ASD assessment (i.e. alternative valid accounts). The researcher used a mixed methods survey. The questionnaire was semi-structured and included both open and closed questions (Cohen, Manion, & Morrison, 2011). This fits with the critical realist view; using open questions acknowledged that there might be ‘bits of reality’ for some people that the closed questions had not tapped into. The questionnaire was distributed to EPs across the UK and Ireland (large scale) to get an overview of the field.

Using the staged approach (i.e. conducting the preliminary research) also meant that the researcher was able to develop some understanding of the field first in order to develop the questionnaire in paper two. The questionnaire was therefore informed by academic literature and some understanding of subjective reality (from the preliminary work).
References


Paper One

School and Educational Psychologists’ Assessment of Autism Spectrum Disorder: A Systematic Literature Review

Prepared in accordance with author guidelines for submission to Psychology in the Schools (Appendix A)

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School and Educational Psychologists’ Assessment of Autism Spectrum Disorder: A Systematic Literature Review

Abstract
As the prevalence of Autism Spectrum Disorder (ASD) increases, School Psychologists (SPs) and Educational Psychologists (EPs) have an increasing role in identifying and assessing children with ASD. This systematic review aims to provide an overview of the tools and processes EPs and SPs are using to assess children with ASD or possible ASD. Studies published between 1996 and 2016 were identified from four databases. Eight studies met the inclusion criteria and were analyzed using quality and relevance frameworks. Six studies were included in the final review. Commonly used tools are identified and discussed. These include observation, interview, developmental history, adaptive behavior scales, ASD specific checklists/rating scales, and record review. The study found a significant gap in current knowledge of EP practice. Findings are discussed in relation to practice guidelines, implications for professionals and future research.

Key words: Educational Psychology, School Psychology, Autism, ASD, and Assessment

Introduction
The number of children identified as having ASD has significantly increased in the United States (US) (Centre for Disease Control & Prevention, 2012) and the United Kingdom (UK) (Baird et al., 2006; Baron-Cohen et al., 2009). The debate over increasing prevalence of ASD is on-going and could be due to: a true increase in population traits and behaviors associated with ASD, improved recognition/awareness of ASD, or changes in the diagnostic criteria (Russell, Collishaw, Golding, Kelly & Ford, 2015).
In the US and the UK, ASD is a medical diagnosis made by clinical or multi-agency teams (Barton et al., 2016; NICE, 2011) using the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, APA, 2013) or the International Classification of Diseases (ICD-10, World Health Organization, 1992). This is independent of assessment for educational support. However, with the number of children with ASD rising, SPs are more frequently involved in assisting in the identification, assessment, and treatment of ASD (Volker & Lopata, 2008).

Although SPs’ and EPs’ roles are similar, their role in relation to ASD assessment and diagnosis differs, which may reflect differences in context. Autism is a category under the Individuals with Disabilities in Education Improvement Act (IDEA, US congress, 2004). In the US, SPs may therefore have more of a role in evaluating whether or not children are eligible for educational support. In the UK on the other hand, multi-agency teams make diagnoses and EPs undertake assessments of special educational needs, which are not linked to diagnostic categories (Department for Education, DFE, 1994; DfE, 2015). Both EPs and SPs also have a role in planning interventions.

ASD evaluations can have various purposes. Shriver, Allen and Mathews (1999) stated that SPs have a role in three aspects of educational programming: a) verification (e.g., diagnosis, determining eligibility for special education); b) programming (developing appropriate and realistic instructional objectives and interventions) and; c) evaluation (establishing baselines in order to measure/evaluate students). As discussed above, EPs are likely to have more of a role in assessment for intervention and less of a role in diagnosis when compared to SPs. The following literature review and SLR focuses on tools/approaches used in ASD assessment irrespective of purpose.
Literature Review

Various tiered approaches to ASD screening and identification have been detailed in the literature (Brock, Jimerson, & Hansen, 2006; Filipek et al., 1999; Wilkinson, 2014). For example, Wilkinson (2014) recommends a three tiered model for screening: 1) Case finding involves all professionals recognizing the risk factors and/or warning signs of ASD, both teacher and parental concerns are important and children who are identified with risk factors should be referred for formal screening as part of tier 2. 2) Individual children’s scores are considered as an indication of the severity of ASD symptomology, students who score positively and continue to show limited progress are then considered for more comprehensive assessment as part of tier 3. 3) Screening information is integrated into a comprehensive developmental assessment to assist in determining eligibility for special education services and guide intervention planning. These tiered approaches (Brock et al., 2006; Filipek et al., 1999; Wilkinson, 2014) start with routine surveillance and move towards more individual diagnostic or psycho-educational assessment. For clinical and educational assessment, a multi-agency approach is recommended in the US and UK (National Research Council, NRC, 2001; NICE, 2011; Ozonoff, Goodlin-Jones & Solomon, 2005; Wilkinson, 2014).

In relation to individual assessment, there seems to be some agreement in the US literature in terms of best practices in ASD assessment. Ikeda (2002) describes the acronym of RIOT as useful when assessing ASD. This stands for: Review of reports and records; Interviews of significant caregivers; Observations of the child; and Testing of the child.

Various authors have advocated record review in the assessment of ASD. Ikeda (2002) explains that reviewing records helps to understand the severity and
pervasiveness of behavior over time and to identify which treatments have been used. Ozonoff et al. (2005) identified a review of available records (e.g., medical, school, previous testing, intervention reports) as a key part of the history-taking aspect of the evaluation.

Interviews with key adults such as parents and teachers are recommended (Shriver et al., 1999; NRC, 2001; Volker & Lopata, 2008). Esler & Ruble (2013) state that school evaluations should include a parent interview that covers early history as well as current behavior. Structured and unstructured approaches have been recommended and depending on the focus, general or ASD specific measures may be used (Ikeda, 2002). Shriver et al. (1999) state that parent/caregiver interviews should include an extensive developmental history. Others have advocated for the importance of a developmental, health and family history (Brock et al., 2006; NRC, 2001; Volker & Lopata, 2008). Ozonoff et al. (2005) stated that the first step of the ‘core assessment process’ is to review with parents the child’s early developmental history and current concerns. They stated that the key aspects of this history taking should be around the child’s communication, social, and behavioral development.

Many authors have detailed the importance of observation in ASD assessment (NRC 2001; Ozonoff et al, 2005; Shriver et al., 1999; Volker & Lopata, 2008). Ikeda (2002) stated that SPs should not feel limited by standardized observational systems. He stated that direct observational systems are helpful in identifying the instructional needs of the learner and the systems can be used to measure changes in the learner as a result of individualized programming. Some advocate the importance of observation across settings (Ozonoff et al., 2005) on multiple occasions and during both structured and unstructured times (NRC, 2001).
In terms of both observation and interviews in ASD assessment, standardized instruments have also been recommended in the literature (these are usually linked to diagnostic assessment). The Autism Diagnostic Interview-Revised (ADI–R; Rutter, LeCouteur, & Lord, 2003) and the Autism Diagnostic Observation Schedule (ADOS; Lord, Rutter, DiLavore, & Risi, 2001) have been labeled the “gold standard” (i.e. evidence based practice) of diagnostic instruments (Brock et al., 2006; Ozonoff et al., 2005; Volker & Lopata, 2008). Volker and Lopata (2008) claimed that although both instruments require significant training to be used properly and the ADI-R requires significant administration time, these tools can offer SPs the opportunity for making greater contributions to the assessment process. Some have argued that the Childhood Autism Rating Scale 2 (CARS2; Schopler, Reichler, & Renner, 2010) should be considered one tool in the evaluation of ASD (Wilkinson, 2010a). Others have discussed the use of The Gilliam Autism Rating Scale 2 (GARS-2; Gilliam, 2005). Brock et al. (2006) have however questioned its use as a screening tool as they state that the scores may underestimate the likelihood of Autism.

Although Ikeda (2002) details testing of the child as a key part of ASD assessment, others have highlighted individual considerations and accommodations around this method. Volker and Lopata (2008) stated that some lower functioning children with ASD may not be able to cope or comply with direct testing requirements. Furthermore, Shriver et al. (1999) stated that direct interaction may not always be necessary (i.e. sometimes observation and interviews can be sufficient for verification decisions). Brock et al. (2006) also draw attention to the fact that impairments in communication/social relations can impact test performance, and
highlight the importance of SPs considering testing accommodations, individual factors and specific assessments that are appropriate for this population.

Despite some cautionary comments, the literature details direct testing of the child as a key part of ASD assessment. Shriver et al. (1999) stated that direct interaction with the individual can assist in gathering information about specific types of functioning within the different domains. Standardized, norm referenced tests can be used to understand where the child is in comparison to a peer group or developmental standard (Ikeda, 2002; Shriver et al., 1999) and criterion/norm-referenced tests, or direct assessments of academic skills can be used if the SP believes that the test will provide important information about the child’s educational needs or eligibility for services (Ikeda, 2002). Shriver et al. (1999) and Volker and Lopata (2008) suggested that an interview with the child can be useful, however this will depend on the child’s functional language skills.

In recommending the use of cognitive assessments, Brock et al. (2006) stated that it is essential to identify cognitive strengths and weaknesses (not just a global intelligence score). Volker and Lopata (2008) and Ozonoff et al. (2005) also recommend the use of cognitive/intellectual assessments but draw attention to some important considerations (e.g., the child’s language levels, social difficulties, functioning). The testing environment must therefore be considered to maximize cooperation/test performance (e.g., more frequent breaks). Shriver et al. (1999) on the other hand question the validity of standardized cognitive assessments with children with ASD and stated that due to the time constraints under which many SPs operate, cognitive assessments may not be efficient or effective for making decisions for children with ASD around verification, programming or intervention.
A range of other approaches such as language assessments (Brock et al., 2006; Campbell, Ruble & Hammond, 2014; Esler & Ruble, 2015; Ozonoff et al., 2005), adaptive behavior assessments/measures (Brock et al., 2006; Campbell et al., 2014; Ozonoff et al., 2005; Shriver et al., 1999), social skills/functioning (NRC, 2001; Shriver et al., 1999; Wilkinson, 2010b), emotional functioning (Brock et al., 2006), motor functioning (Campbell et al., 2014), and sensory processing (Wilkinson, 2010c) have also been suggested. Functional assessment interviews may also help better understand when the behaviors are present/absent (Ikeda, 2002). Functional behavior assessment (FBA) is important in identifying interventions or specific treatment recommendations (Magyar & Pandolfi, 2012; Volker & Lopata, 2008).

Overall, there appears to be broad agreement that a tiered intervention approach should start with initial screening/case finding and move to a more comprehensive assessment if required (e.g., Wilkinson, 2014). There is also broad agreement that individual assessments should include information from a variety of sources/measures and include observation and interview (Ikeda, 2002; Ozonoff et al., 2005; Shriver et al., 1999). Although some have highlighted using testing/direct interaction in ASD assessment, there is some variation in recommendations as to whether this should be undertaken routinely and various test environment considerations are highlighted (Shriver et al., 1999; Volker & Lopata, 2008). There are also additional assessments such as emotional functioning (Brock et al., 2006), which are not consistently recommended in the literature.

A previous review examined the extent to which research on children and adolescents with ASD was published within school psychology journals from 2002 through 2012 (McKenney, Dorencz, Bristol & Hall, 2015). This review only
included one study which measured ongoing SP practices. The current review will just focus on assessment practices and offers an international perspective by considering the EP and SP literature.

The purpose of this paper is to identify common themes relating to the assessment tools and practices EPs and SPs are using. The role and work context of EPs in the UK and SPs in the US may shape the tools used and it is unclear what types of tools and processes EPs/SPs are using. The research question for the study is: What range of tools and approaches are EPs and SPs commonly using in their psychological assessment for school-aged children with ASD?

Method

Selection of Studies

The search terms used focused on three areas: Educational Psychology or School Psychology; ASD OR ASC OR autis* OR Asperger* OR PDD OR Pervasive Development disorder; and Assessment. These terms were used in Psychinfo, Web of Knowledge, Education Resources Information Center (ERIC) and E-theses online (EThOS) databases. Reference harvesting was also used. Searches were conducted between May 2016 and June 2016. Both published journals and dissertations were included in the SLR and a date range from 1996-2016 was specified. A large date range (20 years) was used in order to be able to consider changes over time. A total of 449 records were identified and screened. Of these, 384 were left after removing duplicates. Examination of the titles and abstract excluded 366 of these studies, as they were not relevant to the topic (See Figure 1).
Following initial screening, 18 studies remained and were screened using the inclusion and exclusion criteria described in Table 1. Of these 18, 10 studies were excluded (see Appendix B). The current review follows guidance set out within the preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines (Moher, Liberati, Tetzlaff & Altman, 2009). The PRISMA flowchart is detailed in Figure 1.
Table 1. Inclusion and Exclusion criteria

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Language of publication: English.</td>
<td>• Language of publication: Not in English.</td>
</tr>
<tr>
<td>• Published between 1996-2016.</td>
<td>• Published prior to 1996.</td>
</tr>
<tr>
<td>• Studies which include EPs or SPs reported use of psychological assessment tools or approaches for children with ASD.</td>
<td>• Studies which do not include data on EPs or SPs reported use of psychological assessment tools or approaches for children with ASD.</td>
</tr>
<tr>
<td>• Provides sufficient empirical data to be able to categorise those tools which were commonly used.</td>
<td>• Provides insufficient empirical data to be able to categorise tools which were most commonly used.</td>
</tr>
<tr>
<td>• Data draws upon more than one participant (overview not idiosyncratic).</td>
<td>• Those that focus on one participant (e.g., single case studies).</td>
</tr>
<tr>
<td>• Studies that explore the range of ASD assessment practice in more than one geographical area of practice (e.g., participants from contrasting practice areas, or at state/country level).</td>
<td>• Studies with EPs/SPs which focused on local practice (e.g., one county or practice area).</td>
</tr>
<tr>
<td>• Published in a peer reviewed journal or a peer-reviewed source (e.g., dissertation).</td>
<td>• Published in books, reviews or editorial prefaces.</td>
</tr>
<tr>
<td></td>
<td>• Studies including assessments undertaken by other professionals (hence main focus is not on EP/SP assessment practices).</td>
</tr>
<tr>
<td></td>
<td>• Studies surveying knowledge rather than actual use of tools or approaches.</td>
</tr>
</tbody>
</table>

**Assessing Eligibility: Study Quality and Relevance Assessment**

Eight studies remained after the inclusion/exclusion criteria were applied. The quality of the eight remaining studies was assessed using frameworks. These were assessed for both methodological quality and relevance to the review. It is
important to note that as all of the included studies had more than one focus (e.g., SPs’ knowledge; SPs’ intervention practices), the frameworks were therefore only applied to the sections of the paper/dissertation related to the SLR research question.

Quantitative studies were assessed using the Bond, Woods, Humphrey, Symes and Green (2013) framework (See Appendix C). Fifteen criteria were considered and a score of up to 15 points was given for each paper. Studies using a qualitative methodology were assessed using a Bond et al. (2013) framework (See Appendix D). This framework was developed based on the work of Spencer, Ritchie, Lewis and Dillon (2003) and Henwood and Pidgeon (1992). Twelve criteria were considered and a score of up to 12 points was given. Both frameworks were applied (dual coded) to studies which used a mixed methods design, and the higher score was used.

Inter-rater reliability was calculated with a co-researcher. The researcher and co-researcher independently scored two studies (25%) yielding an inter-rater reliability coefficient of 0.88. To ensure consistency of coding the author and the supervisor met to discuss the scoring before the remaining six studies were scored. During this discussion, criteria were operationalized further and there was discussion around the time trends and multilevel or inter-group criteria. It was decided that this must apply to the relevant RQs, not the dissertation as a whole. Following the inter-rater reliability checking process a coefficient of 1.00 was achieved.

Studies needed to achieve at least 50% of the total available quality score to be included in the SLR (it was felt that this was reasonable given that the study was exploratory in nature and the author wanted to be inclusive of the literature out there).
Two studies (Singer, 2008; White, 2011) were excluded based on their relevance to the SLR RQ. The current SLR aimed to uncover the range of tools and approaches used by EPs and SPs in their ASD assessment practices. As White (2011) and Singer (2008) focused on a narrow range of ASD specific assessment tools/measures and did not consider comprehensive evaluation practices, they were excluded (See Appendix E). It is also important to note that Waite and Woods (1999) included both quantitative and qualitative data and was assessed using both frameworks. However, as it was the only mixed methods study, to increase comparability only the reported quantitative data from this study were drawn on during the synthesis/analysis and the qualitative data informed part of the discussion section.

Results

Overview of the Studies

Six studies were included in the review (see Table 2 for an overview). Three were published in peer-reviewed journals (Allen, Robins & Decker, 2008; Sansosti & Sansosti, 2013; Waite & Woods, 1999), and three were dissertations (Pearson, 2008; Rasmussen, 2009; Small, 2012). One study used mixed methods: questionnaire and interviews (Waite & Woods, 1999); five studies were quantitative and used a survey/questionnaire design (Allen et al., 2008; Pearson, 2008; Rasmussen, 2009; Sansosti & Sansosti, 2013; Small, 2012).

Waite and Woods was the oldest study included in the review (published in 1999) and Sansosti and Sansosti (2013) was the most recent. One of the studies was based in the UK (Waite & Woods, 1999) and included EPs. Five of the studies originated in the US and included SPs (both state-wide and nation wide). Waite and Woods (1999) included a UK small opportunistic sample and is therefore not very
representative. It is important to note that all studies included self-selecting samples, particularly those that did not use random sampling. Those who had a specific interest in ASD may have therefore been more likely to complete the surveys, leading to a potentially biased respondent sample.
<table>
<thead>
<tr>
<th>Author/date/country</th>
<th>Sample (size and location)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sansosti &amp; Sansosti (2013), US</td>
<td>National Sample (random stratified sample from 9 US regions representing 20 states). Online data collection from 978 respondents.</td>
<td>10</td>
</tr>
<tr>
<td>Allen, Robins &amp; Decker (2008), US</td>
<td>Survey invitations were initially sent by email to SPs in several large school districts and regional/state SP associations with further snowballing of other SPs. 121 SPs completed the survey. Four participants excluded, leaving 117 SPs (from 4 states).</td>
<td>8.5</td>
</tr>
<tr>
<td>Waite &amp; Woods (1999), UK</td>
<td>A postal questionnaire was sent to 36 Principle EPs, yielding 21 returns. Three services were selected for follow up interviews on the basis of being contrasting services. Four volunteer EPs from each service were interviewed (12 EPs in total).</td>
<td>7.5</td>
</tr>
<tr>
<td>Small (2012), US</td>
<td>Massachusetts SP Association (MSPA) sent invitation and survey link via email with two follow up reminder emails. From a possible 370 members, 101 members in MSPA completed the survey. One survey was excluded, leaving 100 participants (1 state).</td>
<td>8</td>
</tr>
<tr>
<td>Rasmussen (2009), US</td>
<td>Random sample of 23% of the Nationally Certified SPs per state (50 states plus the District of Columbia). Participants were approached by email until the 23% percent rate was achieved. 805 surveys were completed (response rate 34.64%). 143 did not meet criteria for inclusion leaving 662 participants (nationally).</td>
<td>10.5</td>
</tr>
<tr>
<td>Pearson (2008), US</td>
<td>List of SPs employed in every public school district and Intermediate unit in Pennsylvania (1 state) in the year 2006/2007- 908 from the list were emailed. Total of 243 completed surveys (1 state).</td>
<td>10.5</td>
</tr>
</tbody>
</table>
Demographic Information Across Studies

When considering the demographic information across the six studies, it is important to note that Waite and Woods (1999) did not provide any demographic information. Of the six studies, four reported gender information (Pearson, 2008; Rasmussen, 2009; Sansosti & Sansosti, 2013; Small, 2012) and all four studies involved a higher proportion of female to male SPs (with at least 75% of each sample being female). This is similar to the proportion of practicing SPs in the US (Walcott, Charvat, McNamara, & Hyson, 2015).

Three of the six studies reported race/ethnicity information (Rasmussen, 2009; Sansosti & Sansosti, 2013; Small, 2012) and the majority of participants in these studies were White/Caucasian (at least 90% of each sample identified themselves in this category). This is similar to the overall proportion of practicing SPs in the US (Walcott et al., 2015). Five out of six of the studies considered the number of years working as an SP. Three of these reported average/mean number of years working as an SP (Allen et al., 2008; Rasmussen, 2009; Sansosti & Sansosti, 2013) and these were between 9.11 years and 12.2 years. Small (2012) and Pearson (2008) did not calculate a mean, but 55% and 44.6% (respectively) had at least 11 years of experience working as an SP.

