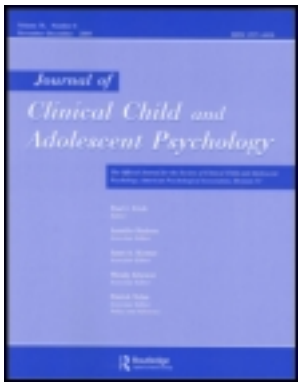
This article was downloaded by: [Harvard College]
On: 22 August 2011, At: 05:15
Publisher: Routledge
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Clinical Child & Adolescent Psychology
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/hcap20

The Youth Self Report: Applicability and Validity Across Younger and Older Youths

Chad Ebesutani [a], Adam Bernstein [a], Jonathan I. Martinez [a], Bruce F. Chorpita [a] & John R. Weisz [b]

[a] Psychology Department, University of California at Los Angeles

[b] Psychology Department, Harvard University and Judge Baker Children's Center, Cambridge, Massachusetts

Available online: 07 Mar 2011

To cite this article: Chad Ebesutani, Adam Bernstein, Jonathan I. Martinez, Bruce F. Chorpita & John R. Weisz (2011): The Youth Self Report: Applicability and Validity Across Younger and Older Youths, Journal of Clinical Child & Adolescent Psychology, 40:2, 338-346

To link to this article: http://dx.doi.org/10.1080/15374416.2011.546041

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.tandfonline.com/page/terms-and-conditions

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan, sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Journal of Clinical Child & Adolescent Psychology, 40(2), 338–346, 2011
Copyright © Taylor & Francis Group, LLC
ISSN: 1537-4416 print/1537-4424 online
DOI: 10.1080/15374416.2011.546041

Routledge
Taylor & Francis Group

The Youth Self Report: Applicability and Validity Across Younger and Older Youths

Chad Ebesutani, Adam Bernstein, Jonathan I. Martinez, and Bruce F. Chorpita
Psychology Department, University of California at Los Angeles

John R. Weisz
Psychology Department, Harvard University and Judge Baker Children's Center, Cambridge, Massachusetts

Downloaded by [Harvard College] at 05:15 22 August 2011

The Youth Self Report (YSR) is a widely used measure of youth emotional and behavioral problems. Although the YSR was designed for youths ages 11 to 18, no studies have systematically evaluated whether youths younger than age 11 can make valid reports on this measure. This study thus examined the reliability and validity of the YSR scales scores for younger (ages 7–10; $n = 184$) and older (ages 11–14; $n = 147$) youths. Results demonstrated that younger youths were able to provide reliable reports on the YSR broad band (Internalizing, Externalizing) scales, though less so on the narrow band scales. Across all scales, the externalizing scales performed more favorably than the internalizing scales among both younger and older youth. Younger youths' *DSM*-oriented scales corresponded significantly with *DSM* diagnoses.

The Youth Self Report (YSR; Achenbach & Rescorla, 2001) is a prominent and widely used youth self-report measure for the assessment of emotional and behavioral problems among youth ages 11 to 18. Despite the wide usage of the YSR, a notable gap in the evidence base of the YSR is that few studies have assessed the reliability and validity of the YSR scales scores for youths younger than 11 years old. This is an important gap to fill given that some researchers have already begun administering the YSR to younger youths (below the intended age range of 11–18 years; Kolko & Kazdin, 1991; Yeh & Weisz, 2001). Demonstrating more conclusive psychometric support of the YSR with younger youth samples would also provide the field with an empirically supported assessment tool with broadened applicability to enhance child assessment practices in both research and clinical contexts.

Previous studies have examined this question with other youth self-report measures. For example, Muris, Meesters, Eijkelenboom, and Vincken (2004) examined the psychometric properties of the Strength and Difficulties Questionnaire (SDQ) and found general support for this measure for use among younger youths (ages 8–10), although the scale was originally intended for use with youths ages 11 to 17. A few studies have also evaluated the psychometric properties of YSR scales among youths younger than 11 years old. Kolko and Kazdin (1991) reported pilot testing the YSR among younger youth and reported that 6-year-olds were only "somewhat familiar" with the five items related to medical or physical conditions (p. 538). Kolko and Kazdin (1993) also administered the YSR to children ages 6 to 13 and found no differences between younger (6–9 years old) and older (10–13 years old) youths with respect to parent–child and teacher–child agreement on the YSR Internalizing, Externalizing and Total Problems scales. Yeh and Weisz (2001) also reported no differences between younger (ages 7–10) and older (ages 11–18) youths' YSR syndrome scales' coefficient alpha values and test–retest reliability estimates.

