

Title

**An Analysis of the South Lanarkshire Council ASD Consultation Approach:
Building confidence and competence amongst staff**

What did we ask?

- i) How useful did teaching staff find the ASD Consultation Approach Training?
- ii) Were teachers able to transfer what they learned in training into practice?
- iii) What factors within the ASD Consultation approach helped facilitate this transfer from training to practice?
- iv) What impacts did the ASD Consultation Approach have on pupil health and well-being?
- v) Does the ASD Consultation help address issues to do with the Attainment Gap?

What is the evidence base?

In 2011, The Scottish Government developed a National Autism Strategy, detailing the need to identify and improve outcomes for individuals with Autism Spectrum Disorder (ASD) and translate research findings into practice. This coincided with schools becoming more inclusive towards pupils with Additional Support Needs (Riddell, Harris & Weedon, 2016) and a now estimated 1% prevalence of ASD amongst children in mainstream schools in the UK (but with a 3/2 diagnosed/undiagnosed ratio; Baron-Cohen et al., 2009).

However, because the developmental patterns, systems of behaviour and logics of children with ASD can differ markedly from their typically developing peers (Baron-Cohen, Leslie, & Frith, 1985; Baron-Cohen & Belmonte, 2005), learning about and applying good practice around ASD can be problematic. Even after receiving training programmes, teachers commonly feel ill-equipped to deal with the complexities of ASD (Jindal-

Snape, Douglas, Topping, Kerr, & Smith, 2005; Symes & Humphrey, 2011).

Learning About ASD

Why does this occur? This is unlikely to be because of a lack of *information* on evidence-based practice, which is relatively profuse amongst training programmes. The problem seems to reside in teachers having difficulty *applying* evidence-based practice in the classroom (e.g., Hess, Morrier, Heflin, & Ivey, 2008; Morrier, Hess, & Heflin, 2011).

For example, Kasari and Smith (2013) detail the complexity with channelling empirical findings on ASD into school environments (c.f., Weisz, 2000). They argue that the thrust of training programmes is on implementing research-based practice as opposed to gaining a deep understanding of the reasoning behind ASD behaviour. Applying research findings is also hampered by the fact that schools, by nature, are not always orderly environments, meaning a strict transfer from a controlled study to a classroom environment can be difficult. Furthermore, the way in which ASD manifests can be unique to a particular child (Georgiades, Szatmari, & Boyle, 2013).

As a remedy, Kasari and Smith (2013) recommend “informed eclecticism”, which encourages practitioners to take on board a toolbox of approaches and attempt to fit the interventions towards the pupil in question. This then becomes an opportunity for more reflection and learning. By encouraging teachers to reflect on practice, we have a synthesis between the theoretical and practical aspects of ASD. Through this approach, the authors suggest, the gap between learning via training and learning through practice can be bridged. This emphasis on child-focussed practice also aligns with approaches suggested in the Scottish Parliament Information Centre’s briefing on closing the Attainment Gap (Marcus, 2016).

Whilst in-class approaches based on standardisation (c.f., Boyd et al., 2014 for a review) and didactic lectures without a supportive scaffold (e.g., Jindal-Snape et al., 2005; Morrier et al., 2011) lack efficacy, approaches more in line with informed eclecticism provide stronger evidence. For example, in a programme providing teachers with ample

support and opportunities for (re)learning Probst and Leppert (2008) found a marked reduction in behavioural challenges, teacher stress and an increase in applying learning strategies. Bolstering learning through practice is a common strategy (e.g., Kolb, 1984) and this principle underpinned the South Lanarkshire ASD Consultation Approach (described further in “What did we do?”).

Health and Wellbeing

Positive health and wellbeing is accepted as central to effective learning (Education Scotland, 2009). Therefore along with literacy and numeracy, health and wellbeing is one of the three core areas that are the responsibility of all school staff (Scottish Executive, 2004).