Five out of six of the studies recorded the level of education of the participants (Allen et al., 2008; Pearson, 2008; Rasmussen, 2009; Sansosti & Sansosti, 2013; Small, 2012). The majority of participants in each study (over 55%) reported holding specialist degrees. No more than 23% of participants in each study held a doctoral degree.

Three of the six studies provided information about the location of participants’ work (Pearson, 2008; Rasmussen, 2009; Small, 2012), the majority of
participants (over 52% in each study) worked in suburban areas. Three of the six studies (Pearson, 2008; Sansosti & Sansosti, 2013; Small, 2012) provided information about the type of settings SPs were working in/current population served. The highest percentage in the three studies was in elementary schools.

Assessment Information Considered Across the Studies

Various assessment tools were considered in each study. In some studies, (Allen et al., 2008; Pearson, 2008) the range of assessment tools included in the questionnaire was limited (9 and 5 tools respectively). Other studies asked about a wider range of tools (Rasmussen, 2009, 15 tools; Sansosti & Sansosti, 2013, 17 tools; Small, 2012, 16 tools; Waite & Woods, 1999, 15 tools). In addition to these broad evaluation/assessment tools, three of the six studies also considered a range of specific ASD instruments (Allen et al., 2008; Pearson, 2008; Rasmussen, 2009).

Studies used a mixture of percentage categories (Allen et al., 2008) and Likert scales (Pearson, 2008; Rasmussen, 2009; Sansosti & Sansosti, 2013; Small, 2012) to establish frequency of use of particular techniques/instruments. It is unclear in Waite and Wood’s (1999) study how the questions were asked. The findings were also presented in different ways across the studies (e.g., means, standard deviations, frequencies, and percentages), which meant it was not possible to aggregate findings across studies.

Method of Synthesis

The aim of this paper was to identify common themes for practice (i.e. what types of assessment are most commonly used). As discussed above, each paper that was included in the SLR used different questions, considered different assessment tools, had different scoring systems or ways of aggregating the data, and presented
their findings in different ways. It was therefore a challenge for the researcher to integrate these in a coherent way. It was agreed to use first hand/raw data (e.g., information provided in table such as means and percentages) when available, rather than relying on each individual authors’ interpretation of their results or their imposed categorization of their findings.

Following the realization that the studies/methodologies/results were not directly comparable, the second decision to be made with regards to synthesizing across the data was how to present the findings and how to define ‘most commonly used’ across the studies. The way ‘most commonly’ was considered in each study was dependent on the study details. The aim was not to apply another level of analysis, but use a consistent approach to identify what was used most. The author and supervisor discussed individual studies to ensure that the decisions made were consistent across the studies, with a tool being included as ‘most used’ if it was selected more than 50% of the time (either an overall mean of more than 50% or 50% of participants used the tool ‘always’ or ‘often’). Finally, the author decided that in order to enable comparisons to be made, rank order would be used in each study to distinguish tools that were most commonly used in each study. These are given to provide an overview of each study and where each tool ranked in each study but not as a comparison between them (i.e., due to variability in sample sizes and questionnaire construction).

**Synthesis: Commonly Used Assessment Tools**

Following synthesis of the assessment tools used across the six studies, Table 3 was created (See Appendix F for category decisions). Assessment methods, which were considered in more than one of the studies (and commonly used in at least one), were included in the table.
Table 3. The most commonly used assessment tools

<table>
<thead>
<tr>
<th>Study</th>
<th>Observation</th>
<th>Interview with parents and/or teacher</th>
<th>ASD specific (autism checklists/rating scales)</th>
<th>Standardized intelligence tests/cognitive</th>
<th>Developmental History</th>
<th>Developmental Assessment checklists/questionnaires</th>
<th>Adaptive behavior scale</th>
<th>Behavior assessment (e.g., FBA, behavioral checklists, rating scales, behavioral observations)</th>
<th>Record</th>
<th>Review</th>
<th>Interview with student/child</th>
<th>Achievement tests</th>
<th>Review of academic work</th>
<th>Review of home/school environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sansosti &amp; Sansosti (2013)</td>
<td>✓2</td>
<td>✓1</td>
<td>✓4</td>
<td>✓</td>
<td>✓3</td>
<td>NC</td>
<td>✓5</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>NC</td>
</tr>
<tr>
<td>Allen et al. (2008)</td>
<td>✓2</td>
<td>✓</td>
<td>✓3</td>
<td>✓</td>
<td>✓4</td>
<td>✓1</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓5</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Small (2012)</td>
<td>✓2</td>
<td>✓3</td>
<td>NC</td>
<td>✓4</td>
<td>✓4</td>
<td>-</td>
<td>NC</td>
<td>✓</td>
<td>✓</td>
<td>✓1</td>
<td>✓</td>
<td>NC</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Rasmussen (2009)</td>
<td>✓4</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓5</td>
<td>-</td>
<td>✓</td>
<td>✓2</td>
<td>✓</td>
<td>✓1</td>
<td>✓</td>
<td>✓</td>
<td>✓3</td>
<td>✓</td>
</tr>
<tr>
<td>Pearson (2008)</td>
<td>✓3</td>
<td>✓2</td>
<td>✓5</td>
<td>-</td>
<td>✓1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓4</td>
<td>-</td>
</tr>
<tr>
<td>Waite &amp; Woods (1999)</td>
<td>✓1</td>
<td>✓1</td>
<td>✓4</td>
<td>NC</td>
<td>-</td>
<td>NC</td>
<td>✓5</td>
<td>-</td>
<td>✓</td>
<td>✓3</td>
<td>-</td>
<td>NC</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

✓: Used more than 50% of the time  
✓1-5: Highest ranked in each study  
NC: Included on assessment list on questionnaire but not commonly used by participants  
- : Not included on questionnaire
**Observation.** Observation was a popular method. It was identified as a commonly used tool (ranked top five) in all six of the studies. Sansosti and Sansosti (2013) did not distinguish between home/school settings. They found that direct observations were ranked second but did not differentiate between setting. They also asked about participants’ use of ‘standardized direct observation systems’; these were used but not ranked in their study.

Participants in five of the remaining six studies were specifically asked about observation in school/class and this was ranked in all five studies. Rasmussen (2009) asked participants whether they ‘observe teacher/classroom to determine environmental factors’ and this was ranked the fourth most frequently used method. Waite and Woods (1999) found that all 12 EPs ‘always use’ observation in class and Pearson (2008) found that ‘observation on the playground and other unstructured activities’ were used by the SPs (Ranked third).

Observation in other settings was considered in three of the studies. One of these three studies (Allen et al., 2008) asked participants about ‘observation of the child in multiple settings’; this was commonly used but was not in the top five ranked tools. Two of the studies (Small, 2012; Waite & Woods, 1999) considered both observation at school and observation at home. Observation at home was not commonly used by Small’s (2012) participants but was ‘always used’ by 8/12 of the EPs (Waite & Woods, 1999).

**Interviews.** Interviews with key adults were identified as a commonly used method across all six studies (in top five rank for four studies). There were various comparability issues in terms of whether studies distinguished between parent or teacher interviews. Not all studies distinguished between parent and teacher interviews (e.g., Sansosti & Sansosti, 2013). Where studies did specifically consider
parent interviews: it ranked first in Waite and Woods (1999), ranked second in Pearson (2008) and was outside the top five in others (Allen et al., 2008; Rasmussen, 2009; Small, 2012). Interviews with teachers was considered specifically in two studies and ranked in the top five for both (Waite & Woods, 1999; Small, 2012). Interestingly, Small (2012) was the only study to include ‘interview aide’ (Teaching Assistant) and they found that this was not commonly used by the SPs. Two studies asked about interview with students (Rasmussen, 2009; Small, 2012); this was used but was not in the top ranked methods.

**ASD specific measures.** Sansosti and Sansosti (2013) found that ‘autism checklist/rating scales’ were commonly used by SPs (ranked fourth). Rasmussen (2009) found that ‘an autism measure’ was used but not among their top five ranked methods. Interestingly, Small (2012) found that ASD specific measures were not commonly used. As only one state was included in this study, the result could reflect factors specific to that state.

Some of the studies considered participants’ use of specific ASD instruments. Rasmussen (2009) considered eight different ASD instruments and found that the CARS was the most commonly used and the GARS was the second most commonly used instrument used, but neither were ranked. The other six instruments were not commonly used by the SPs. Allen et al. (2008) considered 17 ASD instruments and also found the CARS to be the most commonly used tool (not ranked). The other 16 instruments were not commonly used (although the GARS was not commonly used, it was the second most used out of the instruments). Pearson (2008) considered nine ASD instruments and found the most used was the GARS-2 (ranked fifth) followed by the Gilliam Asperger’s Disorder Scale (not ranked) (GADS, Gilliam, 2001). Interestingly, the CARS was just under threshold of
being ‘commonly used’. Waite & Woods (1999) considered the CARS only and found that 8/12 of the EPs were sometimes using it (ranked fourth). Interestingly, the studies which considered instruments such as the ADOS and ADI, found that these measures were not commonly used (Allen et al., 2008; Pearson, 2008; Rasmussen, 2009).

**Standardized intelligence tests/cognitive.** Five out of six of the studies considered EP/SP use of standardized intelligence/ cognitive tests. Waite and Woods (1999) was the only study to identify that ‘normative assessment for older children’ was not commonly used. However, the other four studies found that intelligence/cognitive assessments were used (ranked in Allen et al., 2008 and Small, 2012) and used but not ranked in Rasmussen (2009) and Sansosti and Sansosti (2013).

**Adaptive behavior scale.** Five of the six studies asked about this method. Participants in Small (2012) were not commonly using adaptive measures although this may reflect state specific requirements. The other four studies identified that SPs and EPs were using this method. Sansosti and Sansosti (2013) ranked fifth; Allen et al. (2008) ranked first; EPs in Waite and Woods (1999) were using the Psychoeducational Profile Revised (PEP-R, Schopler, Reichler, Bashford, Lansing, & Marcus, 1990) (ranked fifth). In Rasmussen (2009) participants used it but it was not top ranked.

**Behavior assessment.** Four of the six studies considered behavioral assessment in some form, however different approaches were named (e.g., FBA, behavioral checklists or rating scales and behavioral observations). Rasmussen (2009) found that ‘behavioral observations at school’ were being commonly used by SPs and ranked second, however behavioral observations in child’s home were not
commonly used. ‘Behavioral assessments’ (Small, 2012), ‘behavioral checklists/rating scales’ (Sansosti & Sansosti, 2013) and ‘behavior rating scales (non-autism)’ (Allen et al., 2008) were being used by participants but were not ranked in the top five. FBA was considered in two studies. In Sansosti and Sansosti’s (2013) study the method was commonly used but was not in the top five ranked. In Small’s study (2012) FBA was not commonly used by the participants in this state.

**Academic assessment.** Five out of the six studies considered achievement tests. Two found that they were not commonly used (Waite & Woods, 1999; Small, 2012); two studies found participants to be using them (but not ranked) (Rasmussen, 2009; Sansosti & Sansosti, 2013) and in one study they were used and ranked fifth (Allen et al., 2008). One study (Sansosti & Sansosti, 2013) asked participants about their use of curriculum based assessments, which were used but not ranked. Two of the six studies considered review of academic work, Small (2012) (not ranked) and Rasmussen (2009) (ranked third).

**Other assessments.** Three studies considered participants’ use of Record Review and this method was ranked in the top five in all three studies (Rasmussen, 2009; Small, 2012; Waite and Woods, 1999). Three of the six studies (Allen et al., 2008; Sansosti & Sansosti, 2013; Waite & Woods, 1999) asked about developmental assessments but these were only commonly used in one study (Allen et al., 2008, ranked fourth). Two studies considered review of family systems/home environments (Pearson, 2008; Rasmussen 2009), this method was used; however, it was ranked in only one study (Pearson, 2008). Sansosti and Sansosti (2013) considered SPs’ use of ecological inventories but these were not commonly used.
Developmental history taking was included in five of the studies. It was ranked in the top five in four of the studies (Pearson, 2008; Sansosti & Sansosti, 2013; Small, 2012, Rasmussen 2009). Allen et al.’s (2008) participants used developmental interviews with parents/guardians, however this was not ranked.

Not commonly used. When considering the best practice literature, there were some approaches that although considered in literature, were not commonly used. Sansosti and Sansosti (2013) was the only study to ask participants about SPs’ use of ‘emotional regulation checklists/rating scales’ and found that this method was not commonly used by SPs. Sansosti and Sansosti (2013) was the only study to consider social skills checklists/rating scale but this was not commonly used or ranked. Rasmussen (2010) was the only study to ask participants about their use of ‘sensory assessments’ and found that these were not used often by the SPs.

Discussion

Summary of Findings and Links with Literature

The current SLR included both dissertations and published papers and considered the tools used by both EPs and SPs during ASD assessment. The methods used most (i.e. those rated in at least three of the review studies) include: observation, interview, developmental history, adaptive behavior scales, record review, and ASD specific checklists/rating scales. Although there is limited literature available to confidently identify the extent to which EPs are currently using best practice tools/guidelines, the study can draw some tentative conclusions about SP practice in the US. The SLR therefore provides reasonable evidence that a range of tools are being used by SPs, which are recommended within best practice guidelines.
For example, when considering RIOT (Ikeda, 2002), elements of this are being used, although some elements seemed to be more strongly used than others.

In terms of review of records, the method was not included in three of the studies meaning that limited conclusions can be drawn about this method. It is possible however that participants could have interpreted developmental history as including reviewing records.

In line with best-practice literature (Ikeda, 2002; Shriver et al., 1999), interviews with key adults were used by participants. Interview with students was used in the studies that asked about it (linking with recommendations from Volker & Lopata, 2008). Developmental history was also used, fitting with the literature (Brock et al., 2006; NRC, 2001; Ozonoff et al., 2005; Shriver et al., 1999; Volker & Lopata, 2008).

In line with the ASD assessment literature (Ikeda, 2002; Shriver et al., 1999), observation was a commonly used tool. The studies described observation in different contexts (e.g., in school, in class, on the playground, in multiple settings, at home), some specified the type of observation (e.g., standardized observation) and some were more specific about the function of the observation (e.g., to determine environmental factors). Since ASD is a pervasive developmental disorder, it is important to understand how the child presents in different contexts and what environmental factors might be most enabling for them. The differences in questionnaires meant that it was difficult to draw concrete conclusions in all areas, however, it did seem that participants consistently used school-based observations across the studies. Small (2012) hypothesized that barriers to SPs conducting home observation could be time limitations or this being perceived as another professional’s role. Shriver et al. (1999) state the importance of observation of the
child in several natural settings, this piece of research cannot draw conclusions about whether this is consistently used by SPs.

Although not commonly used across all of the studies, some participants were testing the child (Brock et al., 2006; Ikeda, 2002; Ozonoff et al., 2005; Shriver et al., 1999). This included using standardized intelligence/cognitive tests and achievement tests, despite disagreement in the literature around the use of cognitive assessments (Brock et al., 2006; Esler & Ruble, 2015; Shriver et al., 1999; Volker & Lopata, 2008). There are also some considerations around using direct testing in the literature, which were not elicited as part of the studies. In line with the literature (Brock et al., 2006; Campbell at al., 2014; Ikeda, 2002; Ozonoff et al., 2005; Shriver et al., 1999) participants were using adaptive behavior measures.

The findings suggest that although SPs seemed to be using standardized ASD specific instruments, many relied on a narrow range of brief screening/rating instruments such as the CARS and GARS (and in one study the GADS). Although Singer (2008) and White (2011) were excluded from the current review, their results are comparable to a certain extent. For example, Singer (2008) surveyed 199 SPs (from National Association of SPs) and found that the CARS was the most commonly used, followed by the GARS. White (2011) with a national sample of 203 SPs found that the Behavior Assessment System for Children-second edition (BASC-2) was most commonly used, followed by the GARS-2, CARS and the GADS.

Participants did not seem to be commonly using ‘gold standard,’ comprehensive and robust instruments such as the ADOS or the ADI-R in their ASD assessments. This is likely to be due to the tensions in the role around assessment for
diagnosis and assessment for intervention and may also relate to the further training required for administering these assessments.

**Gaps in Relation to Best-Practice Literature**

Methods recommended in some of the best-practice guidelines were not considered by the questionnaires or not used by the participants. Sansosti and Sansosti (2013) were concerned that SPs rarely prioritized ‘emotional regulation checklists/rating scales’ as many individuals with ASD demonstrate a high degree of emotional difficulties. Wilkinson (2010c) suggests that sensory assessments can be useful. Sensory issues are often major concerns for those with ASD and are now in the DSM-5 criteria (APA, 2013). However, only Rasmussen (2010) asked about SPs use of sensory assessments and found that these were not commonly used. Rasmussen (2010) stated that school personnel are not qualified or able to evaluate this in a school setting and stated that this could be the role of other professionals. The extent to which SPs have expertise in this field requires further exploration.

**Limitations of the SLR, Future Research and Implications for Practice**

There were some limitations with regards to the synthesis of the studies in the SLR. As discussed previously, the studies were not directly comparable and it was therefore a challenge for the author to integrate the studies in a coherent way. There were important decisions around categorizing the different tools (the various questionnaires included different tools/phrases). Some items were particularly tricky to categorize (e.g., ‘behavioral observation’ to go under observation or behavior assessment) and some seemed to be encompassed by other tools/methods (e.g., interview with parents could include developmental history). Furthermore, the
synthesis relied on decisions around criteria/cut off for ‘commonly used’ tools in each study. The criteria was that the tool was used at least 50% of the time. This is quite a low cut off and could have therefore impacted the results, as in the case of some assessments only 50% of participants may have been meeting this good practice criterion. The rankings were used to add some further differentiation to account for this issue. Overall however, the author tried to work systematically, to reflect the various studies findings as accurately as possible by using the raw/original data (without applying another level of analysis), in order to enable consistency. Future research needs to consider linking more closely to best practice terminology and include raw data to enable comparison and consistency across studies.

The SLR only included one study, which considered EPs’ practice in the UK (Waite & Woods, 1999). This study was published 17 years ago and had a limited sample size. Hence the findings from the UK are limited and not generalizable meaning that limited conclusions can be drawn around EP assessment practices. Further UK based research needs to be conducted into EPs use of the assessment tools using a more representative sample.

There have also been various changes in the UK and US (e.g., new ASD assessments and guidelines and new or revised assessment tools). These local and national developments are likely to have been captured to some extent in the US research but need to be further explored in the UK.

Some of the US studies included restricted geographic regions (Pearson, 2008 and Small, 2012 included just one state). Local factors might have skewed the results in these studies. For example, Small (2012) was the only study to find that ASD specific measures were not commonly used and hence certain ‘context-
specific’ factors such as local policies could have impacted on this. Further research should explore the contextual factors that influence and shape assessment practices.

Four out of the five studies employed a quantitative, self-report survey methodology. Waite and Woods (1999) provided some qualitative information, and although these data were not formally part of the analysis, they illustrate the benefits of combining quantitative and qualitative data. They highlighted the importance of context and found that EPs held an appreciation of the potential benefits of collaborative working on assessment as well as the opportunity for a distinctive contribution by a psychologist. They found that participants stated that diagnosis was less important to them than an accurate and formative assessment of need.

The current SLR helped to identify what tools were being used by SPs, but did not help in understating how or why the tools are used. For example, although we identified that observation is used, we do not know how it is used (e.g., to consider the environment) or the purpose of using this tool (e.g., for diagnosis or intervention). Furthermore, the studies did not consider how we integrate the various tools into a more holistic assessment process. Further research which employs qualitative methodologies to uncover the decision-making processes (i.e. when/why EPs and SPs choose particular assessment tools with particular children and young people) and explores the purpose and context of ASD assessment is therefore needed.

Finally, although there are best practice guidelines, there is limited evidence-based research on assessment tools/practices, with most of the best-practice suggestions coming from books and not peer-reviewed empirical work. Mckenney et al. (2015) state that the most surprising of their findings is the relative lack of publication on the development and psychometric properties of assessment tools.
used to evaluate students with ASD. Further rigorous research is needed on the evidence for using these tools to establish if the best-practice guidelines are supported by empirical evidence.

The study has some particular implications for practice. Although the SLR identifies the assessment methods most commonly used, it is unclear if these are the tools which are most empirically valid. Methods used most such as observations and interviews may not have the same validity or reliability as psychometric tools. As there are few studies comparing instruments there is therefore little empirical data to guide practitioners when choosing among them (Ozonoff et al., 2005).