Despite these initial explorations, no study has thoroughly or systematically examined the YSR scales

Correspondence should be addressed to Chad Ebesutani, 725 Weyburn Terrace #200, Los Angeles, CA 90024. E-mail: chadebesutani@hotmail.com

across multiple psychometric domains with younger samples. Such studies are needed given that the YSR continues to be used with youth younger than 11 years old (e.g., McCarthy & Weisz, 2002; Treutler, & Epkins, 2003). Additional questions regarding the validity of younger youths' YSR reports remain unanswered (e.g., factor structure, concurrent validity), and thorough psychometric investigations specific to the YSR are needed before researchers and clinicians should begin widely using the YSR among younger samples. It remains unknown, for instance, whether younger youths can provide reliable and valid reports on both the YSR broad band and narrow band scales.

THE PRESENT STUDY

The current study examined the psychometric properties of both younger (ages 7–10; $n = 184$) and older (ages 11–14; $n = 147$) youths' reports along the following dimensions: (a) factor structure, (b) scale reliability, (c) concurrent validity, and (d) parent–child agreement. Within each domain, we examined whether the test statistics of the younger group met general cutoff criteria for adequate reporting as well as whether their test statistics were significantly different than the older group.

We hypothesized that the younger youths' reports would be associated with model fit indices in acceptable ranges, as previous studies have demonstrated that younger youths' reports on internalizing and externalizing measures were associated with adequate model fit indices (e.g., Muris et al., 2004). Regarding scale reliability, Yeh and Weisz (2001) previously examined the broad band and syndrome scales, reporting .76 as the average (internal consistency) alpha value among their younger youth sample and no significant difference from the average alpha in their older group. We thus predicted that the Cronbach's alpha coefficients of the younger group's scales would not be significantly less than those of the older group. We could not make specific hypothesizes regarding the concurrent validity of younger youths' reports on the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*)-oriented scales given the mixed findings pertaining to their performance in the literature (cf. Ferdinand, 2008; Vreugdenhil, van den Brink, Ferdinand, Wouters, & Doreleijers, 2006). Based on Achenbach, McConaughy, and Howell's (1987) meta-analysis and Meyer and colleagues' (2001) review of parent–child agreement on psychosocial problems, we hypothesized that the older youth would evidence significant parent–child correlation coefficients in the range of .20 to .25. We further hypothesized that parent–child agreement for the younger group would show significantly smaller correlation coefficients than the older group given the generally lower parent–child agreement findings among younger youths (e.g., Edelbrock, Costello, Dulcan, Conover, & Kalas, 1986; Grills & Ollendick, 2003).

METHOD

Participants

Youths in the present sample were drawn from 333 consecutively referred children and adolescents ages 7 to 14 who were seeking treatment in community clinic settings in Hawaii and Massachusetts for problems related to anxiety, depression, and/or conduct problems. Criteria for selection into the present study included having available YSR data. All 333 consecutively referred youth had available YSR data. To help ensure that all YSRs represented valid reports with sufficient data, inclusion into the study also required each YSR measure to have no more than eight problem items missing, as recommended by the measure's developers (Achenbach & Rescorla, 2001). Two participants were excluded due to having more than eight missing YSR items, yielding a final sample size of 331 youths. We computed Child Behavior Checklist (CBCL) scales only if the CBCL also had eight or fewer missing items.

Information on the total number of diagnoses in our sample appears in Table 1. Youth ages ranged from 7 to 14 years ($M = 10.6$, $SD = 1.7$), and caregiver ages ranged from 21 to 78 ($M = 41.2$, $SD = 9.7$). Youths from the two clinics generally did not differ.[1] Additional youth and primary caregiver demographic information appears in Table 2.