A systematic review for the World Health Organisation (Suhrcke & de Paz Nieves, 2011) concluded that overall child health status has a positive effect on educational performance and attainment. Longitudinal data gathered in England identified that children with higher levels of emotional, behavioural, social and school wellbeing, were on average more likely to have higher level of academic achievement and be more engaged with school, than children with lower levels of emotional, behavioural, social and school wellbeing (Gutman & Vorhaus, 2012).

However, children with ASD experience typically experience substantial health and wellbeing problems (Joshi et al., 2010). To take one important example, a recent meta-analysis found that youth with ASD had greater anxiety than the typically developing population, something which appeared to increase with age and IQ (van Steensel & Heeman, 2017). How anxiety in ASD manifests is complex, but seems to arise from the unique processing style of ASD (Wood and Gadow, 2010). This processing style can be accommodated within a school context. Thus, an ASD-friendly school environment can take great strides towards improving health and wellbeing for pupils.

The Influence of Deprivation

Research conducted in Glasgow found a higher prevalence of ASD amongst the most deprived quintile of the Scottish Index of Multiple Deprivation (Campbell, Reynolds, Cunningham, Minnis, & Gillberg

2013). The least deprived quintile, conversely, had a significantly lower rate. There could be several explanations for these results, but it does suggest a relationship to deprivation that should be explored further.

Across Scotland the same inequities persist in relation to Additional Support Needs diagnoses (e.g., Riddell et al., 2016). ASD overlaps in presentation to conditions such as speech and language disorder (Williams, Botting, & Boucher, 2008) and reactive attachment disorder (e.g., Davidson et al., 2015) both of which also appear to affect deprived children disproportionately (Law, McBean, & Rush, 2011; Minnis et al., 2013).

Riddell and Weedon (2016) also found that despite the increase in Additional Support Needs prevalence, there is no corresponding increase in statutory support plans within deprived areas. Research by the same authors also identified differences between families from different SIMD levels in accessing support for children with Additional Support Needs (Riddell & Weedon, 2017). We see no reason why this would not be similarly applicable to ASD. Overall, whilst it is difficult to make a link between deprivation and ASD (support) with complete certainty, it would be remiss to ignore the indirect ways in which deprivation can have a negative effect upon children with ASD. As a consequence, the ASD Consultation Approach, described below, can be seen as a tool for supporting children from deprived backgrounds with ASD that they may not have otherwise received.

What did we do?

The ASD Consultation Approach

Teaching staff and key school staff were trained and supported in the ASD Consultation Approach, which had two components: a training session designed to familiarise staff with ASD and the ASD Consultation Approach; and, Paperwork to be used in conjunction with practice that helps teachers to apply, reinforce and develop their understanding of ASD and their pupils.

Training was delivered in a three hour session by an educational psychologist, with particular focus detailing the theories of ASD and how

the school environment interacts with ASD. Another aim was that attendees would understand the need for a 'whole school' approach to be developed, with all staff from across the school collaborating to develop an ASD-friendly environment, alongside improved practice within classrooms. This is in line with research on school leadership (Leithwood, Harris, & Hopkins, 2008) and Scottish Parliament Information Centre strategies for closing the Attainment Gap (Marcus, 2016).

At the end of the session staff were introduced to the ASD Consultation Form. This form was designed to help staff think about the challenges of ASD they are currently facing, taking into consideration ASD processing styles and to plan next steps. Staff were encouraged to use the Paperwork individually, with a colleague, with a senior member of school staff and then with the educational psychologist as part of a Staged Intervention Approach. However, immediately post-training, educational psychologists were available for coaching and mentoring to support teachers' professional learning and embed the process within schools.

We then ran three separate studies to evaluate the efficacy of the ASD Consultation Approach:

Study 1: Post-Training Evaluations

We gathered evaluative post-training data from 780 practitioners. We asked the practitioners, having received the training, if they felt an improvement in professional knowledge; felt more confident in applying skills and knowledge; their belief in the usefulness of the ASD Consultation Approach; and the likelihood of using the ASD Consultation Approach in school.