Both EPs and SPs need to have good knowledge of ASD, knowledge about the tools available, and the ability to choose assessment methods/apply knowledge in context as part of a holistic assessment. SPs’ and EPs’ roles in assessment and assessment tool use will vary depending on purpose (e.g., screening tools might be useful if that is the purpose, however on other occasions a more holistic and individual assessment might be required). SPs and EPs need to ensure they keep up to date with developments in this changing and evolving field.

**Conclusion**

This SLR found that across the studies the most used tools were observation, interview, developmental history, adaptive behavior scales, ASD specific checklists/rating scales, and record review. The study has drawn some tentative conclusions around the range of tools used by SPs in ASD assessment. It is promising that much of this fits with best-practice guidelines. However, as most of the current research is from the US it is not clear to what extent SPs' and EPs' in other countries assessments of children with possible ASD are informed by best-
practice guidance. The small and dated UK sample means that limited conclusions can be drawn about current EP practice. There is therefore a need for a national questionnaire to provide a more up to date and thorough study of EP practices in the UK. In both the UK and US high quality qualitative data will also be useful. This study has considered use of tools and approaches, regardless of the purpose, and limited focus has been given to the decision making process. Future research should therefore distinguish between tools used for different purposes and allow for some exploration of the process and how tools are used. Further research should help to enhance our understanding around the contextual factors that shape practice.
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Paper Two

Educational Psychologists’ assessment practices for children with Autism Spectrum Disorder in the UK and Ireland

Prepared in accordance with author guidelines for submission to Educational Psychology in Practice (Appendix G)

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Educational Psychologists’ assessment practices for children with Autism Spectrum Disorder in the UK and Ireland

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Abstract

As the prevalence of Autism Spectrum Disorder (ASD) increases, Educational Psychologists (EPs) are likely to spend more of their time assessing this group of children. There is limited evidence regarding how EP professionals assess children with ASD, and hence up to date research is required. One hundred and sixty-one EP professionals from the UK and Ireland took part in an online questionnaire. Analysis of the quantitative data involved descriptive statistics and content analysis was used to analyse the qualitative responses. The most frequently used tools were consultation with parents and teachers, observation at school, the child’s view, and review of records. Qualitative data indicated that conducting individualised, holistic, appropriate assessments with a clear purpose were important considerations and contextual factors also influenced the assessment process. Implications for EPs’ assessment practices and directions for future research are identified.

Key words: Educational Psychology; Autism; ASD; assessment.
Introduction

The prevalence of Autism Spectrum Disorder (ASD) has increased with studies estimating that approximately one per cent of children in the United Kingdom (UK) and Ireland are affected (Baird et al., 2006; Baron-Cohen et al., 2009; Dublin City University, 2013). Given that assessment is a key function of the Educational Psychologist’s (EP’s) role (Fallon, Woods & Rooney, 2010), EPs are among a number of professionals involved in identifying and assessing children with possible ASD, sometimes as part of a multi-professional team (National Institute for Health & Care Excellence, NICE, 2011). As a profession, EPs have moved away from a theoretical stance focusing on within-child factors, to assessing and influencing contexts as well as individuals (Kelly, 2008). EPs will carry out psychological assessments to identify learning profiles and needs with the aim of linking research to practice to help education settings meet children’s needs.

Surprisingly however, there is only one UK based piece of research (Waite & Woods, 1999) and no Irish studies which have considered the EP role in terms of ASD assessment practices. Since Waite and Woods (1999), there have been significant national and international developments such as the new UK Special Educational Needs and Disability Code of Practice (DfE, 2014); revisions to NICE guidelines (NICE, 2011) and new diagnostic criteria for ASD (Diagnostic and Statistical Manual of Mental Disorders-DSM-5, American Psychiatric Association APA, 2013). These contextual factors are likely to influence EP practice and an up to date picture is required to establish what tools and approaches EPs use in their ASD assessments.
Literature Review

In relation to psychological assessment the school psychology guidance (e.g. Ikeda, 2002; Shriver, Allen & Matthew, 1999) recommends that individual assessments should include information from a variety of sources using a variety of measures including: observation, interview and testing/direct interaction. Ikeda (2002) describes the acronym of RIOT as useful when assessing ASD. This stands for: Review of reports or records; Interviews of significant caregivers; Observations of the child; Testing of the child. There are various individual considerations and testing accommodations highlighted in the literature (e.g. Brock, Jimerson & Hansen, 2006) and some debate about whether certain testing (e.g. cognitive assessments) is recommended (Brock et al., 2006; Shriver et al., 1999). Some assessments such as emotional functioning (Brock et al., 2006) are not consistently identified in the literature. However, as the US School Psychologists’ (SP) role and context are somewhat different to those of EPs it is unclear to what extent assessment practices might be the same in the UK and Ireland. There are no EP specific guidelines on ASD assessment.

A UK empirical study by Waite and Woods (1999) investigated how EPs assess the needs of children when ASD is queried. They collected questionnaire data from 21 Principal Educational Psychologists (PEPs) and interviewed 12 EPs from three different Educational Psychology Services. They identified ‘always used’ EP assessment strategies for ASD to include; interview with parent, observation in class or playgroup, interview with teacher, observation at home, and background information. They also identified assessment strategies which were ‘sometimes used’, these included the Childhood Autism Rating Scale (CARS) (Schopler, Reichler & Renner, 1988), direct interaction with the child, Psychoeducational
Profile-Revised (PEP-R) rating scale (Schopler, Reichler, Bashford, Lansing, & Marcus, 1990) and play based assessment. Analysis of the questionnaire data and the interviews also identified contextual and EP factors which might also influence assessment practices such as local diagnostic processes and EP confidence in assessment. They suggested that in the future there would be greater involvement with parents and families.

Although there is limited UK based research, there are a number of empirical studies researching the role of SPs in ASD assessment in the United States. These have included national (Sansosti & Sansosti, 2013) and local surveys (Small, 2012). Some have focused on the broad range of assessment tools used by SPs while other have focused on ASD specific assessment practices (Singer, 2008; White, 2011).

A recent systematic literature review (SLR) (reported in section one of the thesis) aimed to systematically review the empirical literature regarding the type of tools and approaches most commonly used by practising EPs and SPs when assessing children and young people with possible or diagnosed ASD. Six studies (one UK based and five US based) were included in the SLR and the UK study was Waite and Woods (1999). Commonly used tools (those ranked in the top five across three or more studies) included; observation, interview, developmental history, ASD checklists/rating scales, adaptive behaviour scales, and record review. Although the SLR drew some tentative conclusions about SP practice, the study concluded that there is limited literature available to confidently identify the extent to which EPs are currently using best practice tools/guidelines. It concluded that further research in this area is therefore needed.

Overall therefore, there is a paucity of research uncovering the role of the EP in the assessment of children with ASD in the UK and Ireland. The current study
focuses on EPs in the UK and Ireland as the EP role is similar in both. Although the UK/Ireland contexts for EP work are somewhat different to SPs’ work in the US, similarities in questionnaire construction (e.g., with Sansosti & Sansosti, 2013) may enable comparison with SP practice.

The Research Questions (RQs) of the present study are: RQ1: How are EPs involved in assessing children with ASD or possible ASD? RQ2: What factors influence EPs’ assessment of children with ASD or possible ASD?

Methodology

The research described in this paper forms part of a larger ASD survey looking at assessment and intervention for children with ASD. This large scale mixed methods survey used quantitative and qualitative elements to gather information about UK and Irish EPs’ assessment and intervention practices with children with ASD or possible ASD. The data presented here pertain to the assessment of ASD strand only.

The Questionnaire

The researcher, a Trainee Educational Psychologist (TEP) colleague involved in the wider ASD project, and University supervisors developed the questionnaire jointly. Focus group themes from two pilot studies (Robinson, 2015; Sadreddini, 2015) and previous literature (Sansosti & Sansosti, 2013; Waite & Woods, 1999) were used to inform the questionnaire. The questionnaire included both open and closed questions, multiple-choice questions and rating scales (Gillham, 2007) and was adapted following feedback from regular meetings with the supervisors. There were ongoing discussions around the assessment methods to be included in this questionnaire, wording and the length of the questionnaire.
piloted with five EPs and five TEPs. This pilot stage was used to ensure the comprehension of questions and check the completion time of the questionnaire before sending it out nationally. A small number of changes were made based on the feedback received (e.g., typing errors, formatting).

The final questionnaire (See Appendix H) involved three parts (all participants were given part one first but then the order of part two and three were randomized). Part one focused on participants’ individual and employment demographic information and percentage of cases assisting in diagnosis. Part two included information relating to assessment methods used. Participants were asked about percentage of caseload involving assessment of children with ASD/possible ASD and asked to rate 24 assessment methods/tools according to frequency of use (on a 0-5 scale; 0=not familiar, 1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Always). This section also included open and closed questions such as, factors EPs’ perceived to guide their decision making around choice of assessments and any additional assessment tools EPs used which were not listed in the questionnaire. Part three of the questionnaire focused on intervention and these data were analysed separately (see Robinson, 2017).

Participant recruitment

The questionnaire survey was distributed to EPs, TEPs and Assistant Psychologists in England, Northern Ireland, the Republic of Ireland, Wales and Scotland in order to gain a representative sample. The author acknowledged the diversity of the profession and hence included TEPs and Assistant EPs in order to gain a full picture of the practice of the profession and sought to make comparisons between different groups within the profession.
Participants were invited to complete the questionnaire through email or adverts on: Professional networks such as EPNET\(^1\); the Association of Educational Psychologists (AEP); UK Principal EPs (PEPs); National Trainee EP network; via the director of the National Educational Psychological Service (NEPS) in Ireland; and University tutors (See Appendix I for an example advert).

Participants were sent or directed to the link for the online questionnaire but also informed that they could request a paper version. Reminder emails were sent to the NEPS, EPNET and TEP networks. The online questionnaire was live from 15\(^{th}\) July 2016 to 30\(^{th}\) September 2016.

**Data analysis**

The quantitative data from the questionnaire were transferred and analysed using the Statistical Package for the Social Sciences (SPSS) and the data were analysed using means and standard deviations (SDs).

The open questions on the questionnaire were analyzed using a combination of conventional and summative content analysis (Hsieh & Shannon, 2005). For the question about factors influencing assessment choice, a conventional content analysis was undertaken using inductive coding. Inter-rater reliability was calculated to ensure that initial coding was accurate and robust and there was 89% agreement (See Appendix J). The author coded the rest of the transcript following this meeting. The codes were then sorted into meaningful groups and sorted into categories. The author and the supervisor met to review some of the codes and categories to check the reliability of these. Following this meeting, the author grouped data into categories, checking back with the supervisor when required (see Appendix K for

\(^{1}\) The Educational Psychology List - A forum for the exchange of ideas and information among EP professionals throughout the UK and elsewhere.
examples). For the summative aspect of the coding, the author counted the number of times specific additional assessment tools were referred to and the number of mentions/times participants’ responses fitted into a category.

**Ethical considerations**

The project gained ethical approval from the host institution and approval from NEPS (See Appendix L). As it was an online survey it was assumed that participants had consented to participate in the study if they submitted the survey. To ensure anonymity of all participants, names of individuals, services or local authorities were not collected.

**Results**

Although data were collected relating to EPs’ training in specific diagnostic tools and diagnostic criteria used, EPs commented throughout the questionnaire that their core role was not around diagnosis but more to do with assessment for intervention in educational settings. Given that the primary focus of this paper is EP assessment practices, it was decided to focus primarily on this area and not to include results pertaining strictly to diagnosis.

**Demographic and contextual information**

A total of 161 participants responded to the questionnaire. It was not possible to compute a traditional return rate as the questionnaire was sent via various modes, however when considering the number of EPs in previous studies (e.g., Waite & Woods, 1999), this study provides a larger and a more geographically representative sample. Of the 161 participants, not all went on to complete the assessment questions (therefore, some of the assessment questions are based on 112-117
A total of 161 participants were included in the analyses. In terms of gender, 22 (13.8%) of the participants were male and 137 (86.2%) were female. Two participants did not answer this question. This gender imbalance in the sample reflects a national trend (Murphy & Monsen, 2008) and is similar to the proportion of practising EPs in the UK (National Association of Principle EPs, 2015; 18% male and 82% female).

Number of completed years as a qualified EP ranged between 0-40 (M= 10.31, SD= 10.24). Number of completed years in current post ranged between 0-30 (M= 5.47, SD= 5.73).

Size of service (number of full time equivalent EPs) ranged between 0.5-180 (M= 20.96, SD= 33.80, Median=12\(^2\)). It is important to note that the NEPS is a national service and is likely to have skewed this. In the sample, 29 (18.1%) reported being an ASD specialist and the number of completed years with this specialism ranged between 0-20 (M=7.29, SD=4.56). 131 (81.9%) stated that they were not ASD specialists.

Of the 161 participants, one did not state where they currently worked. Of the 160 who responded to this question, 141 practised in England and 19 practised in Ireland. The details of area of current work are detailed in Table 4. It is important to note that nearly a quarter of the sample were from the North West of England, creating a slight skew towards the area where the questionnaire was developed.

\(^2\) Median is provided in addition to the mean when the spread of data was very large and could have skewed the mean.
Table 4. Participant details of area of work

<table>
<thead>
<tr>
<th>Area currently work</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Ireland</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>19</td>
<td>11.9</td>
</tr>
<tr>
<td>Scotland</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Wales</td>
<td>6</td>
<td>3.8</td>
</tr>
<tr>
<td>Channel Islands</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>East of England</td>
<td>7</td>
<td>4.4</td>
</tr>
<tr>
<td>London</td>
<td>20</td>
<td>12.5</td>
</tr>
<tr>
<td>East Midlands</td>
<td>5</td>
<td>3.1</td>
</tr>
<tr>
<td>West Midlands</td>
<td>9</td>
<td>5.6</td>
</tr>
<tr>
<td>North East England</td>
<td>8</td>
<td>5.0</td>
</tr>
<tr>
<td>North West England</td>
<td>39</td>
<td>24.4</td>
</tr>
<tr>
<td>South East England</td>
<td>19</td>
<td>11.9</td>
</tr>
<tr>
<td>South West England</td>
<td>11</td>
<td>6.9</td>
</tr>
<tr>
<td>Yorkshire and Humber</td>
<td>13</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Three participants did not respond to the question about type of service. Forty-four participants (27.8%) reported working in LA embedded, 59 (37.3%) reported working in partially traded services, 21 (13.3%) reported working in fully traded services and 14 (8.9%) reported working for the National service (Eire). Twenty participants (12.7%) selected ‘other’ type of service. Five participants reported that they worked independently and the ‘other’ category included; a combination of independent and LA; independent and National Health Service; and work with academies, charities and public services.

When asked about professional role, one chose not to say. The 160 responses are detailed in Table 5. For ease of reporting the sample will be referred to as ‘EPs’ from this point on.

Table 5. Participant details of professional role

<table>
<thead>
<tr>
<th>Professional Role</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant EP</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>TEP Year 1</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>TEP Year 2</td>
<td>6</td>
<td>3.7</td>
</tr>
<tr>
<td>TEP Year 3</td>
<td>7</td>
<td>4.3</td>
</tr>
<tr>
<td>EP</td>
<td>100</td>
<td>62.1</td>
</tr>
</tbody>
</table>
Level of involvement

Participants were asked about the percentage of time they were involved in working with students with ASD/those who have difficulties consistent with ASD during the last school year. The results suggest that ASD casework covers around 25% of EP professionals’ workload. Further detail about the type of work is in Table 6.

Table 6. Participant involvement in autism practices

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Min/max</th>
<th>Mean %</th>
<th>SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct assessment</td>
<td>104</td>
<td>0-90</td>
<td>21.07</td>
<td>24.29</td>
<td>10.00</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>150</td>
<td>0-100</td>
<td>16.89</td>
<td>23.04</td>
<td>09.00</td>
</tr>
<tr>
<td>Assisting school staff in developing and reviewing interventions</td>
<td>111</td>
<td>0-95</td>
<td>27.59</td>
<td>22.03</td>
<td>20.00</td>
</tr>
</tbody>
</table>

It is important to note that there is a large standard deviation and lots of variation in these responses. This variation would be expected and can be explained as specialisms will influence what EPs do and local policies will influence the EP role in diagnosis.

Assessment methods

EPs were presented with 24 tools and asked to indicate if they were not familiar with the tool. If they were familiar with the tool, then EPs went on to rate how likely they were to use the tool (scored on a scale of 1-5 where; 1=never, 2=rarely, 3=sometimes, 4=often, 5=always).

The tools which participants were most unfamiliar with (i.e. those where the % of responses for ‘not familiar with’ were highest) were; standardized developmental inventories (47% reported being ‘not familiar with this tool’), adaptive behavior
scales (28%), executive functioning assessment (25%), behavioural checklists/rating scales (24%) and emotional regulation checklists/rating scales (22%) (See Appendix M).

At this point, all those who were unfamiliar with the tools were excluded. The participants who were familiar with the tools, rated how likely they were to use each tool. A mean score for each tool from the 1-5 Likert responses was calculated. The tools are shown in the Table 7, in rank/mean order of use.

Table 7. Frequency of instrument use in autism assessment

<table>
<thead>
<tr>
<th>Assessment tool</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation with parents</td>
<td>4.85</td>
<td>0.50</td>
<td>117</td>
</tr>
<tr>
<td>Consultation with teachers</td>
<td>4.83</td>
<td>0.56</td>
<td>116</td>
</tr>
<tr>
<td>Observation at school</td>
<td>4.61</td>
<td>0.75</td>
<td>117</td>
</tr>
<tr>
<td>Child’s view</td>
<td>4.35</td>
<td>0.93</td>
<td>116</td>
</tr>
<tr>
<td>Review of records</td>
<td>4.18</td>
<td>1.01</td>
<td>117</td>
</tr>
<tr>
<td>Play based assessment</td>
<td>3.19</td>
<td>1.09</td>
<td>112</td>
</tr>
<tr>
<td>Observation in other settings</td>
<td>3.18</td>
<td>1.28</td>
<td>113</td>
</tr>
<tr>
<td>Functional Behaviour Analysis (FBA)</td>
<td>3.18</td>
<td>1.11</td>
<td>111</td>
</tr>
<tr>
<td>Standardised ability tests</td>
<td>3.06</td>
<td>1.13</td>
<td>112</td>
</tr>
<tr>
<td>Social skills checklists/ratings scales</td>
<td>2.93</td>
<td>1.18</td>
<td>104</td>
</tr>
<tr>
<td>Curriculum based assessment</td>
<td>2.78</td>
<td>1.26</td>
<td>100</td>
</tr>
<tr>
<td>Ecological inventories</td>
<td>2.76</td>
<td>1.27</td>
<td>101</td>
</tr>
<tr>
<td>Sensory profiling assessment</td>
<td>2.72</td>
<td>1.27</td>
<td>101</td>
</tr>
<tr>
<td>Developmental assessment</td>
<td>2.62</td>
<td>1.21</td>
<td>103</td>
</tr>
<tr>
<td>Standardised achievement tests</td>
<td>2.56</td>
<td>1.21</td>
<td>106</td>
</tr>
<tr>
<td>Adaptive behaviour scales</td>
<td>2.47</td>
<td>1.25</td>
<td>83</td>
</tr>
<tr>
<td>Autism checklists/rating scales</td>
<td>2.33</td>
<td>1.24</td>
<td>93</td>
</tr>
<tr>
<td>Emotional regulation checklists/rating scales</td>
<td>2.26</td>
<td>0.98</td>
<td>91</td>
</tr>
<tr>
<td>Executive functioning assessment</td>
<td>2.18</td>
<td>1.09</td>
<td>85</td>
</tr>
<tr>
<td>Behavioural checklists/rating scales</td>
<td>2.18</td>
<td>1.16</td>
<td>87</td>
</tr>
<tr>
<td>Language assessments</td>
<td>2.03</td>
<td>0.97</td>
<td>93</td>
</tr>
<tr>
<td>Diagnostic instruments</td>
<td>2.02</td>
<td>1.40</td>
<td>92</td>
</tr>
<tr>
<td>Projective tests</td>
<td>2.02</td>
<td>1.10</td>
<td>92</td>
</tr>
<tr>
<td>Standardised developmental inventories</td>
<td>1.63</td>
<td>0.95</td>
<td>59</td>
</tr>
</tbody>
</table>

The results indicate that participants primarily rely on consultation with parents and teachers, observation at school, the child’s view, and review of records.
Interestingly, many of these had the lowest SDs and hence there was less variability in responses for these particular tools.