Measures

CBCL for ages 6–18 (CBCL/6–18; Achenbach & Rescorla, 2001). The 120 items on the CBCL are rated as 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very true or often true*). Validity and reliability of

[1]Youths from the two clinics did not differ with respect to youth age (Hawaii: M age = 10.55, $SD = 1.77$; Boston: M age = 10.76, $SD = 1.70$), $t(329) = 1.04$, $p = .30$, parent age (Hawaii: M age = 42.04, $SD = 9.94$; Boston: M age = 40.84, $SD = 9.65$), $t(312) = 1.02$, $p = .31$, and mean number of comorbid diagnoses (Hawaii: $M = 1.32$, $SD = 1.15$; Boston: $M = 1.08$, $SD. = 1.35$), $t(325) = 1.56$, $p = .12$. However, a significant difference in gender ratio was found between clinics (Hawaii, 75% male; Boston, 62% male), $t(329) = 2.36$, $p < .05$. With respect to differences in scale scores between the two clinics, youths from the two clinics did not differ significantly on the CBCL Externalizing scale (Hawaii: $M = 15.4$, $SD = 9.8$; Boston: $M = 17.0$, $SD = 10.8$), $t(328) = 1.28$, $p = .20$, CBCL Internalizing scale (Hawaii: $M = 14.8$, $SD = 9.6$; Boston: $M = 16.9$, $SD = 9.6$), $t(328) = 1.88$, $p = .06$, or the YSR Externalizing scale (Hawaii: $M = 11.8$, $SD = 9.4$; Boston: $M = 9.5$, $SD = 7.6$), $t(329) = 2.44$, $p = .02$. Youths did differ however on the YSR Internalizing scale (Hawaii: $M = 16.2$, $SD = 10.5$; Boston: $M = 13.0$, $SD. = 8.6$), $t(329) = 2.94$, $p < .01$.

Downloaded by [Harvard College] at 05:15 22 August 2011

TABLE 1
Number of Diagnoses

	Specifier					
	Primary			*Anywhere*		
Diagnoses	*Total*	*Younger*	*Older*	*Total*	*Younger*	*Older*
Anxiety Disorders	71	49	22	134	91	43
Generalized Anxiety Disorder	6	3	3	16	10	6
Separation Anxiety Disorder	25	21	4	45	36	9
Specific Phobia	22	15	7	39	25	14
Social Phobia	10	2	8	16	6	10
Obsessive-Compulsive Disorder	4	4	0	10	8	2
PTSD	2	2	0	4	3	1
Panic Disorder	0	0	0	0	0	0
Anxiety NOS	2	2	0	4	3	1
Affective Disorders	17	8	9	38	21	17
Major Depressive Disorder	11	4	7	25	12	13
Dysthymic Disorder	4	2	2	8	5	3
Depressive Disorder NOS	2	2	0	5	4	1
ADHD Disorders	30	13	17	82	48	34
ADHD–Combined	5	3	2	24	19	5
ADHD–Predominantly Inattentive Type	13	4	9	32	14	18
ADHD–Predominantly Hyperactive Impulsive Type	0	0	0	2	1	1
ADHD-NOS	12	6	6	24	14	10
Disruptive Behavior Disorders	70	32	38	115	58	57
Oppositional Defiant Disorder	53	28	25	81	50	31
Conduct Disorder	17	4	13	33	7	26
Disruptive Behavior Disorder NOS	0	0	0	1	1	0
Bipolar	1	1	0	1	1	0
Schizophrenia	2	2	0	3	3	0
PDD	0	0	0	0	0	0
Other	3	2	1	6	2	4
No Diagnosis	133	74	59	133	74	59
				Comorbidity		
Comorbidity				Total	Youngerr	Older
Single Diagnosis				82	39	43
Two Comorbid Diagnoses				70	39	31
Three Comorbid Diagnoses				22	16	6
Four Comorbid Diagnoses				10	6	4
Five Comorbid Diagnoses				9	6	3
Six Comorbid Diagnosis				1	1	0

Note: $N = 331$. Primary = a child's primary diagnosis; Anywhere = a diagnosis that appears anywhere in a child's diagnostic profile; PTSD = posttraumatic stress disorder; NOS = not otherwise specified; ADHD = Attention-Deficit/Hyperactivity Disorder; PDD = Pervasive Developmental Disorder; Other includes substance abuse, substance dependence, enuresis, trichotillomania. Diagnostic data were missing for three younger youths and one older youth. Therefore, the total number of primary disorders (including no diagnosis) does not sum to the total sample size of 331.