Study2: Follow-up Online Questionnaire

As expected, the training was received with widespread positivity (see next section). The questions are: can what was learned by practitioners be integrated into everyday practice and if so, through what mechanisms? To do this, we evaluated the effects of using the ASD Consultation Paperwork (referred to as the Paperwork) online via SurveyMonkey. We recruited 115 members of teaching staff, of which 53

had completed the ASD Consultation Paperwork to support their implementation of training into practice.

We asked teachers their highest level of usage of the Paperwork (used individually; with a peer; with a promoted member of staff; with an educational psychologist). We asked teachers to rate on a 1-5 Likert Scale the helpfulness of the training and we also asked if teachers saw any improvement in:

- Classroom Practice
- Planning
- Communication
- Curriculum Presentation
- Conversations Amongst Staff
- Discussions with Parents
- Their Understanding of ASD
- Use of Strategies
- Confidence (This was an amalgam of two questions – one about confidence in meeting pupils’ needs and one about confidence in applying knowledge gained from the training)

Study 3: Senior Staff Interviews

We also interviewed senior members of school staff from two schools (one a small rural Primary School, one a large Secondary School). We asked them about a specific pupil with whom the Paperwork had been used, which formed a Case Study and we also asked about the ASD Consultation Approach more generally.

Both these schools were recipients of Scottish Attainment Challenge funding, meaning that a sufficient amount of pupils lived in areas in the lowest quintiles of the Scottish Index of Multiple Deprivation.

What have we found so far?

A more detailed analysis of the findings can be supplied on request.

Study 1: Post-Training Evaluations

Table 1 details the answers to the post-training questions, showing that

the training was met with widespread positivity. No more than 2% answered a single question with “Disagree” and not a single person answered with “Strongly Disagree”.

Table 1. Answers to post-training statements	Strongly Agree	Agree	Disagree	Strongly Disagree
The training/activity has increased my professional knowledge about this topic	494 (63.3%)	275 (35.3%)	11 (1.4%)	0 (0%)
The training/activity has increased my confidence in applying new skills and knowledge to my job	389 (50.0%)	374 (48.1%)	15 (1.9%)	0 (0%)
The ASD consultation model will help support children and young people in my school	391 (52.4%)	353 (47.3%)	2 (0.3%)	0 (0%)
Following this training, I am likely to use the ASD consultation model	378 (50.1%)	369 (48.9%)	7 (0.9%)	0 (0%)

Study 2: Follow-up Online Questionnaire

35% of respondents indicated using the Paperwork individually, 13% with a peer, 10% with a promoted member of staff and 31% with an educational psychologist. Although using the Paperwork individually was the highest answer – for which there could be good reasons (e.g., staff member was already confident working with ASD) – it was positive to

see that most teachers sought support to scaffold their learning.

We also found that those who used the Paperwork reported positive impacts upon practice across all Likert Scale questions (See Table 2) and high inter-item correlations (Table 3).

Table 2. Please indicate the extent to which using the ASD Consultation Paperwork has impacted on the following: **Mean (SD)**

Classroom practice	3.32 (0.84)
Planning	3.31 (0.90)
How staff communicate with pupils with ASD/social communication difficulties	3.35 (0.93)
Presentation of the curriculum in a more ASD-friendly way (i.e., teaching with tasks)	3.23 (0.83)
Conversations with other staff members about pupils	3.50 (0.95)
Discussion with parents	3.35 (1.00)
Understanding of ASD	3.81 (0.94)
Use of strategies	3.65 (0.86)
Confidence	3.47 (0.88)

Answers here are provided on a one to five scale (1 = No impact; 5 = Very high impact).