Participants reported using standardised developmental inventories, projective tests, diagnostic instruments and language assessments least. Interestingly there was the biggest standard deviation/largest variability in responses for the diagnostic instruments which may be due to training, specialisms and role.

When asked if there were any other tools they used, 36 participants responded and mentioned a range of assessment tools and bespoke questionnaires. There were nine mentions of dynamic assessment; five mentions of Personal Construct Psychology (PCP); four mentions of the Children’s Communication Checklist (CCC2; Bishop, 2003); three mentions of the Social Communication, Emotional Regulation and Transactional Support Model (SCERTS; Prizant, Wetherby, Rubin, Laurent, & Rydell, 2006); three mentioned checklists/questionnaires developed by service/LA and several other assessments were mentioned twice or less.

When asked an open response question about which of the assessments were most likely to inform intervention planning/recommendations for children with ASD, participants most frequently mentioned the ten most frequently used tools (see Table 7). As one participant explained: ‘If I’ve selected them as part of the assessment then they will inform my planning and recommendations’. Furthermore, discussions with other professionals (eight mentions) and dynamic assessment (seven mentions) were also identified to inform intervention planning. Interestingly there were eight mentions of diagnostic instruments, however this was not identified as one of the most commonly used tools in the quantitative data.
The factors influencing assessment choices

When considering the factors, which guide EPs’ decision making around the choice of assessments for children with ASD, most of the factors seemed to have some influence. Participants responded on a 1-5 scale (1=never, 2=rarely, 3=sometimes, 4=often, 5=always). Table 8 displays the factors rank ordered by mean. Individual child needs (pupil factors) were the most often considered factor in EP decision making around the choice of assessment, followed by evidence base for the tool, school factors, and child’s views.

Table 8. Factors influencing assessment choices

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual child needs (pupil factors)</td>
<td>4.76</td>
<td>0.45</td>
<td>113</td>
</tr>
<tr>
<td>Evidence base for the tool</td>
<td>4.10</td>
<td>0.84</td>
<td>112</td>
</tr>
<tr>
<td>School factors</td>
<td>4.09</td>
<td>0.91</td>
<td>112</td>
</tr>
<tr>
<td>Child views</td>
<td>4.04</td>
<td>1.07</td>
<td>112</td>
</tr>
<tr>
<td>Parent views</td>
<td>3.96</td>
<td>1.06</td>
<td>114</td>
</tr>
<tr>
<td>Familiarity with the tool</td>
<td>3.69</td>
<td>0.92</td>
<td>113</td>
</tr>
<tr>
<td>National guidelines</td>
<td>3.63</td>
<td>0.93</td>
<td>114</td>
</tr>
<tr>
<td>Length of time to administer</td>
<td>3.31</td>
<td>0.98</td>
<td>111</td>
</tr>
<tr>
<td>Local policies and procedures</td>
<td>3.30</td>
<td>1.25</td>
<td>114</td>
</tr>
<tr>
<td>Ease of administration</td>
<td>3.28</td>
<td>0.97</td>
<td>112</td>
</tr>
<tr>
<td>EPS team approach</td>
<td>3.10</td>
<td>1.19</td>
<td>112</td>
</tr>
</tbody>
</table>

Participants were asked an open question about the main factors which influence the ways in which they assess children with ASD (relating to RQ2). Content analysis was used to analyse participant responses. The analysis focuses on the most commonly mentioned categories/factors and these are displayed in Table 9 (see Appendix K for more detail).
Table 9. Categories and number of mentions

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of mentions</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualised assessment</td>
<td>51</td>
<td>“Child's interests - what can I engage them in and won't make them feel too anxious, frustrated etc.”</td>
</tr>
<tr>
<td>Purpose</td>
<td>41</td>
<td>“What is the psychological question which the school and parents would like to address.”</td>
</tr>
<tr>
<td>Contextual factors</td>
<td>33</td>
<td>“What is available to me and what is feasible within the constraints of a visit to school”</td>
</tr>
<tr>
<td>Role in diagnosis</td>
<td>14</td>
<td>“own view of using psychology to improve outcomes for child rather than to diagnose or categorise”</td>
</tr>
<tr>
<td>Other professionals</td>
<td>13</td>
<td>“What has already been completed by other professionals (e.g. what could be the unique contributing factor)”</td>
</tr>
<tr>
<td>Holistic assessment</td>
<td>10</td>
<td>“Processes and tools used to gain a holistic picture of the child's development and learning”</td>
</tr>
</tbody>
</table>

Individualised assessment was identified as a key area which influences EPs’ assessment practices. EPs commented on how they consider factors such as the child’s interests and engagement and they reported adapting the assessment to minimize anxiety or distress. Some within-child factors (e.g. age, cognitive ability or language level) and appropriateness of the tools for the ASD population as a whole (e.g. standardisation on the general population; some ASD tools being based on a male presentation) also influenced tools selected.

Purpose was identified to be a key category. Many EPs explained that the psychological/ referral question and the main concerns or priority areas for change from school staff and parents/family was a key factor which impacts their assessment. EPs often considered what their assessment would ‘add’. EPs therefore reported working in a collaborative way and considering what school, parent and the
child want from the assessment. There were a range of purposes mentioned which included: identifying children’s needs; identifying environmental factors or informing interventions; as well as supporting parents and school staff. Some EPs explained that the purpose can impact the tools used in assessment. For example, one participant commented that psychometric or diagnostic tools would be used if the purpose was to help the parent approach the medical profession, while consultation might be used if the purpose was to support school/family in developing effective strategies. EPs often reported consulting with key adults first and that the information gained from consultation would then influence what the assessment would look like.

Contextual factors such as time constraints, availability of assessments or resources, EPS team approach, local policies and national guidance also influenced EPs’ ASD assessment practices. Some of the EPs discussed the importance of the environment in which testing would take place (e.g. a quiet area).

Many of the EPs commented that diagnosis is not their role (this may explain some of the patterns in the quantitative data such as the smaller number of EPs reporting involvement in diagnosis). As opposed to focusing on diagnosing or categorizing, many EPs reported their purpose being around understanding the child’s needs, focusing on how to support the child in school and improving outcomes. There were however some statements that identified that some EPs work as part of a wider, multi-disciplinary team in assessing for diagnosis.

A smaller category related to conducting a holistic assessment. EPs reported using a variety of tools and processes to gain a holistic picture of the child’s development and learning in context and reported using a wide range of sources and triangulation.
A final factor which influenced EP ASD assessment practices were other professionals’ involvement/assessment and how an EP assessment might compliment these.

**Other aspects of work**

When asked about ‘other aspects in relation to assessment or intervention that had not been covered,’ some participants commented on the wider role of the EP in relation to ASD. For instance, delivering ASD training and developing staff skills and capacity.

**Discussion**

**Summary of findings**

The results of the present study indicate that ASD casework covers around 25% of EPs’ workload. Participants primarily relied on consultation with parents and teachers, observation at school, the child’s view and, review of records. Many of the tools used most often were indicated to be likely to inform intervention planning suggesting that EPs are making economical decisions around use of tools. A variety of factors seemed to be influencing assessments. The main factors included the individual child needs and evidence base for the tool, however qualitative responses showed that conducting individualised, holistic, appropriate assessments which link to a clear purpose were also important factors for the EPs. Contextual factors and other professionals were also identified to play a role.
**Comparisons to EP and SP assessment practices in other studies**

Waite and Woods (1999) found variability in identification and assessment processes with a trend towards reliance upon interview and observation methods. They found that interviews with parents and teachers and observation in school (class or playgroup) were ‘always used’ assessment strategies and this fits with the present results. They also found that background information was identified as one of the ‘always used’ assessment strategies by EPs, and the current study also found that review of records was used. An additional finding in the present study is that the EPs considered the ‘child’s view’. This could reflect a movement towards this, linked to the new Code of Practice (DFE, 2014), however as Waite and Woods (1999) did not include this option in their study it is unclear how important this was as part of assessment at that time. Waite and Woods (1999) found that ASD checklists/rating scales and adaptive behaviour scales were ‘sometimes used’ by some of the EPs; in this study these are not highly ranked. Play based assessment, which was ‘sometimes used’ by half of the EPs in Waite and Woods’ (1999) study was reported to be used frequently by the participants in this study.

Waite and Woods (1999) suggested that in the future there would be greater involvement with parents and families. When considering the results of the current study, this seems to have happened as ‘consultation with parent’ was the top ranked tool. Furthermore, qualitative data also highlighted the importance of parent views and that information/concerns from parents was a key factor that influenced EP assessment practices. Waite and Woods (1999) found that PEP respondents stated that diagnosis was less important to them than an accurate and formative assessment of need, and this fits with the current findings.
Paper 1 found that the methods used most included: observation, interview, developmental history, adaptive behaviour scales, record review, and ASD specific checklists/rating scales. Tools used by EPs in the current study were broadly the same although the current study did not find that adaptive behavior scales or autism specific checklists/rating scales were top ranked. Many participants in the current study also reported being unfamiliar with adaptive behavior scales. This could reflect contextual differences as the SLR included five US studies and only one UK study. The current study did not include ‘developmental history’ as an option and therefore we cannot compare use of this tool.

It is important to note that there are limited comparable data on the factors influencing assessment. Unfortunately, there is no US comparison around the level of involvement. Sansosti and Sansosti (2013) asked this question in a different way, however their data suggest that SPs have an increasing role in the assessment of children with ASD.

**Comparisons with best practice literature and guidelines**

In relation to the SP literature, the data seems to fit with the four elements of RIOT best practice as described by Ikeda (2002). Considering the child’s views was also a key aspect of assessment and this has been recommended (e.g. Shriver et al., 1999), although the extent to which it is possible may depend on the child’s functional language skills. The current study found that standardized ability tests were used but were not one of the most used tools which might also fit with varying recommendations for their use in the US literature (e.g. Brock et al., 2006; Shriver et al., 1999).
Some of the findings fit with the NICE guidelines (2011). The guidelines emphasise patient centered care and state that treatment and care should take into account the needs and preferences of children, young people and those who care for them. The guidelines state that ASD diagnostic assessment should include: questions about parents'/carers’ concerns and if appropriate, the child's or young person's concerns. This fits with both the quantitative and qualitative data from this study. The NICE guidelines highlight a number of areas that diagnostic assessment should include and they seem to take a broad/holistic view of assessment, which is in line with the current findings. These findings are promising and indicate that EPs are demonstrating many aspects of good practice.

**Limitations and implications of the current study and future research**

There are several limitations that should be addressed through additional research. Nearly a quarter of the sample were from the North West of England and therefore the sample is not truly representative of UK and Ireland EPs. This is likely to be due the additional recruitment strategy which involved emailing other professional groups such as University tutors. However, the sample did appear to be representative of the proportion of UK male and female EPs. The study aimed to compare regions, however this was not possible due to the small numbers from some regions. Future research could make comparisons between these.

Trainee EPs and Assistant EPs were included in the study with the intention of making comparisons between the different groups in the profession. This was not possible however due to the final sample sizes in each group. It is important to note that these participants were included within the overall sample in the study. Although they are only relatively small groups within the overall sample this could have skewed the findings towards those with less experience.
EPs from Ireland were included in the study. Although there are some similarities between the role/context in the UK and Ireland (e.g. those who work for NEPS have a similar role to LA EPs in England in working in schools with teachers, parents and children in identifying educational needs), there are however some differences between the roles and the context in which EPs in Ireland work. For example, there are different systems for SEN resource allocation and recent changes in the way additional teaching resources for students with SEN are allocated (children will no longer need a diagnosis to receive extra teaching support). Furthermore, there are some psychologists in Ireland that do not work with the NEPS (e.g. some work privately) and it is likely that these EPs were not included in the sample due to the recruitment strategy (through NEPS). Future research should consider the similarities and differences between the roles and consider alternative ways of recruiting (e.g. through the Psychological Society of Ireland).

The sample was based on self-selected participants; it is possible that those who chose to respond held more extreme positions about assessment or intervention of students with ASD. A more representative sample is required to confirm the results and conclusions of this study.

Although 161 participants completed some of the questionnaire and were included in the study, there were other individuals who looked at the questionnaire but did not submit responses. Furthermore, of the 161 participants, not all went on to complete the assessment questions. It is possible that the length of the questionnaire or framing of the questions may have put some respondents off and qualitative data provide some confirmation of this. Hence although using the structure of the US questionnaire increased comparability it may not have been sufficiently responsive
to context. The use of a 5 point rather than a 4 point scale may have also reduced comparability with other surveys (e.g. Sansosti & Sansosti, 2013).

The questionnaire was developed based on previous research and ongoing discussions between the author and the supervisors. A stakeholder group (including those with autism) could have been used to inform the questionnaire. This would have enabled the voices of individuals with autism to be considered when developing the questionnaire. Future research should consider including the voices of those with autism.

The qualitative data is a strength of the current survey however, content analysis provides more of a summary overview and further in depth analysis using interviews of focus groups might be warranted. The questionnaire mainly focused on individual assessment and highlights some potential areas for further research. Focus groups or case studies could explore EP work at different levels, the assessment and intervention process, and whether ASD assessments differ between EP professionals with different roles.

Conclusion

The SLR in Paper 1 concluded that there was reasonable evidence that SPs are using a range of tools, which are recommended within best practice guidelines. This study concludes that EPs in the UK and Ireland are also using a range of tools which fit with best practice guidance. This study uncovered some further details around the process of EP ASD assessment and found that EPs individualise their assessments and seek to conduct holistic assessments that fit with a given purpose. They also consider other professionals and contextual factors when conducting assessments.


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Students with Asperger’s Disorder. (Doctoral Dissertation). Available from ProQuest. UMI Number: 3450362.

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Paper Three

The Dissemination of Evidence to Professional Practice

Word Count: 5180
Introduction

This paper considers definitions of evidence based practice (EBP) and practice based evidence (PBE) and discusses the psychologist as a scientist practitioner. It then goes on to consider if/how psychologists use these concepts in practice, before moving on to consider evidence-based assessment and Autism Spectrum Disorder (ASD) assessment. The paper then considers effective dissemination of research and the implications of the research conducted. Finally, the paper outlines a strategy for promoting and evaluating the dissemination and impact of the research.

Evidence-Based Practice and Practice-Based Evidence

Definitions of Evidence-Based Practice and Practice-based Evidence

EBP is the “integration of the best available research within clinical expertise in the context of patient characteristics, culture and preferences” (American Psychological Association, APA, 2006, p.237). EBP involves integrating external evidence, individual clinical experience/knowledge and patient’s choice (Sackett, Rosenberg, Gray, Haynes & Richardson, 1996). Scott, Shaw, and Joughin (2001) discuss the traditional hierarchy of evidence which includes ‘several systematic reviews of Randomized Controlled Trials (RCT) or meta-analyses’ at the top of the hierarchy and ‘expert consensus opinions’ and ‘individual opinion’ at the bottom of the hierarchy. In the UK, there has been a call for increased use of EBP in teaching/education (Durbin & Nelson, 2014).

The relevance of EBP to applied psychology practitioners has been questioned (Barkham & Mellor-Clark, 2003). Concerns have been raised around how RCTs might transfer or generalize to real world/practice settings (Frederickson,
2002) and some have claimed that use of EBP threatens to replace professional judgement (Biesta, 2007).

PBE has been argued to be more appropriate for some practitioners; this involves gathering good quality data from routine practice/natural settings (Barkham, Hardy & Mellor-Clark, 2010; Margison et al., 2000). Barkham et al. (2010) state:

By contrast, practice-based evidence starts from a position of capturing the reality of everyday routine practice and finding ways of evaluating and improving it by adopting a bottom-up approach – that is, starting with the work of practitioners and building the evidence base upwards to the level of policy rather than vice versa (p.331)

An example of practice based research is the Targeted Mental Health in Schools (TaMHS) Project which aimed to support the development of innovative models of mental health support in schools for children at risk of or experiencing, mental health problems. Various Local Authorities took part with the aim of developing local good practice and evaluating it (Department for Children, Schools & Families, 2008). Nuttall & Woods (2013) state that as opposed to the ‘top down’ approach, “analysis of individualised and contextualised interventions are more likely to be relevant for [EP] practitioners in the UK context, where there is a complementary endeavour to develop and disseminate more ecologically valid and transferable practice-based evidence” (p.350).

When considering paper 2, the study took a ‘bottom up approach’ and aimed to capture current practice. This fits with the first part of Barkham et al.’s (2010)
description of PBE (i.e. starting from a position of capturing practitioner work and the reality of everyday routine practice). It was not however in the scope of paper 2 to try to find ways of evaluating and improving practice or building the evidence base upwards to the level of policy. It is hoped that disseminating the research (discussed below) might lead to future PBE in this area.

The Psychologist as a Scientist-Practitioner

The British Psychological Society (2005) identifies the Scientist-Practitioner as drawing upon psychological knowledge, skills and theory to make professional judgments (BPS, 2005). Lane and Corrie (2006) highlight the following aspects of modern scientific practice: the ability to think effectively; the ability to weave gathered data into a formulation; the ability to act effectively; the ability to critique our work systematically.

Kratochwill and Shernoff (2004) state that the scientist-practitioner model is perhaps the first evidence-based practice framework that has been promoted in US graduate training programs such as school psychology. They state that the scientist-practitioner model involves three dimensions: (a) the involvement of practitioners in research agendas; (b) practitioner use of research-based procedures and techniques in practice; and (c) practitioner evaluation of interventions in practice through research and program evaluation.

Psychologists' Use of EBP/ Work as a Scientist Practitioner

There has been an increasing focus on EBP in School and Educational Psychology more generally (Kratochwill & Shernoff, 2004; Miller & Frederickson, 2006).
Research suggests that both EPs and SPs may rely on their own personal judgment above the requirements of EBP. Bramlett, Murphy, Johnson, Wallingsford and Hall (2002) surveyed 370 members of the National Association of School Psychologists (NASP) in the US. They found that 83% of SPs relied upon personal experiences to inform their practice (only 47% used journal articles). In the UK, Burnham (2013) conducted interviews with seven EPs to explore the ways that each participant described and appraised the evidence bases underpinning their work. He found that most participants were ambivalent about the scientific basis of their work and the contribution of peer-reviewed research to their practice. EPs therefore deemed the utility or social value of their professional practice as more important than its congruence with a recognized evidence base. It is important to note however that this was a small-scale study and all of the participants had qualified as EPs before the introduction of a three-year doctoral training courses. It could be argued that current doctoral training emphasizes EBP more. Other research has identified a similar trend with Clinical Psychologists in the US reporting resistance to evidence-based practices (Lilienfeld, Ritschel, Lynn, Cautin & Latzman, 2013).

Lilienfeld, Ammarati and David (2012) discuss the ‘scientist-practitioner gap’ and state that a substantial number of SPs in the US appear not to base their practices on solid science. They detail the danger of cognitive mistakes for SPs in the adoption of pseudoscientific practices and call for psychologists to embrace scientific thinking tools as safeguards against cognitive errors and pseudoscientific techniques (Lilienfeld et al., 2012).
Evidence-Based Assessment

Mash and Hunsley (2005) claim that there has been a great focus on treatments/interventions but a ‘present state of neglect’ in the area of assessment. They aimed therefore to draw greater attention to assessment and introduced the term ‘evidence-based assessment’ (EBA) in a clinical paper about child and adolescent disorders. They claim that despite assessment being an integral component of clinical child psychology practice, there is limited focus in the area. They highlight the variety of purposes/different functions of assessments (no one assessment will do everything) and the use of ongoing decision-making processes which often involves integrating information from repeated/different assessments, using multiple methods and informants in different settings. They also highlight that the evidence-base for individual assessments is variable and the importance of the process of assessment including selection of relevant tests and interpretation. Developing and documenting EBA is therefore not straightforward and involves professional skills and judgement in consultation with multiple clients/other professionals (and issues related to the clinician’s integration of assessment data). The varied purposes of psychological assessment (such as screening, diagnosis, treatment planning, and treatment monitoring) also offer a challenge for EBA.

Peterson (2004) takes a very positivist approach to assessment and does not consider the ideographic or contextual aspects discussed above. He stated:

Psychological phenomena are inherently more difficult to measure. For many of the most important inferences professional psychologists have to make, practitioners appear to be forever dependent on incorrigibly fallible interviews and unavoidably selective, reactive observations as primary
sources of data. We can, should, and have systematized these procedures in ways that allow some of the numerification and quantitative summaries required for scientific advance... (p.202)

Mash and Hunsley (2005) claim that some clinicians have questioned whether quantification of important clinical child practice constructs, processes, and outcomes is possible.