Downloaded by [Harvard College] at 05:15 22 August 2011

the narrow band (syndrome and *DSM*-oriented) and broad band (internalizing and externalizing) scale scores have been documented and extensive normative data are available for children ranging from 6 to 18 (Achenbach & Rescorla, 2001). We used raw CBCL scale scores for all analyses.

Children's Interview for Psychiatric Syndromes, Child Version (ChIPS; Fristad et al., 1998; Teare, Fristad, Weller, Weller, & Salmon, 1998). The ChIPS is a semistructured interview designed to be administered to youth ages 6 to 18 years old. The interview screen for 20 different Axis I disorders and are based on the *DSM–IV* (American Psychiatric Association, 1994) classification criteria. Content and concurrent validity, and inter-rater agreement of the ChIPS have been demonstrated in previous studies in clinical and community samples (e.g., Fristad et al., 1998; Teare et al., 1998).

YSR (Achenbach & Rescorla, 2001). The YSR is a self-report questionnaire developed to assess problems in youth ages 11 to 18. The 119 items on the YSR are rated as 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very true or often true*). The YSR developers intended it to be completed by youth with a mental

TABLE 2
Youth and Caregiver Demographic Information

	n	%
Youth Gender		
Boys	218	65.9
Girls	113	34.1
Youth Ethnicity		
Multiethnic	96	29.0
White	155	46.8
African American	33	10.0
Asian American	11	3.3
Latino/Hispanic	25	7.6
Other	9	2.7
Missing	2	0.6
Caregiver Type		
Biological Mother	192	58.0
Biological Father	63	19.0
Adoptive Mother	8	2.4
Adoptive Father	6	1.8
Grandmother	17	5.1
Grandfather	10	3.0
Other	22	6.6
Missing	13	3.9
Caregiver Marital Status		
Married	129	39.0
Divorced, Separated	99	29.9
Widowed	16	4.8
Single	53	16.0
Missing	34	10.3
Caregiver Highest Level of Education		
No High School	31	9.4
High School/GED	102	30.8
College	169	51.1
Graduate School	22	6.6
Missing	7	2.1
Family Income		
$0–$39,999	182	55.0
$40,000–$79,999	82	24.8
$80,000–$119,999	34	10.3
$120,000 or More	17	5.1
Missing	16	4.8

age of 10 and fifth-grade reading skills (Achenbach & Rescorla, 2001).[2] Validity and reliability of the YSR broad band, syndrome, and *DSM*-oriented scales have been documented, and extensive normative data are available for children ages 11 to 18 (Achenbach & Rescorla, 2001). We used raw scores for all analyses.

[2]Although the YSR developers intended the YSR to be completed by youth with a mental age of 10 and fifth-grade reading skills, analysis of the YSR items via the Flesch-Kincaid readability scale (Flesch, 1951) yielded a Flesch Reading Ease score of 100.0 and a Flesch-Kincaid Grade Level score of 0.6. Flesch Reading Ease scores of 90 to 100 indicate easily understandable items for an average 11-year-old student, and the Flesch-Kincaid Grade Level score corresponds to approximately Grade 1 reading level. These results thus indicate that the YSR items are highly readable, even among children younger than 11 years old.

Procedure

Legal guardians of all participating youths underwent standardized Institutional Review Board–approved notice of privacy and consent procedures prior to any data collection. Following consent provided at the initial meeting with the youths and their caretakers, the youths and caregivers filled out questionnaires including the YSR and CBCL. Youths also participated in the ChIPS structured interview conducted by assessors who were clinical psychology doctoral students and bachelor-level trained staff.[3] Assessors were blind to the YSR and CBCL scores while formulating diagnoses.

Data Analyses

Data preparation. Although missing data levels were low in our sample (80.5% and 81.6% of the 331 participants had no missing YSR and CBCL items, respectively; and 12.3% and 12.7% had only 1 missing YSR and CBCL item, respectively), missing data were handled using the Missing Value Analysis module of SPSS 15.0 (SPSS, 2006).[4] To help ensure that all YSR and CBCL subscales were valid, we calculated each subscale only if it had less than 20% missing items (cf. Ebesutani, Bernstein, Nakamura, Chorpita, & Weisz, 2010).