Table 3. Inter-item correlations between dependent variables

Help ful	Pract ice	Pla n	Co mm	Pre s	Co nv	Pare nts	Unde rs	Str at	Co nf
---------------------	----------------------	------------------	------------------	------------------	------------------	---------------------	--------------------	-------------------	------------------

Helpful	1									
Practice	.443*	1								
Plan	.229	.755**	1							
Comm	.525*	.622**	.547**	1						
Pres	.425*	.603**	.583**	.743**	1					
Conv	.224	.555**	.636**	.398**	.528**	1				
Parents	.153	.572**	.712**	.280	.340*	.507**	1			
Unders	.692*	.540**	.423**	.515**	.548**	.492**	.365*	1		
Strat	.459*	.573**	.500**	.529**	.620**	.561**	.504**	.705**	1	
Conf	.512*	.564**	.639**	.439**	.618**	.618**	.582**	.699**	.822**	1

Item names have been shortened due to space constraints. Note: * $p < .05$, ** $p < .001$

Using a mediation analysis, we also formulated a conceptual model that explained how this transfer from training to confident practitioner could occur. We found that the Use of Strategies could explain the positive relationship between finding the Training helpful and becoming a more confident practitioner. In other words, helpful training translated into confident practitioner because teachers were able to use and apply strategies, reinforcing their learning through practice.

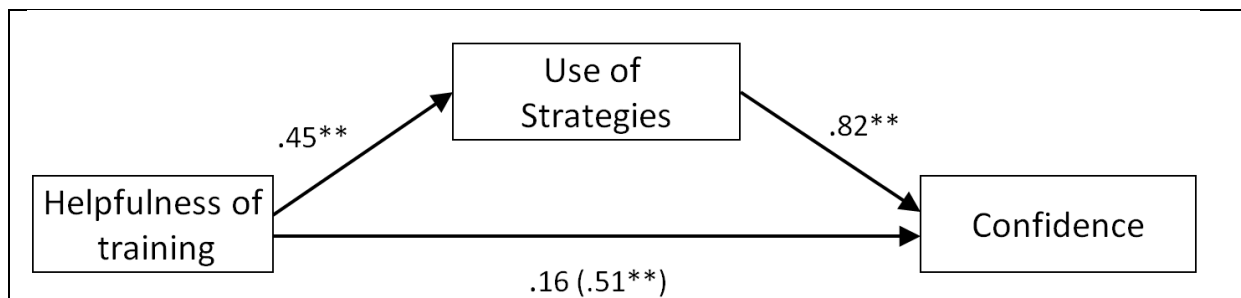


Figure 1. Standardised regression weights (β) for the mediation between Helpfulness of training, Use of Strategies and Confidence. Note: * $p < .05$, ** $p < .001$

Study 3: Senior Staff Interviews

In both Case Studies, significant improvements were found in both pupils' health and wellbeing following use of the Paperwork. Prior to the Paperwork being used, neither pupil was able to fully engage with school life. As a result of working through the Paperwork, the first Case Study pupil became less emotionally volatile and appeared more settled and content. The teacher who used the Paperwork became better able to identify the "triggers" and found the educational psychologist's support useful, particularly in terms of identifying strategies. It also helped the class teacher think outside the box, and helped her independently gauge the appropriateness of strategies to use.

The second Case Study pupil was disengaged from learning and refusing to interact with staff. Following use of the ASD Consultation Approach with the educational psychologist, staff were able to support the pupil to articulate what was causing the distress. Subsequently, the pupil has begun to reengage with classwork and with teachers. Staff report that health and wellbeing has improved for this individual.

In the interviews, when discussing the ASD Consultation Approach in general, we found many similar themes. Both interviewees reported that they felt that the ASD Consultation would become embedded in the school in the near future and that at such a point, support from educational psychology would not be needed as much because the programme would operate independently.

Both interviewees reported that staff showed a marked increase in knowledge and confidence around ASD. Rather than just looking at

things from a purely behavioural perspective, staff considered the psychology behind ASD as a way of understanding the behaviour. This was, for our purposes, very important as it showed staff engaging with the principles underlying the ASD Consultation.