**Practice Frameworks and assessment**

There are various practice frameworks which can be used by EP practitioners and trainees (Kelly, 2008). Kelly (2008) explains that using frameworks might help to bring “clarity and cohesion to the very complex relationship between theory and practice” (pg.16).

The Division of Education and Child Psychology (DECP) developed one of the earlier frameworks: A Framework for Psychological Assessment and Intervention (DECP, 1999). This came out of a movement for greater accountability in the profession and a movement away from positivist frameworks towards a more dynamic and interactive approach. They claim that psychological assessment is individualised and complex, however there are some under-pinning principles which will apply to all EPs.

Pameijer (2017) describe a more recent framework: The Assessment for Intervention (AFI) model. This is a practice based assessment model which aims to bridge the gap between assessment and intervention and make the assessment process more meaningful to stakeholders (e.g. parents, teachers and children). The model offers practitioners guidelines on how to collect and integrate knowledge from various stakeholders (e.g. knowledge of the assessor, the parent, teacher and
child). Pameijer (2017) focuses on the content of the five stages within the cycle (intake; strategy; investigation; integration, goals and needs; and recommendations, appointments and feedback). This model seems to fit well with the findings from Paper 2 (e.g. both highlight the importance of the purpose of the assessment; collaboration with the child, parents and staff; less of a focus on diagnosis and more of a focus on the child’s needs) and hence further exploration of this model in practice would be useful.

Wicks (2013) states that executive frameworks could be useful for making practice more efficient, effective and transparent, however she queries whether these are used in routine EP practice. She stated that factors such as EP time and experience may impact whether frameworks are used.

**Autism Assessment**

The literature on ASD assessment is very different from ASD intervention. A lot of attention has been focused on the evidence-base around interventions (Bond, Symes, Hebron, Humphrey & Morewood, 2016; Wong et al., 2015) and there has not been a corresponding level of focus on assessment.

Although in medical diagnostic assessment, researchers have determined fairly well-established EBP guidelines/ ‘gold standard tools’ for an accurate ASD diagnosis (e.g., Ozonoff, Goodlin-Jones, & Solomon, 2005), there is not a similar evidence-based model embedded for educational assessment.

Educational ASD assessment is complex (there are more factors to consider than a diagnostic assessment). It is possible that an evidence-based model has not been embedded because it is difficult (as mentioned above) but also because professional judgement is also important.
As there is no ‘set formula’ around the process of ASD assessment, EPs need to use professional/practitioner judgements and consider client preference/needs. Spring et al. (2008) highlight the importance of joint decision making in assessment and claim that client characteristics, needs, values and preferences are important. This fits with the findings from paper two which indicate that EPs’ focused on adapting their assessments and tailoring them to the individual child’s needs.

**Effective Dissemination of Research: Outcomes and Impact**

Dissemination of research is a key process in evidence-based practice (Bradley & McSherry, 2009). Wilson, Petticrew, Calnan and Nazareth (2010) highlight some of the different terminology used to describe dissemination approaches (e.g., diffusion, dissemination, implementation, knowledge transfer, knowledge mobilisation, linkage and exchange). The current paper will use the term dissemination.

Freemantle and Watt (1994) stated that dissemination “encompasses more than just the distribution and diffusion of information, but also involves the processes by which the target groups become aware of, receive, accept and utilize information” (p.133). Harmsworth and Turpin (2000) describe the term as the ‘delivering and receiving of a message’, ‘the engagement of an individual in a process’ and ‘the transfer of a process or product’. They talk about dissemination of awareness (e.g., word of mouth type dissemination), dissemination for understanding (e.g., target group directly as believe they can benefit) and dissemination for action (e.g., change of practice). With this in mind, it is important to focus not only on the researchers’ output/actions but also around the target groups’ receipt of the information and ability to use it.
When considering what makes dissemination effective, Harmsworth and Turpin (2000) state that successful dissemination engages the recipient in a process (e.g., increased awareness, understanding or commitment and action). Freemantle and Watt (1994) state that the research evidence suggests that effective dissemination will depend on using “multiple means to communicate key messages rather than a single measure or magic bullet” (p.135). Harmsworth and Turpin (2000) also claim that a multi-strand approach to dissemination is often more effective.

Freemantle and Watt (1994) state that publishing in grey literature and journals does little to change practice among the professionals whose decisions determine the process of care. They state that ‘dissemination is not just about libraries’ and claim that it is insufficient to send copies of reports to health professionals or medical libraries. Bero et al. (1998) also state that the passive dissemination of information is generally ineffective in altering practices no matter how important the issue or how valid the assessment methods.

Freemantle and Watt (1994) state that information scientists may become crucial in championing such information, taking a leading role in locating and disseminating evidence to those who make decisions and influence patient care. The effectiveness of such a process is the extent to which the target audience becomes better informed, make decisions or change behavior as a result of using the disseminated information. They claim that systematic overviews of research which addresses areas of uncertainty are likely to provide the best evidence for dissemination.

In terms of assessing the success of dissemination activities, Harmsworth and Turpin (2000) state that researchers need to put in place suitable mechanisms for
reviewing progress and the extent to which the dissemination strategy is meeting the objectives. This could involve considering the quality or impact factor of the journal or the number of times the paper has been cited, although as mentioned above this may not link well to changes in professional practice. Barkham et al. (2010) discuss monitoring practice and quality improvement in PBE through the procedures of benchmarking and case tracking, which may be a more appropriate monitoring strategy in relation to the current research. They describe benchmarking as locating a “treatment outcome in the context of outcomes derived from different studies (or some other feature of a service against data on the feature from a wider source)” (p.43). Furthermore, case tracking is described as locating “a client’s ongoing data against a trajectory derived from a larger base of similar clients” (p.43).

Research Implications

The thesis comprised a SLR which provided an overview of the most commonly used tools/processes to assess children with ASD or possible ASD. The study found a significant gap in current knowledge of EP practice. The second part of the thesis involved a questionnaire relating to EPs’ ASD assessment practices in the UK and Ireland. The research aimed to make a contribution to the literature by providing an insight into EP ASD assessment practices (both the tools and the process/factors, which was a gap in previous research). The study found that EPs were using a range of tools which were in line with practice guidelines. The study uncovered some further details around the process of EP ASD assessment and found that EPs individualize their assessments and seek to conduct holistic assessments that fit with a given purpose.
This has implications at individual, local and national levels, for instance individual EPs reflecting upon their ASD assessment work, local development of policy and practice and potentially the development of national guidelines in EP best-practice ASD assessment. Each will be discussed in more detail.

**Individual Level**

At the individual participant level (EPs), the researcher received some feedback on the impact completing the questionnaire had on some participants. One participant emailed the author following completion of the questionnaire and explained how it helped her to reflect on her practice, another participant stated that she used it as part of her continuing professional development portfolio. One participant reflected on how she uses very limited range of assessment tools and completing the questionnaire allowed her to reflect on this. It is hoped that sharing the research (through various avenues discussed later in this paper) will have a similar effect at an individual level across more EPs (EPs reflecting on their own practice).

**Local/Service Level**

When considering the implications of the research at a local/service level, the anecdotal responses discussed above might be examples of the impact that feedback to EPs might have on a larger scale (e.g., to a team or nationally). When the findings of the preliminary research (Sadreddini, 2015) were fed back to the EPS team, EPs explained that the focus group provided them with time to reflect upon their own practices and share good-practice amongst each other. It is hoped therefore that
feeding back the current research findings to EP teams will have a similar impact (e.g., groups sharing and reflecting together on their practice).

It may be that the research will inform service reviews of tools and processes in EP services where the research is shared. These discussions might also lead to more specific training implications (which could be followed up and reviewed). It is possible therefore that at this level an action plan and review could occur.

**National Level**

Throughout the thesis it became evident that there are no EP specific ASD best-practice guidelines in the UK (the best-practice that exists is often US focused). Thinking about ‘what a good EP assessment looks like’ is a key step in moving forward with this.

Although the current research is only able to capture current practice among a sample of EPs, it is hoped that sharing the research may generate discussions at a practice level about what makes a ‘good ASD assessment’. It is hoped that sharing the research could lead to further empirical research to explore EP decision-making within ASD assessment and how we integrate the various tools into a more holistic assessment process. The research could lead to further practice-based research (e.g. action research with services to consider assessment processes and how to evaluate practice) to build on the evidence. This might also inform practitioner working groups in developing guidance for EPs relating to ASD assessment.

It would be helpful to the profession to develop more consistent ASD assessment approach/practice. This might include developing some EP specific best-practice guidance or a structured framework which is sufficiently flexible for EPs to follow (e.g. adaptable depending on the assessment purpose and stage of
assessment), but gives clients confidence that there is some consistency. It is hoped that this will help EPs to think about the assessments they choose and to be more explicit about their rationale for assessment. This is useful for both stakeholders (confidence that there is some consistency) and for EPs (defensible work). It would also be useful for the profession to consider the various frameworks available (e.g. the DECP framework and the AFI model) and how these could support autism assessment and assessment practice more generally. Despite the benefits of using frameworks, it is unclear if EPs incorporate or use these in practice. It would be useful for future research to consider EPs use/application of frameworks in assessment practice. It would be interesting to consider whether using such frameworks can support EPs in the complex task of autism assessment and linking this to intervention.

**Trainer Level**

It is possible that the research could have particular implications for TEP training. Sharing this information with University tutors could spark discussions about how to integrate the findings of the study within TEP ASD training.

**A Strategy for Promoting and Evaluating the Dissemination and Impact of the Research**

**Considerations of Dissemination Activities at Different Levels**

When considering the strategy in which the research will be promoted at the various levels above, it is first important to consider that the dissemination strategy will differ at the various levels (e.g., at the service level as opposed to at a national level). When considering the dissemination strategy at a service/team level,
dissemination might involve first an overview of the findings but then more of a focus on particular areas of the findings that are relevant to that service. This might be dependent on what the authority needs and as a result enable the team to consider questions such as ‘what does this mean for us’? The researcher’s knowledge of the team and authority will help in unpicking what is needed/most useful (e.g., the TEP’s current placement has a consultation based model of service delivery and this might influence the areas of reflection). This fits with Harmsworth and Turpin’s (2000) dissemination of awareness (e.g., word of mouth type dissemination), dissemination for understanding (e.g., targeting a group directly as the researcher believes they can benefit) and perhaps dissemination for action (e.g., change of practice). These discussions will therefore involve reflections on practice in that locality and team.

When considering dissemination at a national level on the other hand, this would involve more of an overview of the research and findings and the general factors/influences around assessment tools and processes. Discussion following presentation of the findings at a national level is likely to revolve around reflections and implications for the profession as a whole.

**Dissemination Strategy**

Academic researchers often publish in academic journals and this is often the primary way by which research findings are disseminated (Bradley & McSherry, 2009). The researcher has a dissemination strategy for both the SLR and the empirical survey study. The SLR was written to be submitted to Psychology in the Schools Journal as much of the data pertained to US School Psychology and it was anticipated the SLR would be a helpful summary of US surveys to date. The
An empirical study was written to be submitted to Educational Psychology in Practice (EPiP) journal. The practitioner journal was chosen specifically with the intention that the research would reach UK EPs specifically (many EPs are members of the Association for Educational Psychologists and hence be sent copies of this journal).

Although publication in academic journals is a key part of the dissemination strategy, it is also important to note the argument that, scientific journals are ineffective in influencing practice (Bero et al., 1998; Freemantle & Watt, 1994). As a result, additional forms of dissemination were considered to take account of this and to ensure that the research reaches practitioners. Furthermore, following claims that a multi-strand approach to dissemination is most effective, multiple means of dissemination are considered as opposed to one ‘magic bullet’ (Freemantle & Watt, 1994; Harmsworth & Turpin, 2000). These are discussed below.

The researcher feels that the professional forum EPNET would be another useful way to disseminate the findings nationally to EPs and to also promote ongoing discussions around EPs’ assessment of ASD. As discussed, the researcher hopes that summarising the research and building awareness about what tools EPs are using and why might inform individual and service reviews of tools and assessment processes.

Additionally, the researcher intends to apply to present the research findings at an Educational Psychology conference to provide an opportunity to disseminate to professionals in the field at a national level.

Autism@Manchester is an active network with research covering areas as broad and diverse as education, psychology, speech and language therapy, neuroscience, biosciences and genetics. The researcher plans to engage with the network to promote awareness of the research and some initial steps have already
been made to link in with this network. It will be important however for the researcher to contact other ASD networks outside of the North West. Accessing these broader ASD networks will also enable the researcher to access alternative perspectives on EP ASD assessment such as other professionals and the views of children with ASD and their families.

The researcher plans to share the findings with University course tutors to consider the implications of the research for TEP training. It is likely that this will start at the University where the TEP is training (due to already established connections and interest in the research) and discussions with other Universities might follow this.

Finally, the research findings could be presented to TEPs in order to pitch ideas for the research in this area to continue. Further research around the processes will be informative.

Evaluating Research Dissemination and Impact

The researcher plans to monitor the impact of the dissemination strategy/research through various methods. Firstly, she plans to track the number of citations for both papers (once they are published). Furthermore, it may be that the research will inform an ASD assessment review in her current service or other services where the research is shared. The TEP plans to follow up/track and evaluate any ongoing changes around assessment processes or training implications as a result of this. The TEP plans to monitor the impact of the dissemination on TEP trainers and will be able to evaluate the impact with regards to any changes to training programmes through ongoing contact with university tutors. The researcher also plans to contact individuals who voiced interest in the research findings to share
these. She plans to maintain ongoing contact with these individuals to monitor the impact of the research (i.e. is there any impact on the ground/in services as a result of the research findings?).

Conclusion

Reviewing EPB and PBE has allowed the researcher to reflect on the relevance of this to EP work. The researcher feels that the main conclusions from this paper are around professional practice. It is hoped that the work will spark a wider discussion around EP ASD assessments but also EP assessment generally as this seems to be less of a focus in the EP literature. Furthermore, reviewing the evidence/research on effective dissemination helped the researcher to consider the importance of dissemination within the research process. This paper allowed the researcher to reflect and plan ways to disseminate and promote the research and consider the implications this might have at various levels.
References


Department for Children, Schools and Families (2008). *Targeted Mental Health in Schools Project* (TaMHS). Retrieved on 13.4.17 from:


Appendix A: Author Guidelines for Psychology in the Schools

Psychology in the Schools
© Wiley Periodicals, Inc.

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

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Author Guidelines
Wiley's Journal Styles and EndNote

Psychology in the Schools requires adherence to the stylistic guidelines of the sixth edition of the Publication Manual of the American Psychological Association. A cover letter must accompany each submission indicating e-mail address, mailing address, telephone number, and fax number of the author to whom all future correspondence will be addressed.

Format
Manuscripts must be double-spaced with one-inch margins. This includes tables, references, and footnotes. A 100–150 word abstract communicating the essence of the paper is required. The title should be short and informative. The main text of the manuscript should be reasonably divided into sections whenever appropriate. Authors are responsible for the accuracy of all written material.

References
References are styled according to the sixth edition of the Publication Manual of the American Psychological Association.
Examples of the proper style for in-text citations are given below.
Phelps (1996) and Jones and Black (1989) stated that . . .
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).


References should be typed double-spaced, in alphabetical order starting on a separate page following the manuscript. References should refer only to material listed within the text. Do not abbreviate journal names. Authors should review and verify references before manuscripts are submitted for consideration, because they alone are responsible for accuracy and completeness. Material that is not retrievable, such as papers presented at meetings and symposia, unpublished works, personal communications, and reports available from the Educational Resources Information Center (ERIC), should be limited to material absolutely essential to the article. Anthologies and collections must include names of editors and pages on which the reference appears. Books in a series must include series title and number/volume if applicable. Because of the large quantity of conference proceedings available, it is critical to give as much information as possible when citing references from proceedings. Please include the complete title of the meeting, symposium, etc. (do not abbreviate titles), and the city and dates of the meeting. If a proceeding has been published, please provide the editors' names, publisher, city, and year of publication, and pages on which the article appears.

Wiley's Journal Styles Can Be Created in EndNote

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Each table must be cited in the text, but the tables themselves should not be embedded in the text. With the hard copy of the manuscript, group together the copies of tables at the end, each new table starting on a fresh page. All tables
should be numbered consecutively with Arabic numerals and should include an explanatory heading. The Publication Manual has helpful guidelines for both tables and figures. For the final, accepted, electronic manuscript, tables are best grouped together in a separate electronic file and clearly labeled either with the manuscript number or with your last name, followed by an underscore and the word “tables” (e.g., 2447_tables).

Figures and Artwork

Gray Scale Art & Line Art. As with tables (see above), figures should not be embedded in the text. Please cite the figure in the text and provide a list of figure captions at the end of the manuscript, after the references. With the hard copy of the manuscript, group together the figures at the end, each starting on a fresh page. Figures must be numbered consecutively with Arabic numerals.

For the final, accepted manuscript submitted electronically, figures are best submitted in TIFF or EPS (with preview) formats. If these formats are not possible, use JPEG. (Tip: TIFF files can be created from PowerPoint by choosing "Save As" and then selecting "Tag Image File Format.") Please do not submit proprietary graphics formats such as Corel Draw or Adobe Illustrator. Figures can be submitted in Microsoft Word, but please include them as a separate document from the article text file, following the naming convention suggested above for tables. For best quality printing, ensure that gray scale figures (e.g., screen shots, photos, or charts requiring shades of gray) are high resolution (above 300 dpi). Figures pasted directly from the Web are low resolution (72 dpi). Bitmapped line art (made only of black & white lines—often simple charts or graphs) should be submitted at higher resolutions yielding 600-1200 dpi.

For the final, accepted manuscript, figures submitted only in hard copy are acceptable if they have been printed with a high-quality laser printer. Authors are cautioned to provide lettering of graphs and figure labels that is large, clear, and open so that letters and numbers do not become illegible when reduced. Likewise, authors are cautioned that very thin lines and other fine details in figures may not successfully reproduce. Original figures should be created with these precautions in mind.

