

Table 2

*Psychometric Properties of Measures Used to Assess Social Anxiety in Children and Adolescents with ASD*

Questionnaires						
Measure	Description	Informant <sup>a</sup>	Study(s)	$\alpha$	Comparison Measure(s)	$r$
Child and Adolescent Symptom Inventory (CASI: Gadow & Sprafkin 1994, 1997)	132-item DSM-IV referenced rating scale for ages 3-18; two item screen for social anxiety	P	Hallett et al., 2013	NR		NR
		P	Sukhodolsky et al., 2008	NR		NR
Child Symptom Inventory (CSI-4: Gadow & Sprafkin, 1994)	97-item broad symptom inventory for ages 6-12; three item screen for social anxiety	P	Weisbrot et al., 2005	NR		NR
Early Childhood Inventory – 4 (Sprafkin et al., 2002)	108-item broad symptom inventory for ages 3-5; screen for Social Anxiety	P	Weisbrot et al., 2005	NR		NR
Matson Evaluation of Social Skills for Youngsters (MESSY: Matson, 1990)	62-item assessment of social skill deficits for ages 4-18; 6 items related to social anxiety/loneliness	P, S, T	Kalyva et al., 2010	NR		NR
Multidimensional Anxiety Scale for Children (MASC: March, 1998)	39-item broad symptom inventory for ages 8-19; 9 item screen for social anxiety composed of two subscales: Humiliation/Rejection and Performance Fears	P, S	Bellini, 2004	NR	Social Skills Rating System (SSRS: Gresham & Elliot, 1990); Assertion Scale	$r = -.31^*$ (S); NS (P)

		P, S	Renno & Wood, 2013	.81 (P) .86 (S)	Autism Diagnostic Interview-Revised (ADI-R: Lord et al., 1994)	$r = -.04$ (P) $r = .32^*$ (S)
					Autism Diagnostic Observation Schedule (ADOS: Lord., 2002)	$r = -.21$ (P) $r = .43^{**}$ (S)
					Anxiety Disorder Interview Schedule - Child/Parent Version (ADIS-C/P: Silverman & Albano, 1996); SAD Clinician Severity Rating (CSR)	$r = .18$ (P) $r = .09$ (S)
					MASC-C Social Anxiety Subscale	$r = .06$ (P)
					Social Responsiveness Scale (SRS: Constantino, 2005)	$r = .41^*$ (P) $r = .10$ (S)
		P	Spiker et al., 2012	NR		NR
		P	Storch et al., 2012a	NR		NR
		P	Storch et al., 2012b	NR		NR
		P	Storch et al., 2013	NR		NR
		S	White & Roberson-Nay, 2009	NR	Loneliness Questionnaire (Asher et al., 1984); Social; Global Subscales	$r = .59^{**}$ ; $r = .50^*$
		S	White et al., 2009b	NR		NR
		P	Wood et al., 2009	NR		NR
Screen for Childhood Anxiety Related Emotional Disorders	41-item broad symptom inventory for ages 8-18; 7 item screen for social anxiety	P, S	Blakeley-Smith et al., 2012	NR		NR

(SCARED:  
Birmaher, 1995)

		P	Larson et al., 2011	NR		NR
		P	South et al., 2010	NR		NR
		P	South et al., 2011	NR	Carver's Behavioral Inhibition Scales/ Behavioral Activation Scales (BIS/BAS; Blair et al., 2004)	$r = .30$
		P, S	van Steensel et al., 2012 <sup>2</sup>	NR	Risk (experimental measure of risk taking behavior)	$r = .32$ NR
Social Anxiety Scale for Adolescents (SAS - A: La Greca & Lopez, 1998)	22-item assessment of social anxiety for adolescents ages 13-18; 3 subscales - Social Avoidance and Distress around New Peers or in New Situations (SAD-New), Fear of Negative Evaluation from Peers (FNE), and Generalized Social Avoidance and Distress (SAD-General)	S	Bellini, 2004	NR	SSRS Assertion subscale	SAD-New $r = -.31^*$ ; SAD-General $r = -.39^{**}$
		S	Lerner et al., 2012	.90		NR
Social Anxiety Scale for Children - Revised (SASC-R: La Greca & Stone, 1993)	22-item assessment of social anxiety for ages 7-13; 3 subscales - SAD-New, FNE, SAD-General	S	Kuusikko et al., 2008	.92 FNE = .68 SAD-NEW = .80 SAD-General = .35 <sup>3</sup>	Social Anxiety and Anxiety Inventory for Children (SPAI-C) (Beidel et al., 1996)  Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983); Internalizing subscale	$r = .76^{**}$  $r = .25^{**4}$
		S	Sutton et al., 2005	NR	EEG asymmetry; Midfrontal; Lateral Frontal	$r = .41$ ; $r = .54^*$
SPAI-C	26-item assessment of social anxiety for ages 8-14	S	Kuusikko et al., 2008	.96 <sup>3</sup>	SASC-R total score CBCL; Internalizing subscale	$r = .74^{**3}$ $r = .26^{**4}$