Confirmatory factor analysis. We explored the model fit of the YSR narrow and broad band scales using both younger and older subsamples. We conducted confirmatory factor analysis (CFA), using LISREL 8.8. We used the comparative fit index (CFI; Bentler, 1990) and the root mean square error of approximation

[3]Although interrater reliability data of these structured interviews were not gathered, assessors in the present study were trained to reliability using the ChIPS. Becoming trained to reliability involved (a) observation of three ChIPS interviews conducted by trained assessors, (b) conducting a series of five ChIPS interviews while being observed by a criterion-trained assessor, (c) matching the experienced assessor on all clinical diagnoses in three of the five interviews, and (d) matching the experienced interviewer on the Clinical Severity Ratings (CSRs) within at least 1 point on all diagnoses given. CSRs are ratings provided by the assessor which range from 0 to 10 and indicate clinical severity of each disorder. CSRs at 5 or higher indicate clinically significant severity for each disorder.

[4]Notably, missing item values can be a sign that items were not understood by the respondent (e.g., the youth). We thus examined the number of missing items specific to the younger and older youths in the present study. The number of missing YSR items for both the younger and older groups were low. Specifically, the percentage of younger and older youths with missing YSR items were as follows: no missing YSR items = 80% and 85%, respectively; one missing item = 13% and 11%, respectively; two missing items = 3% and 1%, respectively; three to eight missing items = 4% and 3%, respectively. Both younger and older youths thus had comparable (low) levels of missing data.

Downloaded by [Harvard College] at 05:15 22 August 2011

Downloaded by [Harvard College] at 05:15 22 August 2011

(RMSEA; Steiger, 1990) statistics to evaluate model fit. CFI values of .90 or greater (Bentler, 1990) and RMSEA values of .08 or lower (Browne & Cudeck, 1993) suggest good model fit. We then conducted a multisample CFA to assess the degree to which the *DSM*-oriented scales were *invariant* across younger and older youths with respect to factor form and other related model parameters (i.e., factor loadings, factor correlations, error variance).

Scale reliability. We evaluated the reliability of the younger and older youths' reports on each of the YSR scales through estimating internal consistency via Cronbach's alpha coefficients. We used the .80 as the cutoff for acceptable reliability, as recommended by Nunnally and Bernstein (1994) for scale scores intended for use in clinical settings. Differences in internal consistency between groups were evaluated via F tests for Cronbach's alphas from independent samples (Feldt, 1969; Feldt, Woodruff, & Salih, 1987), adjusting the p value criterion to less than .003 (.05/17) to control for Type 1 error rates. As a basis for comparison, we also computed Cronbach's alpha coefficients for the narrow and broad band CBCL scales among the younger and older groups.

Concurrent validity. We used an analysis of variance and receiver operating characteristic (ROC) analyses to examine the degree of correspondence of younger youths' reports on the *DSM*-oriented scales with related *DSM* diagnoses. For the ROC analyses, Area Under the Curve (AUC) values indicate the degree to which an indicator predicts binary classification status (e.g., presence/absence of a diagnosis). AUC values may be interpreted as follows: AUC of .50 to .70, poor; .70 to .80, fair; .80 to .90, good; .90 to 1.00, excellent (cf. Ferdinand, 2008). We also compared the relative performance of the younger and older youths' reports via z test comparisons of AUC values (p value criterion adjusted to <.003 [.05/16] to control for Type 1 error rates).

Correlational analyses. Last, we examined parent–child agreement[5] of the younger youths compared to older youths. We used Fisher's z tests to examine differences in (independent) correlations between groups (p value criterion adjusted to <.003 [.05/16] to control for Type 1 error rates). To determine significance of *individual* correlations, we used the significance level of $p < .01$.

[5]As some CBCL *DSM*-oriented, syndrome, and broad band scales contain additional items not present on the YSR (i.e., the CBCL *DSM*-oriented Conduct Problem scale includes two more items than the YSR *DSM*-oriented Conduct Problem scale; the CBCL Internalizing scale includes one more item than the YSR Internalizing scale; the CBCL Externalizing scale includes three more items than the YSR Externalizing scale; five of the eight CBCL Syndrome scales include one to three more items than the corresponding YSR Syndrome scales), we rescored these CBCL scales excluding the nonoverlapping items. We then used these rescored CBCL scales (based on YSR/CBCL overlapping items only) in the correlational analyses, so as to eliminate bias toward lower correspondence due to the additional CBCL items.