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Email regarding length of journal

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
jnlpyschscho@bsu.edu
<table>
<thead>
<tr>
<th>No</th>
<th>Authors, Date</th>
<th>Title and Journal/Dissertation</th>
<th>Summary</th>
<th>Reason for Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Torto, (2009)</td>
<td>Differences in assessment and diagnosis of ASDs among professionals and organizations: A possible reason for increase in reported prevalence. (Dissertation)</td>
<td>149 professionals in the fields of psychology (including social work, school psychology, psychiatry, etc) filled out a survey designed to identify the various diagnostic and assessment procedures utilized when assessing and diagnosing ASD.</td>
<td>Study includes assessments undertaken by other professionals. Main focus is not on EPs and /or SPs.</td>
</tr>
<tr>
<td>2</td>
<td>Messmer-Wilson, (2007)</td>
<td>Autism: Current beliefs, diagnostic practices and treatment approaches within the State of Indiana. (Dissertation)</td>
<td>The main purpose of this research was to collect information regarding clinical and counseling psychologists', school psychologists', and child psychiatrists' (a) current knowledge about autism, (b) levels of training and preparedness to provide diagnoses and interventions, (c) common tools and methods used to assess autism, (d) the disorders that are most difficult to differentiate from autism, and (e) the most common recommendations and interventions used for children with autism.</td>
<td>Study includes assessments undertaken by other professionals. Main focus is not on EPs and /or SPs.</td>
</tr>
<tr>
<td>3</td>
<td>Austin, (2013)</td>
<td>The use of evidence-based practices in the provision of social skills training for students with ASD: A national survey of SPs’ training, attitudes, and practices. (Dissertation)</td>
<td>The purpose of this exploratory study was to examine SPs’ use of evidence-based practices (EBP), in general, and more specifically in the area of social skills training (SST) for students with ASD. Study participants, consisting of 498 school psychologists from across the nation, participated in an online survey that gathered information about their training, attitudes, and practices.</td>
<td>Study does not collect and analyse data on specific assessments used. Main focus is on training and not tools/ approaches.</td>
</tr>
<tr>
<td></td>
<td>Author(s)</td>
<td>Title</td>
<td>Description</td>
<td>Methodology</td>
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<td>------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Gilling, (2012)</td>
<td>When the powerfulness isn't so helpful: Callum's relationship with autism. (Educational and Child Psychology, 29,2 32-40.)</td>
<td>This paper documents a piece of educational psychology casework that explores one young person's relationship with autism. It provides an example of how a young person's preferred identity can be constructed through a narrative framework.</td>
<td>Single case study.</td>
</tr>
<tr>
<td>5</td>
<td>Gerbe, (2008)</td>
<td>SPs' knowledge of Asperger's disorder, its differential diagnosis, and treatment recommendations. (Dissertation)</td>
<td>Investigation of SPs’ knowledge of Asperger's and the differential characteristics distinguishing it from autism, effective assessment practices used in screening for the disorder, and viable treatment options.</td>
<td>Primary focus on what SPs know about tools not what they use in practice.</td>
</tr>
<tr>
<td>6</td>
<td>Meagher, (2007)</td>
<td>Factors that influence diagnosis and treatment recommendations for autistic students: A survey of SPs (Dissertation)</td>
<td>A survey was conducted on 1,000 SPs who are members of the NASP to determine the most well-known evaluative tools and therapies in the field.</td>
<td>This is about what is most well-known, not what SPs use.</td>
</tr>
<tr>
<td>7</td>
<td>Akshoomoff, Corsello, Schmidt. (2006)</td>
<td>The role of the ADOS in the assessment of ASD in school and community settings. (California School Psychologist. Vol.11, pp. 7-19.)</td>
<td>Autism diagnostic practices among school and clinical psychologists, particularly those using the ADOS, were examined using national survey results (N=132).</td>
<td>Includes clinical psychologists practices (various professionals included). Primary focus is not SPs.</td>
</tr>
<tr>
<td>8</td>
<td>Martin, Bibby, Mudford, Eikeseth (2003)</td>
<td>Toward the use of a standardized assessment for young children with autism: Current assessment practices in the UK. (Autism. Vol.7(3) pp. 321-330.)</td>
<td>The reports of 75 children with autism, for whom special educational provision had been determined by a local education authority, were reviewed. Parents were interviewed and EPs were contacted for details of any norm-referenced assessments.</td>
<td>Does not include data on EPs or SPs reported use of psychological assessment tools or approaches.</td>
</tr>
<tr>
<td>9</td>
<td>Dufek, (2013)</td>
<td>Community practitioner utilization of evidence-based practice for assessment of ASD. (Dissertation)</td>
<td>This study evaluated the benefits of SPs use of EBP for ASD evaluations. A multiple baseline design was conducted across 6 SPs who collectively assessed 77 children for ASD over the course of the study. After a baseline phase where usual care for assessment of children with ASD in the school setting was monitored, SPs were trained to utilize 2 standardized ASD assessments that are considered EBP for ASD evaluation in research settings: the ADOS and the SCQ.</td>
<td>Excluded as included participants from 1 county/1 practice area only.</td>
</tr>
<tr>
<td>10</td>
<td>Gilmore, Islam, &amp; Su, &amp; Younesian (2015)</td>
<td>A global perspective on psycho-educational assessment. (Journal of Psychologists and Counsellors in Schools.)</td>
<td>This article focuses on school psychology and psycho-educational assessment in three countries: Bangladesh, China and Iran.</td>
<td>Study does not focus on EP/SPs reported use of psychological assessment tools or approaches for ASD.</td>
</tr>
</tbody>
</table>
Appendix C: Review framework for quantitative investigation research

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data gathering</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear research question or hypothesis</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Appropriate process for participant/ item identification</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Appropriate data gathering method used</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Comprehensive data gathering method</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Reduction of bias within participant recruitment/ item selection</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Response rate/ item elicitation maximised</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Population subgroup data collected (e.g. participant gender; item context)</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td><strong>Data analysis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing data analysis</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Time trends identified</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Geographic considerations</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Appropriate statistical analyses (descriptive or inferential)</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Multi-level or inter-group analyses present</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td><strong>Data interpretation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear criteria for rating of findings</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Limitations of the research considered in relation to initial aims</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>Implications of findings linked to rationale of research question</td>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>Max 15</td>
</tr>
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</table>
Appendix D: Review framework for qualitative evaluation/ investigation research

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Score</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness of the research design</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Clear sampling rationale</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Well executed data collection</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Analysis close to the data</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Emergent theory related to the problem</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of explicit reflexivity</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Comprehensiveness of documentation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Negative case analysis</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Clarity and coherence of the reporting</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of researcher-participant negotiation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Transferable conclusions</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Evidence of attention to ethical issues</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Max 12</strong></td>
<td></td>
</tr>
</tbody>
</table>

References

### Appendix E: Studies excluded based on ‘relevance’ criteria

<table>
<thead>
<tr>
<th>Authors &amp; Date</th>
<th>Title/Location</th>
<th>Summary</th>
<th>Reason for Exclusion</th>
<th>Score on Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (2011)</td>
<td>A Survey of SP Training and Practices with Students with Asperger’s Disorder (Dissertation)</td>
<td>A total of 203 Nationally Certified SPs from the US completed an online survey. This included the tools the participants were familiar with and/or have utilized as a part of a multi-modal diagnostic assessment.</td>
<td>Excluded based on ‘relevance criteria’</td>
<td>11.5</td>
</tr>
<tr>
<td>Singer (2008)</td>
<td>The practice and training of SPs in the Autism Spectrum Disorders (Dissertation)</td>
<td>This study surveyed 199 school psychologists regarding the frequency with which they were called upon to provide services to students with an ASD, the services they actually provided to those students (including use of screening measures), and their perceptions of the training and experience they had pertaining to the assessment and treatment of the ASDs. Additionally, this study surveyed graduate programmes to determine the extent to which these programs prepared new school psychologists to work with children who have an ASD.</td>
<td>Excluded based on ‘relevance’ criteria</td>
<td>8</td>
</tr>
</tbody>
</table>
Appendix F: Table detailing how decisions were made to categorise questionnaire items into Table 3

Once the scores were considered—those which were above threshold/to be included in table were considered. Assessment methods which were considered in more than one of the studies (and commonly used in at least one) were included in the table.

When there were multiple types of assessments, the higher ranking was prioritised in the table.

<table>
<thead>
<tr>
<th>Category in Table 3</th>
<th>Assessment method named in study (and category/rank)</th>
</tr>
</thead>
</table>
| Observation         | Observation of child in classroom (Allen et al., 2008, Ranked 2nd)  
Observation of the child in multiple settings (Allen et al., 2008, not ranked)  
Observation on the playground and other unstructured activities (Pearson, 2008, Ranked 3rd)  
Observe teacher/classroom to determine environmental factors (Rasmussen, 2009, Ranked 4th)  
Direct Observation (Sansosti & Sansosti, 2013, Ranked 2nd)  
Standardized direct observation systems (Sansosti & Sansosti, 2013, no rank)  
Observe School (Small, 2012, Ranked 2nd)  
Observation at home (Small, 2012, Not commonly used)  
Observation at home (Waite & Woods, 1999, Ranked 1st)  
Observation in class or playgroup (one specific mention of playground) (Waite & Woods, 1999, Ranked 1st) |
| Interview with parent and/or teacher | Developmental interview with parent/guardian (Allen et al., 2008, not ranked)  
Conduct parent interview (Pearson, 2008, Ranked 2nd)  
Parent Interview (Rasmussen, 2009, not ranked)  
Interviews (Sansosti & Sansosti, 2013, Ranked 1st)  
Interview Teacher (Small, 2012, Ranked 3rd)  
Interview Parent (Small, 2012, Not ranked)  
Interview with parents (Waite & Woods, 1999, Ranked 1st)  
Interview with teacher (Waite & Woods, 1999, Ranked 1st) |
| ASD specific (autism checklists/rating scales) | Childhood autism rating scale (Allen et al., 2008, not ranked)  
Gilliam Asperger’s Disorder Scale (Pearson, 2008, not ranked)  
An autism measure (Rasmussen, 2009, not ranked)  
Childhood Autism Rating Scale (Rasmussen, 2009, not ranked)  
Gilliam Autism Rating Scale (Rasmussen, 2009, not ranked)  
Autism checklist/Rating scales (Sansosti & Sansosti, 2013, Ranked 4th)  
ASD Specific Measure (Small, 2012, Not Commonly used)  
CARS autism rating scale (Waite & Woods, 1999, Ranked 4th) |
| Standardised intelligence test/cognitive | Intelligence/cognitive measure (Allen et al., 2008, Ranked 3rd)  
An intelligence test (Rasmussen, not ranked)  
Standardized intelligence tests (Sansosti & Sansosti, not ranked)  
Cognitive (Small, 2012, Ranked 4th)  
Normative assessment (for older children) (Waite & Woods, 1999, Not commonly used) |
| Developmental history | Developmental interview with parent or guardian (Allen et al., 2008, not ranked)  
Obtain a developmental/medical history (Pearson, 2008, ranked 1st) |
<table>
<thead>
<tr>
<th><strong>Developmental assessment (assessments/checklist/ questionnaires)</strong></th>
<th><strong>Adaptive Behaviour Scale</strong></th>
<th><strong>Behaviour assessment (E.g. FBA, behavioural checklist or rating scales, behavioural observations)</strong></th>
<th><strong>Record Review</strong></th>
<th><strong>Interview with student/child</strong></th>
<th><strong>Achievement tests</strong></th>
<th><strong>Review of academic work</strong></th>
<th><strong>Review of home/ school environments</strong></th>
<th><strong>Other items that were not categorised or included on table</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical examination (completed by a physician) Physical/medical exam</td>
<td>Refer the child to an outside specialist for further clinical assessment</td>
<td>A sensory measure</td>
<td>Curriculum based assessment</td>
<td>Emotional regulation checklists/rating</td>
<td>Allen et al., 2008, not commonly used. Rasmussen, 2009, not commonly used.</td>
<td>Pearson, 2008, commonly used but not ranked. This was not included in table as this was the only study to consider it.</td>
<td>Sansosti &amp; Sansosti, 2013, commonly used but not ranked Not on table as this was the only study to consider this type of assessment.</td>
<td>Sansosti &amp; Sansosti, 2013, not commonly used.</td>
</tr>
<tr>
<td>scales</td>
<td>Sansosti &amp; Sansosti, 2013, not commonly used</td>
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</tr>
<tr>
<td>Projective tests</td>
<td>Sansosti &amp; Sansosti, 2013 commonly used but not ranked : Not in table as the only study to consider it.</td>
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<td>Social skills checklist/rating scale</td>
<td>Sansosti &amp; Sansosti, 2013 commonly used but not ranked – too vague to categorise in table</td>
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<td>Systematic experimental analyses</td>
<td>Sansosit &amp; Sansosti, 2013, not commonly used</td>
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<td>Interview aide</td>
<td>Small, 2013, not commonly used</td>
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<td>Direct interaction with child</td>
<td>Waite &amp; Woods, 1999, commonly used but not ranked</td>
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<td>Play based assessment</td>
<td>Waite &amp; Woods, 1999, commonly used but not ranked. Not included in table as the only study to consider this type of assessment.</td>
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<td>Trial teaching</td>
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<td>Internally produced checklist</td>
<td>Waite &amp; Woods, 1999, not commonly used</td>
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<td>Cumine observation schedule</td>
<td>Waite &amp; Woods, 1999, not commonly used</td>
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Appendix G: Author Guidelines for Educational Psychology in Practice

Educational Psychology in Practice
theory, research and practice in educational psychology

Instructions for authors
Thank you for choosing to submit your paper to us. These instructions will ensure we have everything required so your paper can move through peer review, production and publication smoothly. Please take the time to read and follow them as closely as possible, as doing so will ensure your paper matches the journal's requirements. For general guidance on the publication process at Taylor & Francis please visit our Author Services website.

This journal uses ScholarOne Manuscripts (previously Manuscript Central) to peer review manuscript submissions. Please read the guide for ScholarOne authors before making a submission. Complete guidelines for preparing and submitting your manuscript to this journal are provided below.

About the journal
Educational Psychology in Practice is an international, peer reviewed journal, publishing high-quality, original research. Please see the journal's Aims & Scope for information about its focus and peer-review policy. Please note that this journal only publishes manuscripts in English. This journal accepts the following article types: Research or Review Article; Brief Report; Research Note; Practice Article; Article Reflecting on Practice. Articles should be of direct relevance to the theory, research and practice of educational psychologists. Articles should be original work, where appropriate should acknowledge any significant contribution by others, and should not have been accepted for publication elsewhere. Authors should confirm that clearance has been obtained from a relevant senior officer of the LEA if the article concerns the policies and practices of the LEA.

Peer review
Taylor & Francis is committed to peer-review integrity and upholding the highest standards of review. Once your paper has been assessed for suitability by the editor, it will then be double blind peer-reviewed by independent, anonymous expert referees. Find out more about what to expect during peer review and read our guidance on publishing ethics.

Preparing your paper
Word limits
Please include a word count for your paper.
A typical Research or review article for this journal should be more than 2000 and no more than 6000 words.
A typical Brief report for this journal should be more than 1500 and no more than 2000 words.
A typical Research note for this journal should be more than 800 and no more than 1000 words.
A typical Practice article for this journal should be more than 1500 and no more than 2000 words.
A typical Article reflecting on practice for this journal should be more than 1500 and no more than 2000 words.

Style guidelines
Please refer to these style guidelines when preparing your paper, rather than any published articles or a sample copy.
Please use British -ise spelling style consistently throughout your manuscript.
Please use double quotation marks, except where "a quotation is 'within' a quotation". Please note that long quotations should be indented without quotation marks.

Formatting and templates
Papers may be submitted in any standard format, including Word and LaTeX.
Figures should be saved separately from the text. To assist you in preparing your paper, we provide formatting templates.
A LaTeX template is available for this journal.
Word templates are available for this journal. Please save the template to your hard drive, ready for use.
If you are not able to use the templates via the links (or if you have any other template queries) please contact authortemplate@tandf.co.uk

References
Please use this reference guide when preparing your paper. An EndNote output style is also available to assist you.

Checklist: what to include
1. **Author details.** Please include all authors’ full names, affiliations, postal addresses, telephone numbers and email addresses on the title page. Where available, please also include ORCiDs and social media handles (Facebook, Twitter or LinkedIn). One author will need to be identified as the corresponding author, with their email address normally displayed in the article PDF (depending on the journal) and the online article. Authors’ affiliations are the affiliations where the research was conducted. If any of the named co-authors moves affiliation during the peer-review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after your paper is accepted. Read more on authorship.
2. A non-structured abstract of no more than 150 words. Read tips on writing your abstract.
3. You can opt to include a video abstract with your article. Find out how these can help your work reach a wider audience, and what to think about when filming.
4. 5-6 keywords. Read making your article more discoverable, including information on choosing a title and search engine optimization.
5. **Funding details.** Please supply all details required by your funding and grant-awarding bodies as follows:
For single agency grants: This work was supported by the [Funding Agency] under Grant [number xxxx].

For multiple agency grants: This work was supported by the [Funding Agency 1]; under Grant [number xxxx]; [Funding Agency 2] under Grant [number xxxx]; and [Funding Agency 3] under Grant [number xxxx].

6. Disclosure statement. This is to acknowledge any financial interest or benefit that has arisen from the direct applications of your research. Further guidance on what is a conflict of interest and how to disclose it.

7. Geolocation information. Submitting a geolocation information section, as a separate paragraph before your acknowledgements, means we can index your paper’s study area accurately in JournalMap’s geographic literature database and make your article more discoverable to others.

8. Supplemental online material. Supplemental material can be a video, dataset, fileset, sound file or anything which supports (and is pertinent to) your paper. We publish supplemental material online via Figshare. Find out more about supplemental material and how to submit it with your article.

9. Figures. Figures should be high quality (1200 dpi for line art, 600 dpi for grayscale and 300 dpi for color, at the correct size). Figures should be saved as TIFF, PostScript or EPS files. More information on how to prepare artwork.

10. Tables. Tables should present new information rather than duplicating what is in the text. Readers should be able to interpret the table without reference to the text. Please supply editable files.

11. Equations. If you are submitting your manuscript as a Word document, please ensure that equations are editable. More information about mathematical symbols and equations.

12. Units. Please use SI units (non-italicized).

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You must obtain the necessary permission to reuse third-party material in your article. The use of short extracts of text and some other types of material is usually permitted, on a limited basis, for the purposes of criticism and review without securing formal permission. If you wish to include any material in your paper for which you do not hold copyright, and which is not covered by this informal agreement, you will need to obtain written permission from the copyright owner prior to submission. More information on requesting permission to reproduce work(s) under copyright.

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We are committed to promoting and increasing the visibility of your article. Here are some tips and ideas on how you can work with us to promote your research.

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Style guidelines:

**Font:** Times New Roman, 12 point, double-line spaced. Use margins of at least 2.5 cm (or 1 inch). Guidance on how to insert special characters, accents and diacritics is available here.

**Title:** Use bold for your article title, with an initial capital letter for any proper nouns.

**Abstract:** Indicate the abstract paragraph with a heading or by reducing the font size. Check whether the journal requires a structured abstract or graphical abstract by reading the Instructions for Authors. The Instructions for Authors may also give word limits for your abstract. Advice on writing abstracts is available here.

**Keywords:** Please provide keywords to help readers find your article. If the Instructions for Authors do not give a number of keywords to provide, please give five or six. Advice on selecting suitable keywords is available here.

**Headings:** Please indicate the level of the section headings in your article:

1. First-level headings (e.g. Introduction, Conclusion) should be in bold, with an initial capital letter for any proper nouns.
2. Second-level headings should be in bold italics, with an initial capital letter for any proper nouns.
3. Third-level headings should be in italics, with an initial capital letter for any proper nouns.
4. Fourth-level headings should be in bold italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.
5. Fifth-level headings should be in italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.

**Tables and figures:** Indicate in the text where the tables and figures should appear, for example by inserting [Table 1 near here]. The actual tables should be supplied either at the end of the text or in a separate file. The actual figures should be supplied as separate files. The journal Editor’s preference will be detailed in the instructions for Authors or in the guidance on the submission system. Ensure you have permission to use any tables or figures you are reproducing from another source.

- Advice on obtaining permission for third party material is available here.
- Advice on preparation of artwork is available here.
- Advice on tables is available here.

**Running heads and received dates** are not required when submitting a manuscript for review; they will be added during the production process.

**Spelling and punctuation:** Each journal will have a preference for spelling and punctuation, which is detailed in the Instructions for Authors. Please ensure whichever spelling and punctuation style you use is applied consistently.
Appendix H: Questionnaire

Educational Psychologists' assessment and intervention practices with children with autism

Part 1: Participant Information

Gender
- Male
- Female

Professional role/position
- Assistant EP
- TEP Year 1
- TEP Year 2
- TEP Year 3
- EP
- Senior EP
- PEP
- Associate EP
- Choose not to say

Number of years working as a qualified EP

Number of completed years in my current position

Are you an ASD specialist?
- Yes*
- No

*If "Yes", please indicate the number of completed years
Where do you currently work?

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

How would you describe the area where you currently work?

- Predominantly urban
- Predominantly rural
- Mixed urban/rural

Could you describe the type of service?

- LA embedded
- Partially traded
- Fully traded
- National service (Eire)
- Other (please specify)

Size of service (no. of FTE EPs in service)


Is there an autism pathway in your area?

- Yes
- No

Is an EP part of the ASD Pathway?

- Yes
- No
Is this your role?

- Yes
- No

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

When involved in the diagnosis of ASD which criteria do you consult?

- DSM-4
- DSM-5
- ICD-10
- Other (please specify)

Educational Psychologists' assessment and intervention practices with children with autism

Part 2: Assessment methods for children with autism/children who have difficulties consistent with autism

What % of your caseload would you estimate has involved you engaging in direct assessment of students with autism/children who have difficulties consistent with autism during the last school year?
For each assessment method, please tick the number that most closely reflects how likely you would be to use the assessment with children with autism/children who have difficulties consistent with autism (0= Not familiar with, 1 = Never 2= Rarely 3= Sometimes 4= Often 5= Always).