			Melfsen et al., 2006 <sup>5</sup>	NR		NR
			Wong et al., 2012	NR		NR
Social Worries Questionnaire (SWQ: Spence, 1995)	13-item assessment of social anxiety for children and adolescents	S	Gillot et al., 2001	NR		NR
		P, S	Russel & Sofronoff, 2005	.82 (P) .85 (S)		NR
		P	Sofronoff et al., 2005	.82		NR
Spence Children's Anxiety Scale (SCAS: Nauta et al., 2004)	45-item broad symptom inventory for ages 7-19; 6 item screen for social anxiety	P, S	Chalfant et al., 2007	NR		NR
		P, S	Farrugia & Hudson, 2006	NR		NR
		P, S	Gillot et al., 2001	NR		NR
		P, S	Greenaway & Howlin., 2010	“acceptable”	Dysfunctional Attitudes Scale for Children (D'Alessandro & Burton, 2006)	$r = -.07$
					Child and Adolescent Perfectionism Scale (Flett et al., 2000)	$r = .01$
		P	Rodgers et al., 2012	NR	Repetitive Behaviours Questionnaire (Turner, 1995); Insistence of Sameness/Circumscribed Interests Factor	$r = .20$
		P, S	Russell & Sofronoff, 2005	ranged from adequate to excellent		NR

P	Sofronoff et al., 2005	ranged from adequate to excellent	NR
P	Sofronoff et al., 2011	NR	NR
S	Sung et al., 2011	.68	NR
S	Williamson et al., 2008	NR	NR

**Interviews**

Measure	Description	Informant	Study	ICC/Kappa	Relevant Comparison Measure(s)	<i>r</i>
ADIS-C/P <sup>6</sup>	Semi-structured diagnostic clinical interview for children and adolescents for DSM-IV disorders; SAD module with CSR on scale from 0-8; also both Child (C) and Parent (P) Severity Ratings on scale from 0 to 8	P, S	Chang et al., 2012	NR	SSRS Total	<i>r</i> = -.37**
		P, S	Chalfant et al., 2007	NR		NR
		P, S	Farrugia & Hudson, 2006	NR		NR
		P	Reaven et al., 2012	ICC = .88 <sup>7</sup>		NR
		P, S	Renno & Wood, 2013	NR	ADIR-R	<i>r</i> = -.20
		P	Spiker et al., 2012	NR	ADOS	<i>r</i> = .13
		P, S	Storch et al., 2012a	NR		NR
		P, S	Storch et al., 2012b	NR		NR
		P, S	Storch et al., 2013	NR		NR
		P, S	van Steensel et al., 2012	<i>K</i> in range of .52 to .85		NR
		P, S	White et al., 2009b	NR		NR
		P, S	White et al., 2013 <sup>7</sup>	NR		NR

		P, S	Wood et al., 2009	ICC = .86 <sup>8</sup> K = .84 <sup>9</sup>	NR
		P, S	Wong et al., 2012	NR	NR
Autism Comorbidity Interview-Present and Lifetime Version (ACI-PL: Leyfer et al., 2006)	Semi-structured diagnostic clinical interview modified from the K-SADS-PL for children and adolescents with ASD for DSM-IV disorders; SAD module	P	Leyfer et al., 2006	NR	NR
		P, S	Mazefsky et al., 2011	NR	NR
Child and Adolescent Psychiatric Assessment-parent version (CAPA-P: Angold et al., 1995)	Semi-structured diagnostic clinical interview for ages 9 to 18 for DSM-IV disorders; SAD module.	P	Simonoff et al., 2008	NR	NR
Children's Interview for Psychiatric Symptoms-Parent Version (P – ChIPS: Weller et al., 1999)	Highly structured respondent based interview for ages 6 to 18 to assess DSM-IV disorders; Social Anxiety Section.	P	Witwer & Lecavalier, 2010	NR	NR
Diagnostic Interview Schedule for Children IV. Parent-version (DISC-IV-P: Ferdinand & Van der Ende, 1998)	Highly structured respondent based interview for ages 6 to 17 to assess DSM-IV disorders; Social Anxiety Section.	P	de Bruin et al., 2007	NR	NR
Kiddie Schedule for Affective Disorders and	Semi-structured diagnostic clinical interview for children and	P	Antshel et al., 2010	NR	NR

Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL: Ambrosini, 2000)	adolescents for DSM-IV disorders; SAD module.				
		P	Matilla et al., 2010	NR	NR
		P	Mukkades & Fateh, 2010	NR	NR
		P	Mukkades et al., 2010	NR	NR
Structured Clinical Interview for DSM-IV-Child Edition (Version 1.0: Hien et al., 1994) <sup>10</sup>	Semi-structured diagnostic clinical interview for children and adolescents for DSM-IV disorders; Social Anxiety Disorder Section	P, S	van Steensel et al., 2013	NR	NR

*Note.* If measure is a broad symptom inventory, all reliability and validity statistics are reported for the social anxiety subscale unless otherwise noted.

NR – Not reported

NS – Non-significant

\*Significant at  $p < .05$

\*\*Significant at  $p < .01$

<sup>a</sup> Informant: [P] Parent, [S] Self, [T] Teacher

<sup>1</sup>For full sample, including individuals with  $IQ < 70$

<sup>2</sup>Utilized Dutch Version: SCARED-71 (Bodden et al., 2009)

<sup>3</sup>Calculated with items deemed to be overlapping with ASD removed

<sup>4</sup>Calculations included control group without ASD ( $n = 353$ )

<sup>5</sup>Utilized German Version: SPAI-K (Melfsen, Florin, & Warnke, 2001)

<sup>6</sup>Use of CSR's for correlations unless otherwise noted

<sup>7</sup> Administered jointly to parent and child

<sup>8</sup>Calculated with CSR'S of interviewer and consensus team

<sup>9</sup>Diagnosis agreement between interviewer and consensus team

<sup>10</sup>Utilized Dutch translation KIDSID (Dreessen et al., 1998)