The rural Primary School found it straightforward to operate a 'whole-school approach', with all staff engaging with the ASD Consultation Approach principles. The Secondary School, however, found this more difficult. This likely speaks towards the logistical difficulties inherent in large secondary schools, with more barriers towards implementing a whole-school approach. The Secondary School actually took many steps towards embedding the ASD Consultation Approach including surgery sessions, a revised transition program, training refreshers and links with other nearby Secondary Schools.

Conclusion

Overall, the findings from the current research indicate that the ASD Consultation Approach has been useful and has helped facilitate confidence and competence in staff. We have provided a conceptual mechanism – the use of strategies – which can help facilitate this often elusive transfer from training to practice. There is still room for improvement in this regard; however by providing supportive scaffolds, we have improved beyond a traditional 'train and hope' model that appeared commonplace in much prior research.

Furthermore, teachers appear responsive to the content of the ASD Consultation Approach and through case studies we have documented improvements in pupil health and well being (within Scottish Attainment Challenge schools). This is all the more important given the likelihood of children from deprived areas having less access to valuable supports: the ASD Consultation will ensure that children do not miss out. Furthermore, we have indicators of schools taking steps towards developing an environment catered towards ASD. This whole-school approach is important in addressing the Attainment Gap (Marcus, 2016) and fostering an ASD-friendly environment.

The ASD Consultation Approach has improved confidence and competence in teachers around ASD. This has allowed them to

accommodate the unique style of processing in their pupils with ASD. In turn, this is leading to meaningful systemic change.

What do we plan to do next?

South Lanarkshire Council Psychological Service will continue with their plans to roll out the ASD Consultation Training to all primary schools and key staff in secondary by the end of the 2017/18 school year. In addition there will continue to be close collaboration with the Inclusive Education Service and managers at a locality level.

References

- Baron-Cohen, S. & Belmonte, M.K. (2005). Autism: A window onto the development of the social and the analytic brain, *Annual Review of Neuroscience*, 28, 109-26.
- Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a “theory of mind”? *Cognition*, 21(1), 37-46.
- Baron-Cohen, S., Scott, F. J., Allison, C., Williams, J., Bolton, P., Matthews, F. E., & Brayne, C. (2009). Prevalence of autism-spectrum conditions: UK school-based population study. *The British Journal of Psychiatry*, 194(6), 500-509.
- Campbell, M., Reynolds, L., Cunningham, J., Minnis, H., & Gillberg, C. (2013). Autism in Glasgow: cumulative incidence and the effects of referral age, deprivation and geographical location. *Child: Care, Health and Development*, 39(5), 688-694.
- Davidson, C., O’Hare, A., Mactaggart, F., Green, J., Young, D., Gillberg, C., & Minnis, H. (2015). Social relationship difficulties in autism and reactive attachment disorder: improving diagnostic validity through structured assessment. *Research in Developmental Disabilities*, 40, 63-72.
- Education Scotland (2009). *Curriculum for Excellence: Health and Wellbeing; Principles and Practice*. Available at <https://education.gov.scot/Documents/health-and-wellbeing-pp.pdf>

(Accessed 20/12/17).

Georgiades, S., Szatmari, P., & Boyle, M. (2013). Importance of studying heterogeneity in autism. *Neuropsychiatry*, 3(2), 123-125.

Gutman, L. M., & Vorhaus, J. (2012). *The Impact of Pupil Behaviour and Wellbeing on Educational Outcomes*. London: Department of Education.

Hess, K. L., Morrier, M. J., Heflin, L. J., & Ivey, M. L. (2008). Autism treatment survey: Services received by children with autism spectrum disorders in public school classrooms. *Journal of Autism and Developmental Disorders*, 38(5), 961-971.