<table>
<thead>
<tr>
<th>Assessment Method</th>
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<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<tr>
<td>Autism Checklists/Rating Scales: e.g. Gilliam Autism Rating Scale-Second Edition (GARS-2)</td>
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<td>Behavioural Checklists/Rating Scales: e.g. Devereux, Social Skills Improvement System (SSIS)</td>
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<td>Child's view</td>
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<td>Consultation with Parents</td>
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<td>Consultation with Teachers</td>
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<td>Curriculum Based Assessment: e.g. Curriculum Based Measurement; DIBELS</td>
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<td>Developmental assessment: e.g. Schedule of Growing Skills</td>
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<td>Diagnostic Instruments: (e.g. Autism Diagnostic Observation Schedule (ADOS) or The Diagnostic Interview for Social and Communication Disorders (DISCO))</td>
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<td>Direct observation at school (e.g. in class or in the playground)</td>
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<td>Direct observation in other settings (e.g. in the home)</td>
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<td>Ecological Inventories e.g.: Classroom environment checklist</td>
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<td>Emotional Regulation Checklists/Rating Scales: e.g. Childhood Depression Inventory (CDI)</td>
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<td>Executive functioning assessment: e.g. Behaviour Rating Inventory of Executive Function (BRIEF)</td>
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<td>Functional Behaviour Assessment: e.g. Analysis of Antecedent-Behaviour-Consequence Logs</td>
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<td>Language Assessments: e.g. Clinical Evaluation of Language Fundamentals (CELF)</td>
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<td>Play based assessment</td>
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<td>Projective Tests: e.g. Childhood Apperception Test (CAT); Draw-A-Person Test</td>
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<td>Review of Records</td>
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<td>Sensory profiling assessment: e.g. The Sensory Profile</td>
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<td>Social Skills Checklists/Ratings Scales: e.g. Social Communication Questionnaire (SCQ)</td>
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<td>Standardised Ability Tests: e.g. British Ability Scale (BAS-3), Wechsler Intelligence Scale for Children (WISC-IV)</td>
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<td>Standardised Achievement Tests: e.g. Wechsler Individual Achievement Test-Second Edition (WIAT-II)</td>
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<td>Standardised Developmental Inventories: e.g. Battelle Developmental Inventory-Second Edition (BDI-2)</td>
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If Other, please specify

Which of the above assessment methods are most likely to inform your intervention planning recommendations for children with autism/children who have difficulties consistent with autism?

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<thead>
<tr>
<th>Assessment Method</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>The Autism Diagnostic Observation Schedule (ADOS)</td>
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<td>The Autism Diagnostic Interview (ADI)</td>
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<tr>
<td>The Diagnostic Interview for Social and Communication Disorders (DISCO)</td>
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Have you been trained in ASD clinical assessments?

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<thead>
<tr>
<th>Assessment Method</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>The Autism Diagnostic Observation Schedule (ADOS)</td>
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<td>The Autism Diagnostic Interview (ADI)</td>
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<tr>
<td>The Diagnostic Interview for Social and Communication Disorders (DISCO)</td>
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</table>

How often do you currently work collaboratively with the following professionals in conducting assessments for children with autism/children who have difficulties consistent with autism?

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<thead>
<tr>
<th>Professional</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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<tr>
<td>Paediatricians</td>
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<td>Speech &amp; Language therapists</td>
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<td>Clinical psychologists</td>
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<td>Teachers</td>
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<td>SENCos</td>
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<td>Specialist teachers</td>
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<td>Outreach teams</td>
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<td>Family support</td>
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<td>Other* (please specify below)</td>
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</table>
How often do the following factors guide your decision making around your choice of assessment for children with autism/children who have difficulties consistent with autism?

<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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<td>Evidence base for the tool</td>
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<td>Individual child needs (pupil factors)</td>
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<td>School factors</td>
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<td>Length of time to administer</td>
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<td>Ease of administration</td>
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<td>Familiarity with the tool</td>
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<td>EPS team approach</td>
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<td>Local policies and procedures</td>
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<td>National guidelines</td>
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<td>Parent views</td>
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<td>Child views</td>
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<td>Other* (please specify below)</td>
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</tbody>
</table>

*If "Other", please specify

Thinking more broadly about your overall assessment, what are the main factors that influence the ways in which you assess children with autism?
Educational Psychologists' assessment and intervention practices with children with autism

Part 3: Intervention strategies for children with who have difficulties consistent with autism

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

In identifying evidence-based practices, Wong et al (2014) 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.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Not familiar</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social outcomes (Skills needed to interact with others)</td>
<td></td>
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<tr>
<td>Communication outcomes (ability to express wants, needs, choices, feelings, or ideas)</td>
<td></td>
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<tr>
<td>Challenging/Interfering behaviour outcomes (Decreasing or eliminating behaviours that interfere with the individual’s ability to learn)</td>
<td></td>
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<tr>
<td>Joint attention outcomes (Behaviours needed for sharing interests and/or experiences)</td>
<td></td>
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<tr>
<td>Play-based outcomes (Use of toys or leisure materials)</td>
<td></td>
<td></td>
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<tr>
<td>Cognitive skills outcomes (problem solving, information processing, reasoning, theory of mind, memory, creativity)</td>
<td></td>
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<tr>
<td>School readiness outcomes (performance during a task not directly related to task content)</td>
<td></td>
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<tr>
<td>Pre-academic/academic skills outcomes (Performance on tasks typically taught and used in school settings)</td>
<td></td>
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<tr>
<td>Motor skills outcomes? (Movement or motion, including both fine and gross motor skills, or related to sensory system/sensory functioning)</td>
<td></td>
<td></td>
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<tr>
<td>Adaptive/self-help skills outcomes? (Independent living skills and personal care skills)</td>
<td></td>
<td></td>
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<tr>
<td>Vocational outcomes (Employment or employment preparation or relate to technical skills required for a specific job)</td>
<td></td>
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<tr>
<td>Mental health outcomes (Emotional well-being)</td>
<td></td>
<td></td>
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<tr>
<td>Multiple outcomes? (e.g. a combination of 2 or more of the above outcomes)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
The following 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>Not familiar</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement</td>
<td></td>
<td></td>
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<td></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>
<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>
<td></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>
<td></td>
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<tr>
<td>Parent-implemented intervention</td>
<td></td>
<td></td>
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<tr>
<td>Technology-aided instruction and intervention</td>
<td></td>
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<tr>
<td>Visual support</td>
<td></td>
<td></td>
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<tr>
<td>Social narratives/stories</td>
<td></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>
<td></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>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>
<td></td>
<td></td>
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<td></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</td>
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</tbody>
</table>
a broad range of outcomes
Joint attention interventions
LEGOTM therapy
Play-based interventions (using direct instruction to train students with ASD in social skills during play activities with an adult or peer)
Multi-sensory

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>
<td></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>Teachers</td>
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<tr>
<td>SENCos</td>
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<tr>
<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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</tbody>
</table>

In the last year, which of these sources have informed your practice regarding of interventions for ASD?

<table>
<thead>
<tr>
<th>Source</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal articles</td>
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<tr>
<td>Reports</td>
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<tr>
<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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<tr>
<td>Charity organization (e.g. NAS)</td>
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<tr>
<td>University seminars</td>
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</table>

If you have found information about interventions for ASD from other sources not list above please specify them here.
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>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence base</td>
<td></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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<tr>
<td>Local policies and expectations (e.g. LA)</td>
<td></td>
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<tr>
<td>Parents’ views</td>
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<td></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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</tbody>
</table>

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


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

- Daily
- Weekly
- Fortnightly
- Monthly
- Half-termly
- Termly
- Yearly

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

- Yearly review
- Consultation
- IEP review
- Informal conversations
- CAF/EHAT review
- Other, please specify

Are there any other aspects of your work in relation to assessment and intervention with children with autism/children who have difficulties consistent with autism, that haven’t been covered?


Appendix I: Example Advert

Trainees and staff from the University of Manchester Doctorate in Educational and Child Psychology programme are 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 to complete an anonymous on-line questionnaire which will take no longer than 25 minutes. 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: http://tinyurl.com/EPsASD2016

If you would like to receive a paper version of the questionnaire, please email the research team at ASDresearch@manchester.ac.uk.

We very much welcome contributions from EPs at whatever their stage of career (including trainees) and those with and without ASD specialisms.

Caroline Bond (Doctorate in Educational and Child Psychology Placement Director)
Lee Robinson (Y2 TEP)
Shireen Sadreddini (Y2 TEP)

Manchester Institute of Education
University of Manchester
Thinking more broadly about your overall assessment, what are the main factors that influence the ways in which you assess children with autism?

<table>
<thead>
<tr>
<th>Qualitative data</th>
<th>Researcher 1 Initial Code</th>
<th>Researcher 2 Initial Code</th>
<th>Matches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processes and tools used to gain a holistic picture of the child's development and learning</td>
<td>-Holistic</td>
<td>-Holistic picture</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Child’s development</td>
<td>-Assessment for development</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Child’s learning</td>
<td>-Assessment for learning</td>
<td>Y</td>
</tr>
<tr>
<td>The primary focus is always how to support the child in managing their school day and support their social, emotional and academic development.</td>
<td>-Child centered support</td>
<td>-managing school day</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-social, emotional, academic development</td>
<td>-Social/ emotional support and academic development</td>
<td>Y</td>
</tr>
<tr>
<td>Use screening tools and refer on for assessment</td>
<td>-Screening tools</td>
<td>-screening tools</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Referral</td>
<td>-Screening for referral</td>
<td>Y</td>
</tr>
<tr>
<td>Behavior, Cognitive ability, Extent of concerns</td>
<td>-Behaviour</td>
<td>-Child’s behaviour</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Cognitive</td>
<td>-cognitive ability</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Concerns of others</td>
<td>-severity</td>
<td></td>
</tr>
<tr>
<td>Age of child, presenting needs, level of concentration, perceived ability level</td>
<td>-Age</td>
<td>-Age</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Child’s needs</td>
<td>-Individual needs</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Concentration</td>
<td>-concentration</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Ability</td>
<td>-ability</td>
<td>Y</td>
</tr>
<tr>
<td>What is the psychological question which the school and parents would like to address.</td>
<td>-Psychological questions</td>
<td>-purpose</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-School and parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local policies and resources available.</td>
<td>-Local policies</td>
<td>-Local policies</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Availability of Resources</td>
<td>-Available resources</td>
<td>Y</td>
</tr>
<tr>
<td>the extent of their flexibility</td>
<td>-Child’s flexibility</td>
<td>-flexibility</td>
<td>Y</td>
</tr>
<tr>
<td>Child's level of development, context and family's/school's concerns</td>
<td>-Child’s development</td>
<td>-developmental level</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Context</td>
<td>-context</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>-Concerns from school and family</td>
<td>-concerns</td>
<td>Y</td>
</tr>
<tr>
<td>Child centered</td>
<td>-Child-centered assessment</td>
<td>-child-centered</td>
<td>Y</td>
</tr>
</tbody>
</table>
| What the child is interested in, able to do, and what they find difficult. What their parents want for them. What the problem is that brought them to my attention. | -Child’s interests  
-Child’s ability  
-What child finds difficult  
-Parents  
-Problem identified | -child’s interests  
-ability  
-difficulties  
-parent views  
-concerns | Y  
Y  
Y  
Y  
Y |
| Collaboration with others to supplement or triangulate existing information. | -Collaboration with others  
-Triangulating information | -collaboration  
-triangulation | Y  
Y |
| Observation Consultation assess tools as above | -Observation  
-Consultation | -observation  
-consultation | Y  
Y |
| Age of the child, family factors and team approach | -Child’s age  
-Family context  
- Team approach | -age  
-family factors  
- EPS team approach | Y  
Y  
Y |
| the referral question and the child’s language level | -Referral question  
-Child’s language level | -purpose of involvement  
-language ability | Y  
Y |
| Strong evidence base In line with NICE guidelines | -Evidence base  
-NICE Guidelines | -evidence-base  
-non-statutory guidelines | Y  
Y |
| Time and parent views | -Time  
-Parents | -Time  
-View of parents | Y  
Y |
| My assessment is based on information from the widest range of sources possible and is based on how the child engages in real-life situations rather than on a test. I would tend to look for evidence of the triad of impairments in their processing in everyday life as a guide. | -Wide range of sources  
-Real life observations  
-Triad of impairments | -Range of sources  
-Observation vs testing  
-triad of impairments | Y  
Y  
Y |
| Two different aims: sometimes the assessment is to support the parent in approaching the medical profession to request investigation therefore more likely to use psychometric, diagnostic type methods. If the assessment is to support the school / family in developing effective strategies / problem solving more likely to rely on observation / | -Support parents to request medical investigation  
-use psychometric/diagnostic tools  
-Assessment for school/family support  
-observation to support school  
-consultation to support school/family  
-dynamic assessment to | -parental support  
-medical investigation  
-psychometric assessment  
-diagnostic assessment  
-school support  
-assessment to inform strategies  
-assessment for problem solving  
-observation to inform strategies  
-consultation to inform strategies  
-Dynamic assessment to inform strategies | Y  
Y  
Y  
Y  
Y  
Y  
Y  
Y  
Y  
Y |
<table>
<thead>
<tr>
<th>consultation / dynamic assessment.</th>
<th>support school/family tools depend on purpose</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The impact of social deficits on day to day living and integration in school life.</td>
<td>-Within child factors</td>
<td>-Impact of social skill difficulties</td>
</tr>
<tr>
<td></td>
<td>-child within context</td>
<td>-Integration into school</td>
</tr>
<tr>
<td>I do not conduct assessments to diagnose ASD. I conduct assessments to determine the best intervention given the profile of the young person and their circumstances.</td>
<td>-Role not diagnosis</td>
<td>-Not assessing to diagnose intervention</td>
</tr>
<tr>
<td></td>
<td>-Assessment for intervention</td>
<td>-Assessment to inform intervention</td>
</tr>
<tr>
<td></td>
<td>-Considers yp profile</td>
<td>-individual needs</td>
</tr>
<tr>
<td>Familiarity with assessment tools and team practice.</td>
<td>-Familiarity</td>
<td>-familiarity with tools</td>
</tr>
<tr>
<td></td>
<td>-Team approach</td>
<td>-EPS team approach</td>
</tr>
<tr>
<td>Their presenting needs - how they may participate with an assessment etc</td>
<td>-Child’s needs</td>
<td>-individual needs</td>
</tr>
<tr>
<td></td>
<td>-Participation with assessment</td>
<td>-assessment participation</td>
</tr>
<tr>
<td>It is based on the purpose of the assessment--why I am asked to be involved and this can vary from diagnosis to schools wanting help with behavior for a child already diagnosed</td>
<td>-Purpose</td>
<td>-purpose of involvement</td>
</tr>
<tr>
<td></td>
<td>-Diagnosis</td>
<td>-assessment for diagnosis</td>
</tr>
<tr>
<td></td>
<td>-School support</td>
<td>-assessment to inform strategies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-support for school</td>
</tr>
<tr>
<td>What is appropriate for the individual child and the context in which they're being seen. This includes chronological and developmental age, interests, setting, involvement from other professionals.</td>
<td>-Individual child</td>
<td>-individual needs</td>
</tr>
<tr>
<td></td>
<td>-Context</td>
<td>-context</td>
</tr>
<tr>
<td></td>
<td>-Age (dev and chronological)</td>
<td>-age</td>
</tr>
<tr>
<td></td>
<td>-Child’s interests</td>
<td>-interests</td>
</tr>
<tr>
<td></td>
<td>-Assessment setting</td>
<td>-setting</td>
</tr>
<tr>
<td></td>
<td>-Other professionals</td>
<td>-other professionals</td>
</tr>
<tr>
<td>Depends on what I am trying to find out. In all my answers above relating to assessment, I have assumed you do not just mean assessment to look at ASD traits, but assessment in its broader sense. In this way the child's ASD traits may not be the main reason I am conducting an assessment.</td>
<td>-Purpose</td>
<td>-purpose of involvement</td>
</tr>
<tr>
<td></td>
<td>-Broader assessment</td>
<td>-ASD specific vs broad assessment</td>
</tr>
<tr>
<td>Developmental history Direct observation Reports from school</td>
<td>-Developmental history</td>
<td>-developmental history</td>
</tr>
<tr>
<td></td>
<td>-Observation</td>
<td>-observation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-school information</td>
</tr>
<tr>
<td>The question being asked and whether the task is accessible or appropriate for the youngster. What can best help the child too. Sometimes use sub tests of the bas 3 on their own in a dynamic assessment way.</td>
<td>-School reports</td>
<td>-Purpose of involvement</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>-Question/ purpose</td>
<td>-Appropriateness of assessment</td>
<td>-Accessible for child</td>
</tr>
<tr>
<td>-Child-centered/support child</td>
<td>-Purpose of involvement</td>
<td>-Support individual</td>
</tr>
<tr>
<td>-Adapting tests to use dynamically</td>
<td>-Appropriateness of assessment</td>
<td>-Dynamic assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Individualising assessment</td>
</tr>
<tr>
<td>Case by case basis and how best to communicate with the child to get the most out of an assessment</td>
<td>-Each case considered independently</td>
<td>-Communication</td>
</tr>
<tr>
<td></td>
<td>-Best way to communicate with child</td>
<td>-Assessment maximisation</td>
</tr>
<tr>
<td>Age of child, developmental history and stages reached (attention span etc), context for assessment.</td>
<td>-Age</td>
<td>-Age</td>
</tr>
<tr>
<td></td>
<td>-Developmental history</td>
<td>-Developmental history</td>
</tr>
<tr>
<td></td>
<td>-Developmental stage</td>
<td>-Attention span</td>
</tr>
<tr>
<td></td>
<td>-Attention</td>
<td>-Context</td>
</tr>
<tr>
<td>The only psychological input as part of my local ASD pathway is a steering group, chaired by PEP, which reviews some concerns around diagnoses raised by EPs post diagnosis. In terms of working with children with ASD post diagnosis I am guided by local policies and procedures</td>
<td>-ASD Pathway</td>
<td>-Steering group</td>
</tr>
<tr>
<td></td>
<td>-Steering group</td>
<td>-Diagnosis concerns</td>
</tr>
<tr>
<td></td>
<td>-EPs concerns post diagnosis</td>
<td>-Post diagnosis</td>
</tr>
<tr>
<td></td>
<td>-Post diagnosis work</td>
<td>-Local policies</td>
</tr>
<tr>
<td></td>
<td>-Local policies</td>
<td></td>
</tr>
<tr>
<td>Usefulness to key people in planning / monitoring over time</td>
<td>-Involvement over time</td>
<td>-Assessment usefulness</td>
</tr>
<tr>
<td></td>
<td>-Assessment for monitoring</td>
<td></td>
</tr>
<tr>
<td>The child primarily, level of skills, ease of working with, etc and then the referral question.</td>
<td>-Child’s skills</td>
<td>-Ability</td>
</tr>
<tr>
<td></td>
<td>-Child’s comfort working with other</td>
<td>-Individual needs</td>
</tr>
<tr>
<td></td>
<td>-Referral question</td>
<td>-Purpose of involvement</td>
</tr>
<tr>
<td>Tests that can be administered untimed</td>
<td>-Untimed tests</td>
<td>-Untimed assessment</td>
</tr>
<tr>
<td>Age and ability levels of child</td>
<td>-Age</td>
<td>-Age</td>
</tr>
<tr>
<td>Other professionals involved</td>
<td>-Child’s ability</td>
<td>-Ability</td>
</tr>
<tr>
<td>Other interventions in place</td>
<td>-Other professionals</td>
<td>-Other professionals</td>
</tr>
<tr>
<td></td>
<td>-Interventions</td>
<td>-Existing interventions in place</td>
</tr>
</tbody>
</table>
My view of educational psychology work, including firm commitment to consultation and improving outcomes for children. Assessment choice is driven by exploring the presenting concerns and used to help plan next steps, implement appropriate intervention and improve outcomes for children. View assessment as a part of consultative approach, working with key adults, using carefully selected assessment to explore areas of priority for making changes rather than diagnosing problems. Each piece of work is approach based on what is presented during consultation and differs in each situation/context and each different child.

