

The SIGNS Schools Project

in partnership with the Learning with Autism Programme

Dr Sarah Barrett, Wales Autism Research Centre

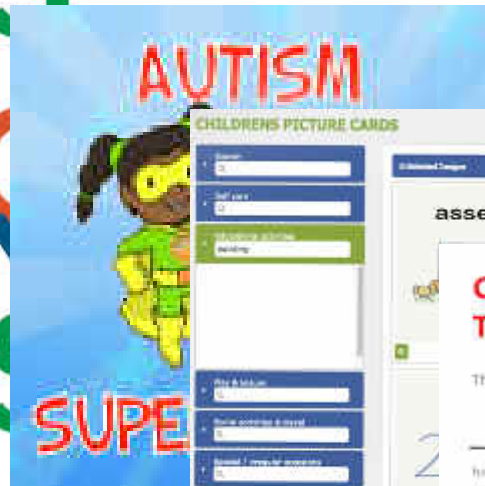
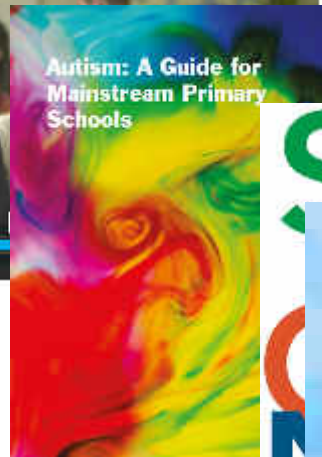


Learning with Autism (LWA)

- Online resources
- Aimed at staff across whole school
- Recognise autism and adapt practice
- Available for early years (up to 4 years), primary (4-11 years) and secondary (11-16 years)



Learning with Autism (LWA)



Signposting

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Signposting for diagnosis of Autism Spectrum Disorder using the Diagnostic Interview for Social and Communication Disorders (DISCO)



Sarah Carrington^{a,*}, Susan Leekam^a, Rachel Kent^a, Jarymke Maljaars^{b,c},
Judith Gould^d, Lorna Wing^d, Ann Le Couteur^e, Ina Van Berckelaer-Onnes^e,
Ilse Noens^f

^aWales Autism Research Centre, School of Psychology, Cardiff University, UK

^bUniversity of Leuven (KU Leuven), Belgium

^cLeiden University, The Netherlands

^dLorna Wing Centre, National Autistic Society, Eilat House, Brentley, UK

^eAutism of Health and Society, Newcastle University, UK

NICE National Institute for
Health and Care Excellence

Research Questions

- Are the new signposting questionnaires reliable and valid?
- Do they distinguish autistic from non-autistic children?



Method

- Participants
 - Parents and teachers of 165 children on the Special Educational Needs (SEN) register
 - Caerphilly primary schools that have completed Learning With Autism programme training



Method

- Materials
 - SIGNS Questionnaire
 - NICE Questionnaire
 - Strengths and Difficulties Questionnaire
 - Autism-Spectrum Quotient (10 items)
 - Demographics/Background
- Procedure
 - Parents complete questionnaire
 - Teachers complete questionnaire
 - Learning With Autism Evaluation

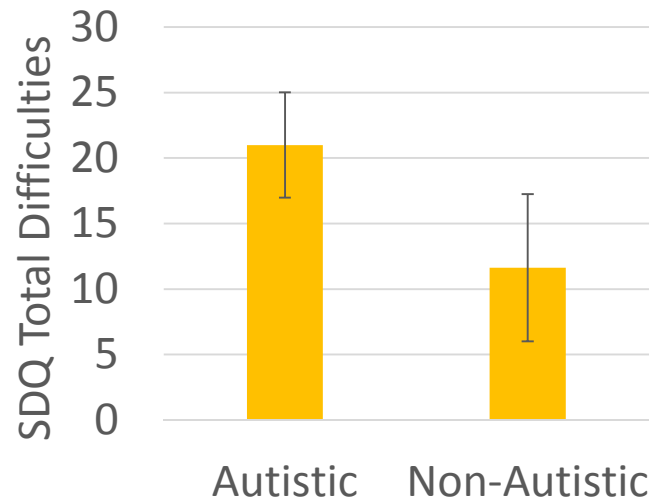


Reliable and Valid?