Joshi, G., Petty, C., Wozniak, J., Henin, A., Fried, R., Galdo, M., ... & Biederman, J. (2010). The heavy burden of psychiatric comorbidity in youth with autism spectrum disorders: A large comparative study of a psychiatrically referred population. *Journal of Autism and Developmental Disorders*, 40(11), 1361-1370.

Jindal-Snape, D., Douglas, W., Topping, K., Kerr, C., & Smith, E. F. (2005). Effective education for children with autistic spectrum disorder. *International Journal of Special Education*, 20(1), 77-87.

Kasari, C., & Smith, T. (2013). Interventions in schools for children with autism spectrum disorder: Methods and recommendations. *Autism*, 17(3), 254-267.

Law, J., McBean, K., & Rush, R. (2011). Communication skills in a population of primary school-aged children raised in an area of pronounced social disadvantage. *International Journal of Language & Communication Disorders*, 46(6), 657-664.

Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership and Management*, 28(1), 27-42.

Marcus, G. (2016). *Closing the Attainment Gap: What Can Schools Do?* Edinburgh: Scottish Parliament Information Centre.

- Minnis, H., Macmillan, S., Pritchett, R., Young, D., Wallace, B., Butcher, J., ... & Gillberg, C. (2013). Prevalence of reactive attachment disorder in a deprived population. *The British Journal of Psychiatry*, 202(5), 342-346.
- Morrier, M. J., Hess, K. L., & Heflin, L. J. (2011). Teacher training for implementation of teaching strategies for students with autism spectrum disorders. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 34(2), 119-132.
- Probst, P., & Leppert, T. (2008). Brief report: Outcomes of a teacher training program for autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(9), 1791-1796.
- Riddell, S., Harris, N. & Weedon, E. (2016). Special and additional support needs in England and Scotland: Current dilemmas and solutions. In: L. Peer & G. Reid (Eds.) *Special Educational Needs: A Guide for Inclusive Practice*. London: Sage.
- Riddell, S., & Weedon, E. (2016). Additional support needs policy in Scotland: challenging or reinforcing social inequality? *Discourse: Studies in the Cultural Politics of Education*, 37(4), 496-512.
- Riddell, S., & Weedon, E. (2017). Social justice and provision for children with additional support needs in Scotland. *Education, Citizenship and Social Justice*, 12(1), 36-48.
- Scottish Executive (2004). Curriculum for Excellence. Edinburgh: Scottish Executive
- Scottish Government. (2011). *The Scottish strategy for autism*. Available at: <http://www.autismstrategyscotland.org.uk/strategy/linking-goals-aims-and-recommendations.html> (Accessed: 3/10/17).
- Suhrcke, M., & de Paz Nieves, C. (2011). *The impact of health and health behaviours on educational outcomes in high-income countries: a review of the evidence*. Copenhagen, Denmark: World

Health Organization, Regional Office for Europe.

Symes, W., & Humphrey, N. (2011). School factors that facilitate or hinder the ability of teaching assistants to effectively support pupils with autism spectrum disorders (ASDs) in mainstream secondary schools. *Journal of Research in Special Educational Needs*, 11(3), 153-161.

van Steensel, F. J., & Heeman, E. J. (2017). Anxiety Levels in Children with Autism Spectrum Disorder: A Meta-Analysis. *Journal of Child and Family Studies*, 26(7), 1-15.

Weisz, J. R. (2000). Agenda for child and adolescent psychotherapy research: On the need to put science into practice. *Archives of General Psychiatry*, 57(9), 837-838.

Williams, D., Botting, N., & Boucher, J. (2008). Language in autism and specific language impairment: Where are the links? *Psychological Bulletin*, 134(6), 944-963.

Wood, J. J., & Gadow, K. D. (2010). Exploring the nature and function of anxiety in youth with autism spectrum disorders. *Clinical Psychology: Science and Practice*, 17(4), 281-292.

For further information contact

Dr Valerie Duchak
Depute Principal Educational Psychologist
01355 574121
valerie.duchak@slcpsych.org.uk