<table>
<thead>
<tr>
<th>Policy developed by LA</th>
<th>-LA policies</th>
<th>-Local policies</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying where young person is struggling - play times, accessing learning. Need to balance this with the 'agenda' of school and family. Greater understanding of young persons needs is my main priority.</td>
<td>-To identify where yp is struggling (e.g. social/ learning) -Child needs vs parent/school agenda. -Understanding child’s needs.</td>
<td>-Individual needs -social needs -learning needs -school/family agenda -understanding individual needs</td>
<td>Y Y Y</td>
</tr>
<tr>
<td>Understanding the child’s needs and skills eg anxiety, ability and social comm skills, interests and technology skills</td>
<td>-Understanding of the child’s needs -Anxiety -Ability -Social Skills -Communication skills -Interests -Technology skills</td>
<td>-individual needs -anxiety -ability -social communication needs -child’s interests -technology skills</td>
<td>Y Y Y Y</td>
</tr>
<tr>
<td>Individual child factors, e.g. Age, communication skills, etc. Who else is involved and the assessments that have already been completed. The needs raised by parents and senco prior to assessment.</td>
<td>-Individual child factors -Age -communication skills -other professionals -other assessments -areas of concern from parents and school</td>
<td>-individual child factors -age -communication skills -other professionals -previous assessment -concerns</td>
<td>Y Y Y Y Y</td>
</tr>
<tr>
<td>125 codes</td>
<td>130 codes</td>
<td>113 similar codes</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average number of codes= 127.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>113 out of an average of 127.5 codes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 113/127.5=0.8862</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 0.8862 X 100=88.62%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• =89% agreement</td>
<td></td>
</tr>
</tbody>
</table>

**Average number of codes= 127.5**

113 out of an average of 127.5 codes
- 113/127.5=0.8862
- 0.8862 X 100=88.62%
- =89% agreement
Appendix K: Table displaying categories mentioned at least 10 times, including initial codes and examples

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Groupings</th>
<th>Initial codes</th>
<th>Exemplars</th>
</tr>
</thead>
</table>
| Individualised assessment | 51 | • Within child factors (e.g. age, cognitive ability, language or developmental level)  
• Personalizing/ tailoring assessment  
• Appropriateness of tools | • Child’s interests  
• Child’s engagement  
• Child’s temperament  
• Child’s flexibility  
• Child's level of distress/anxiety  
• Accessibility  
• Child-centered  
• Age  
• Cognitive ability  
• Language  
• Developmental level  
• Appropriateness of tools. | • What the child is interested in, able to do, and what they find difficult.  
• Individual child factors, e.g. Age, communication skills, etc.  
• Age of child, presenting needs, level of concentration, perceived ability level  
• Their engagement, how comfortable they are / limited distress  
• How the child responds to unfamiliar adults, novel assessments and different environments.  
• The selection of assessment tools and procedures is generally based upon what I believe will offer the most helpful information with the least inconvenience / upset for the individual being assessed. In the case of children and young people with ASD anxiety around the unfamiliar is a big factor and I am always mindful of minimizing the impact that I have on the person being assessed.  
• The assessment has to… be acceptable to the child, I will take options so that the child can opt out if they want and have choices.  
• Child's interests - what can I engage them in and won't make them feel too anxious, frustrated etc. Child's skills e.g. level of communicative ability  
• Relevance of standardisation to ASD population (e.g. I wouldn't quote scores standardised on a same-aged population without pointing out that children with ASD would only have been a tiny proportion of the population the test will have been standardised on |
<table>
<thead>
<tr>
<th>Purpose</th>
<th>41</th>
</tr>
</thead>
</table>
| • Purpose  
  • Consultation | • Referral question  
  • Main concerns (school staff and parents)  
  • Problem brought to attention  
  • Aims  
  • Fit for purpose  
  • Priority needs in school  
  • Consultation | • What is the psychological question which the school and parents would like to address.  
  • What the problem is that brought them to my attention.  
  • the purpose of the assessment is key - why am I assessing the child - this is usually with the aim of improving their progress in whatever setting they are in….  
  • The questions and issues that schools raise in relation to meeting the pupil's needs.  
  • The assessment has to be fit for purpose so carried out with a particular hypothesis in mind.  
  • I start with a consultation to explore what the school/parent/child want from my assessment and use this to guide what I offer  
  • Each piece of work is approach based on what is presented during consultation and differs in each situation/context and each different child. |

<table>
<thead>
<tr>
<th>Role in Diagnosis</th>
<th>14</th>
</tr>
</thead>
</table>
| • Diagnosis not role  
  • Assessing for diagnosis | • Improving outcomes rather than diagnosing  
  • Support parent approach medical profession  
  • Assessment for intervention/child’s profile  
  • Identifying and supporting wide range of social communication/ | • own view of using psychology to improve outcomes for child rather than to diagnose or categorise  
  • Two different aims: sometimes the assessment is to support the parent in approaching the medical profession to request investigation….  
  • I do not conduct assessments to diagnose ASD…  
  • My assessments not driven by medical diagnosis…  
  • …providing a psychological perspective and intervention strategies rather than just diagnostic.  
  • Thinking how best to inform support and intervention in their setting - diagnosis is often largely irrelevant to my involvement.  
  • As I am not involved in a process of diagnosis the main focus of my assessment is around the child's functioning in school and how this can be maximised. |
<table>
<thead>
<tr>
<th>Challenge</th>
<th>That often I am being asked to answer a specific question in the wider team as part of the jigsaw of diagnosis (eg could this be learning difficulties?)…I am never the only person making a diagnosis, and have a specific job in that team. Eg someone else does the ados, developmental history.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic/ wide ranging assessment</td>
<td>• Holistic assessment</td>
</tr>
<tr>
<td>10</td>
<td>• Triangulation</td>
</tr>
<tr>
<td></td>
<td>• Child in context</td>
</tr>
<tr>
<td></td>
<td>• Holistic assessment</td>
</tr>
<tr>
<td></td>
<td>• Triangulation</td>
</tr>
<tr>
<td></td>
<td>• Wide range of sources</td>
</tr>
<tr>
<td></td>
<td>• Broad assessment</td>
</tr>
<tr>
<td></td>
<td>• Valid/comprehensive</td>
</tr>
<tr>
<td></td>
<td>• Child-in-context process tools used to gain a holistic picture of the child's development and learning</td>
</tr>
<tr>
<td></td>
<td>• My assessment is based on information from the widest range of sources possible</td>
</tr>
<tr>
<td></td>
<td>• In all of my practice I try to consider the young person in a holistic way.</td>
</tr>
<tr>
<td></td>
<td>…Also, observation and meetings to triangulate evidence.</td>
</tr>
<tr>
<td>Other professional 13</td>
<td>• Prior information</td>
</tr>
<tr>
<td>s</td>
<td>• Unique contribution</td>
</tr>
<tr>
<td></td>
<td>• Other professionals’ assessments</td>
</tr>
<tr>
<td></td>
<td>• Pediatrician/ Speech &amp; Language/ Specialist teachers/ CAMHS</td>
</tr>
<tr>
<td></td>
<td>• Others’ assessments/contributing to these</td>
</tr>
<tr>
<td></td>
<td>• Unique contribution</td>
</tr>
<tr>
<td></td>
<td>• Info from other professional colleagues who've been involved especially Paediatrician, SLT and Specialist Teacher for Communication and Language.</td>
</tr>
<tr>
<td></td>
<td>• Area in which I can contribute/add to other professionals' assessments</td>
</tr>
<tr>
<td></td>
<td>• Who else is involved and the assessments that have already been completed.</td>
</tr>
<tr>
<td></td>
<td>• What has already been completed by other professionals (e.g. what could be the unique contributing factor)</td>
</tr>
<tr>
<td></td>
<td>• Availability of other professionals (no CAMHS involvement in this area, experience/clinical judgement, having info that might lead to different diagnosis)</td>
</tr>
</tbody>
</table>
| Contextual factors | 33 | • Time  
• Availability and familiarity with resources  
• Policies/procedures  
• Environmental factors | • Time  
• Available resources  
• Familiarity with resources  
• Team approach  
• LA policies/procedures  
• Guidelines  
• School environment | • What is available to me and what is feasible within the constraints of a visit to school  
• The authority approach.  
• Familiarity with assessment tools and team practice  
• What will be achievable and helpful within the given time and setting  
• It is important that the assessment can be done properly in school in the right environment (a school factor) and not rushed, so the ease of administration and length is important.  
• Time, familiarity and availability of resources  
• Local policies and resources available. |
Appendix L: Ethic Forms and approval

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 (REA) form.**

This form should be completed, in consultation with the MIE Ethical Practice Policy Guidelines[^4], by Manchester Institute of Education students and their supervisors in all cases, except where a pre-approved assignment template currently exists[^5]. 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**

- 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.

---

[^3]: A reasonable person would agree that the study includes no issues of public or private objection, or of a sensitive nature.
[^4]: [http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/)
[^5]: 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 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 out: | England and Ireland |
| A14. Student Signature: | Shireen Sadreddini  
Lee Robinson |

The following section to be completed by the SUPERVISOR

<table>
<thead>
<tr>
<th>A15. Assessed Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
</tr>
<tr>
<td>A16. Supervisor Signature</td>
</tr>
<tr>
<td>A17. Date</td>
</tr>
</tbody>
</table>
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 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 in the present context.

B2. The principal research methods and methodologies are (250 words max):
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
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/
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.

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

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>2</td>
</tr>
</tbody>
</table>

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

---

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

7 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 visits® (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 travel®

☐ 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 unit 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 hours® 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.

☐ 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

® Fieldwork visits involve travel to research locations off campus to collect data.
® This can be checked on this website http://www.fco.gov.uk/en/travel-and-living-abroad/travel-advice-by-country/
® For example, in the UK normal working hours are between 8am and 6pm Mon-Fri inclusive.
C.2 No Fieldwork visits

Fieldwork Statement
I confirm:

- ✔ this research does not involve fieldwork visits of any kind
- ✔ 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:

Students and Supervisors please complete C.3 / C.4 respectively

<table>
<thead>
<tr>
<th>C.3 Student Declaration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

Signature:  
Lee Robinson  
Shireen Sadreddini

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

<table>
<thead>
<tr>
<th>C.4 Supervisor Declaration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

Signature:  

Name (in capitals):  
Date:  
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 site12) and all supporting documents13, 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 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.

11 For full details see http://www.hra.nhs.uk/resources/applying-for-reviews/
12 http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/
13 ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.
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.\(^{14}\)
- 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\(^{15}\) 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)\(^ {16}\) and all supporting documents\(^ {17}\), and give these to your supervisor for review and feedback.
3. When satisfied with the application, your supervisor will submit:
   1. The 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.

---

\(^{14}\) This does not include research in locations where children are present if they are not the focus of the research.

\(^{15}\) 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

\(^{16}\) 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/)

\(^{17}\) ‘Supporting documents’ include recruitment adverts/emails, draft questionnaires / interview topic guides, information sheets and consent forms.
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).

---

18 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) and all supporting documents, 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.

---

19 This document and guidance can downloaded from http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/

20 ‘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.

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:</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number submitted</td>
<td>Completed RREA form</td>
</tr>
<tr>
<td></td>
<td>Student research proposal, or equivalent, on which the assessment is based</td>
</tr>
<tr>
<td></td>
<td>Completed and approved Fieldwork Risk Assessment form - where indicated</td>
</tr>
</tbody>
</table>

**Supporting documents:**

- Draft questionnaire / interview topic guide / other data collection tools
- Recruitment email / advertisement
- Participant Information Sheet / page / letter (PIS) for each group
- Consent form (or alternative) for each participant group

**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.

---

21 Fieldwork visits involve travel to research locations off campus to collect data.

22 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.
F.1 Minor 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.

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: |

---

23 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.
Manchester Institute of Education

Ethical Approval Application Form

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

**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>
<tr>
<td>Email Address:</td>
<td><a href="mailto:Lee.robinson-3@postgrad.machester.ac.uk">Lee.robinson-3@postgrad.machester.ac.uk</a> <a href="mailto:Shireen.Sadreddini@postgrad.manchester.ac.uk">Shireen.Sadreddini@postgrad.manchester.ac.uk</a></td>
</tr>
<tr>
<td>Name of Supervisor:</td>
<td>Caroline Bond</td>
</tr>
<tr>
<td>Supervisor email:</td>
<td><a href="mailto:Carolline.bond@manchester.ac.uk">Carolline.bond@manchester.ac.uk</a></td>
</tr>
<tr>
<td>Programme (PhD, Prof Doc, MEd, PGCE, MSc, BA etc):</td>
<td>D.Ed.Ch.Psychol</td>
</tr>
<tr>
<td>Year of Study</td>
<td>Year 1</td>
</tr>
<tr>
<td>Full/Part-time</td>
<td>Full</td>
</tr>
<tr>
<td>Title of Research Project:</td>
<td>Educational psychologists’ contributions to the assessments of and interventions with children with autism</td>
</tr>
<tr>
<td>Recruitment and Data Collection</td>
<td><strong>Start Date:</strong> On receipt of confirmation of ethical approval <strong>End Date:</strong> May 2017</td>
</tr>
<tr>
<td>Location(s) where the project will be carried out:</td>
<td>England and Ireland</td>
</tr>
<tr>
<td>Student Signature:</td>
<td>Lee Robinson &amp; Shireen Sadreddini</td>
</tr>
<tr>
<td>Supervisor Signature:**</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td></td>
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</table>

** 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 Woods’ 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**

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

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>
</tr>
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<tbody>
<tr>
<td>X</td>
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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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<td>X</td>
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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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<tbody>
<tr>
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<td>X</td>
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</tbody>
</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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<td></td>
<td>X</td>
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</tbody>
</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>
</tr>
</thead>
<tbody>
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<td></td>
<td>X</td>
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</table>

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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
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</tbody>
</table>

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/stillimagereach/search/](http://www.seed.manchester.ac.uk/studentintranet/miestudenthome/integrityethics/stillimagereach/search/)

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.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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<tbody>
<tr>
<td>DBS*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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

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
- No
- NA

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

- Yes
- No
- NA

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

If NA, please explain why permission is not applicable.
Separate permission will be sought from the educational psychology service in Ireland.

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

<table>
<thead>
<tr>
<th>Option</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters/ emails and follow up phone calls to organisations</td>
<td>x</td>
</tr>
<tr>
<td>Posters / Advertisements</td>
<td>x</td>
</tr>
<tr>
<td>Website/Internet (including Facebook/other social media)</td>
<td>x</td>
</tr>
<tr>
<td>Known or named client groups (students, etc).</td>
<td>x</td>
</tr>
<tr>
<td>Networks and recommendations</td>
<td>x</td>
</tr>
<tr>
<td>Person in a position of authority in organisation</td>
<td>x</td>
</tr>
<tr>
<td>Directory/database/register in public domain</td>
<td>x</td>
</tr>
</tbody>
</table>

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 email.

4.2.2. Who will the potential participants be?

<table>
<thead>
<tr>
<th>Option</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons unknown to the researcher</td>
<td>x</td>
</tr>
<tr>
<td>Client groups (students, etc) within an organisation known by the researcher</td>
<td></td>
</tr>
<tr>
<td>Persons accessed through networks and recommendations</td>
<td>x</td>
</tr>
<tr>
<td>Persons nominated by a position of authority</td>
<td>x</td>
</tr>
<tr>
<td>Other (describe here)</td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Option</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter</td>
<td>x</td>
</tr>
<tr>
<td>Email</td>
<td>x</td>
</tr>
<tr>
<td>Website/internet (including Facebook/other social media site)</td>
<td>x</td>
</tr>
<tr>
<td>Presentation at meeting or similar</td>
<td></td>
</tr>
<tr>
<td>Other (describe here):</td>
<td></td>
</tr>
</tbody>
</table>

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

How will your recruitment methods avoid putting any overt or covert pressure on vulnerable individuals to consent (children, junior colleagues, adults with learning disabilities)?

N/A

4.3. Consent

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

- My consent taking procedures are relevant to each participating group
- 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?
25mins 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:

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

7. Data Protection and confidentiality

7.1 Data activities and storage of personal data

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

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:

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

University Data Protection Policy (UDPP): I confirm

X My data and its storage will comply with the UDPP
X Paper copies of data and encrypted storage devices will be stored in a locked draw or
For UG research: On completion of my research, the data will be kept until the study has been completed and will then be shredded/destroyed

For PGT/PGR research: On completion of my research, the data will be passed to my supervisor for archiving at the University for a period of 5 years after which it will be shredded/destroyed

7.5 Privacy during data analysis Please confirm:

- Analysis will be undertaken by the student researcher
- Analysis will take place in a private study area

If other arrangements apply please describe:

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

If other/additional arrangements apply, please describe:

7.8 Use of data in future studies

Will the data be stored for use in future studies? Yes [x] 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)

- [X] Peer reviewed scientific journals
- Book / Chapter contribution
- Published review (ESRC, Cochrane)
- Internal report
- [X] Conference presentation
- [X] Thesis/dissertation
- Other e.g. Creative works (describe here):

8.2 Participant and community feedback
How will the results of research be made available to research participants and communities from which they are drawn? (Tick all that apply)

- [X] 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
- [X] No external funding

If you have funding please provide details:

<table>
<thead>
<tr>
<th>Organisation</th>
<th>UK Contact</th>
<th>Amount</th>
<th>Duration</th>
</tr>
</thead>
</table>

9.2 Sponsoring organisation
Who will be responsible for governance and insuring the study? (tick one)

- [X] 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:

X NONE of the ABOVE APPLY

Thank you
This is the end of the form

Please use the checklist below to ensure that you append all necessary supporting documents

CHECKLIST

Please tick to indicate whether the document is APPENDED OR NOT APPLICABLE for this application.

<table>
<thead>
<tr>
<th>Documents</th>
<th>Appended</th>
<th>Total Number</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection instruments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draft copy of each data collection instrument named in Q2.2</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(Questionnaire, interview guide, etc)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video and Still Image Recording Declaration (VASTRE)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Participant recruitment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letter(s) of permission to conduct research within each organisation</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Recruitment advertisement(s) specified in Q4.2.1</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(poster/email/letter/presentation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant Information giving – one for each participant type specified in Q3.1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(Information sheet/letter/email/script)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consent taking – one for each participant type specified in Q3.1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(Consent form or alternative procedure)</td>
<td></td>
<td></td>
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<tr>
<td>Fieldwork risk assessment</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fieldwork Risk Assessment Form (approved)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RREA form Low Risk Fieldwork Declaration (Section C) completed</td>
<td></td>
<td>1</td>
<td></td>
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</tbody>
</table>

SECTION 3: MINOR AMENDMENT TO RESEARCH PROJECT

Application for Approval of Minor Amendment to a Research Study
### Details of proposed amendment (please give as much detail as possible)

<table>
<thead>
<tr>
<th>Supervisor Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>I agree that the amendment proposed does not change the character of this research or the participant groups.</td>
</tr>
<tr>
<td>I confirm that the research risk assessment for the study as MEDIUM remains.</td>
</tr>
</tbody>
</table>

<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.
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 first 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></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Is your research in line with NEPS key Research Directions for 2011 – 2016</em></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will your project involve deliberately misleading participants in any way?</td>
<td>☑</td>
</tr>
<tr>
<td>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).</td>
<td>☑</td>
</tr>
<tr>
<td>Do you consider that this research has any significant ethical implication not covered by the questions above?</td>
<td>☑</td>
</tr>
</tbody>
</table>

**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>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with NEPS key Research Directions for 2011 – 2016</td>
<td>Yes, assessment and intervention</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</td>
</tr>
<tr>
<td><strong>Intention to publish/present at conference</strong></td>
<td><strong>Journal publications, doctoral theses and relevant conferences.</strong></td>
</tr>
<tr>
<td><strong>Supervision (University etc.)</strong></td>
<td><strong>Caroline Bond, The University of Manchester</strong></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 questionnaire_ (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
You are being invited to take part in a research study as part of a thesis project exploring Educational Psychologists’ contributions to the assessments of and interventions with children with autism. 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?**
Shireen Sadreddini and Lee Robinson
Manchester Institute of Education
The University of Manchester
Manchester
M13 9PL
UK

**Title of the Research**
Educational Psychologists’ assessment and intervention practices for children with autism.

**What is the aim of the research?**
We hope to gain an insight into Educational Psychologists’ (EPs’) role in the assessment and interventions of children with autism 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 experience of conducting assessments with children suspected of having ASD and also been in involved in implementing interventions for children with ASD.

**What would I be asked to do if I took part?**
You will be asked to reflect on your current practice by taking an online questionnaire that lasts no longer than 25 minutes.

**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. If you do decide to take part you will be able to print this information sheet. 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 25 minutes to complete.

**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 an academic book 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**

Shireen Sadreddini: Shireen.sadreddini@postgrad.manchester.ac.uk

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

CONSENT FORM

If you are happy to participate please read the statements below. By completing and submitting this questionnaire, you are agreeing to the following statements.

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

• I understand that my participation in the study is voluntary and that 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.

• I agree that any data collected may be used in future studies.
Participant consent form for postal questionnaire.

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

CONSENT FORM

If you are happy to participate please read the statements below. By returning a completed questionnaire, you are agreeing to the following statements.

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

- I understand that my participation in the study is voluntary and that 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.

- I agree that any data collected may be used in future studies.
Ethical Approval

Approval from the University of Manchester

From: ethics.education@manchester.ac.uk
Date: 15.9.15

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

 Approval from the director of the National Educational Psychological Service (NEPS)

From: O'Neill, Feargal <Feargal.ONEill@education.gov.ie>
Date: Friday, 15 January 2016
Subject: RE: Research approval

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 M: Percentage of EPs unfamiliar with each assessment tool

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<tr>
<th>Assessment</th>
<th>%</th>
<th>Valid %</th>
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<tr>
<td>Standardised Developmental inventories</td>
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<tr>
<td>Adaptive Behaviour Scales</td>
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<td>Behavioural Checklists/Rating Scales</td>
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<td>Diagnostic Instruments</td>
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<td>Language Assessments</td>
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