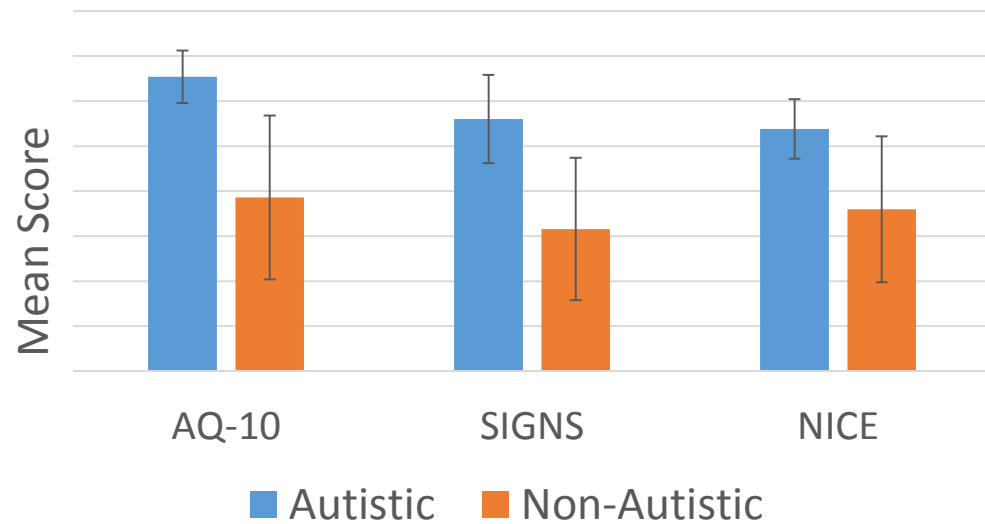
- 28 participants from initial data collection
- Aged 4-11 years
 - 20 children with ASD, 5 children with other SEN and 3 typically developing children

	SDQ (Total Difficulties)	AQ-10	SIGNS	NICE
Mean (SD)	18.32 (6.19)	2.89 (.80)	2.46 (.81)	2.63 (.73)
Range	4-29	1.3-4.0	1.0-3.64	1.19-3.64
Reliability (α)	.71	.87	.92	.96

Distinguish Children?



$t(1,10.02)=18.4, p=.002$



$Z=-3.24, p=.001; Z=-3.05, p=.001; Z=-3.07, p=.001$

Next Steps

- Continue data collection in Wales
- Run study in Latvia
 - Do the questionnaires measure the signs of autism across language and culture?
 - Children with subtle signs of autism may get missed
 - **NOT** a diagnostic tool, but signposting for support



Thank you!

Wales

- Research Team
 - Cardiff University: Prof. Sue Leekam, Dr Catherine Jones and Prof. Dale Hay
 - Aston University: Dr Sarah Carrington
- Educational Psychology
 - Cardiff University: Dr Kyla Honey and Andrea Higgins
 - Caerphilly Council: Dr Laurie Davies and Lois Brown
- Welsh Government and Education
 - Welsh Government: Jo Manikiza and Gaby Worgan
 - Caerphilly Council: Jacqui Elias
- Participants
 - Caerphilly schools
 - Research Recruitment Register
 - Welsh Local Government Association mailing list

Latvia

- University of Latvia
 - Dr.psych. Ieva Bite, Marija Legzdiņa and Kristīne Āriņa
- Autism Association of Latvia
 - Līga Bērziņa
- Prof. Sandra Serbe
- British Psychological Society Postdoctoral Study Visit Scheme



Pilot Data

	SDQ (Total Difficulties)	AQ-10 (Mean)	SIGNS (Mean)	NICE (Mean)
Mean (SD)	18.32 (6.19)	2.89 (.80)	2.46 (.81)	2.63 (.73)
Range	4-29	1.3-4.0	1.0-3.64	1.19-3.64
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	AQ-10 (Mean)	SIGNS (Mean)	NICE (Mean)
SDQ (Total Difficulties)	$r_s=.77, p<.001$	$r_s=.82, p<.001$	$r_s=.75, p<.001$
AQ-10 (Mean)	-	$r_s=.87, p<.001$	$r_s=.82, p<.001$
SIGNS (Mean)	-	-	$r_s=.81, p<.001$

	SDQ (Total Difficulties)	AQ-10 (Mean)	SIGNS (Mean)	NICE (Mean)
ASD Mean (SD)	21 (4.03)	3.27 (.29)	2.8 (.49)	2.69 (.33)
Non-ASD Mean (SD)	11.63 (5.63)	1.93 (.91)	1.58 (.79)	1.8 (.81)
Difference	$t(1,10.02)=18.4, p=.002$	$Z=-3.24, p=.001$	$Z=-3.05, p=.001$	$Z=-3.07, p=.001$

Pilot Data

ASD	SIGNS		SIGNS	
	High score=ASD	Low score=ASD	High score=ASD	Low score=ASD
Mean (SD)	2.59 (.72)	2.05 (.48)	2.61 (.55)	1.91 (.33)
Reliability (α)	.60	.63	.68	.72
Correlation	$r = -.501, p = .024$		$r = -.431, p = .058$	
Paired t-test	$t(19) = 2.29, p = .034$		$t(19) = 4.11, p = .001$	

non-ASD	SIGNS		SIGNS	
	High score=ASD	Low score=ASD	High score=ASD	Low score=ASD
Mean (SD)	1.55 (.78)	3.4 (.81)	1.53 (.93)	3.11 (.79)
Reliability (α)	.91	.94	.96	.97
Correlation	$r_s = -.71, p = .047$		$r_s = .81, p = .016$	
Wilcoxon's test	$Z = -2.1, p = .036$		$Z = -1.83, p = .067$	