RESULTS AND DISCUSSION

Factor Structure Across Younger and Older Youths

Adequate model fit was demonstrated among the younger and older samples for the six-factor *DSM*-oriented scales (younger: RMSEA = .068, CFI = .87; older: RMSEA = .070, CFI = .87), and the eight-factor syndrome scales (younger: RMSEA = .077, CFI = .80; older: RMSEA = .070, CFI = .74). The multisample CFA solution evidenced support for "equal form" of the six-factor *DSM*-oriented problems model across younger and older groups (i.e., $\mathrm{RMSEA}_{\text{multi-sample}} = .069$). Further, allowing correlations between factors to be freely estimated did not significantly improve fit compared to specifying all factor correlation pairs to be equal across younger and older groups, $\chi^2_{\text{freely estimated model}}(260) = 4809.91$; $\chi^2_{\text{constrained model}}(2641) = 4845.82$; $\chi^2_{\text{difference}}(21) = 35.91, p > .01$, suggesting that the correlations between factors are generally equal across groups. Overall, the YSR scales evidenced supportive factorial validity across both younger and older youths.

Internal Consistency Across Younger and Older Youths

The Cronbach's alpha values associated with reports on the YSR and CBCL specific to younger and older youths appear in Tables 3 and 4, respectively. Results revealed that the YSR *narrow band* scales did not achieve adequate levels of reliability ($\alpha < .80$) among the younger group, whereas the older group performed much better with respect to this benchmark. The younger youths' YSR *broad band* internalizing and externalizing scale scores, however, did meet the benchmark for acceptable reliability ($\alpha = .88$, $\alpha = .88$, respectively), supporting the reliability of the broad band scale scores for application with younger youth in clinical settings. This is an important finding, particularly as Muris and colleagues' (2004) found that younger youths (ages 8–10) were not able to provide reliable reports on the SDQ scales, including the Total Difficulties scale ($\alpha = .76$).

Concurrent Validity

Anxiety Problems scale. As seen in Table 5, both younger and older youths' reports on the Anxiety Problems scale were able to discriminate anxious youths

TABLE 3
Youth Self-Report Internal Consistency Cronbach's Alpha for Younger ($N = 184$) and Older ($N = 147$) Subsamples

	Subsample Cronbach's α		*Cronbach Difference F Tests*	
Youth Self-Report	*Younger*	*Older*	χ^2 *Value*	*p*
DSM-Oriented Scales				
Affective Problems	.68	.79	5.45	.02
Anxiety Problems	.61	.70	1.81	.18
Somatic Problems	.78	.76	0.48	.49
ADH Problems	.78	.78	0.00	.96
Oppositional Problems	.70	.76	1.37	.24
Conduct Problems	.77	.81	0.86	.35
Syndrome Scales				
Anxious/Depressed	.75	.83	4.19	.04
Withdrawn/Depressed	.69	.67	0.12	.73
Somatic Complaints	.79	.80	0.01	.93
Social Problems	.75	.74	0.01	.92
Thought Problems	.75	.74	0.09	.77
Attention Problems	.77	.82	1.84	.18
Rule-Breaking Behavior	.70	.78	3.03	.08
Aggressive Behavior	.85	.85	0.08	.78
Broad Band Scales				
Internalizing	.88	.89	0.47	.49
Externalizing	.88	.89	0.65	.42
Total	.93	.93	0.00	1.00

Note: DSM = Diagnostic and Statistical Manual of Mental Disorders; ADH = Attention Deficit/Hyperactivity.

TABLE 4
Child Behavior Checklist Internal Consistency Cronbach's Alpha for Younger ($N = 184$) and Older ($N = 147$) Subsamples

	Subsample Cronbach's α		*Cronbach Difference Tests*	
Child Behavior Checklist	*Younger*	*Older*	χ^2 *Value*	*P*
DSM-Oriented Scales				
Affective Problems	.77	.77	0.00	1.00
Anxiety Problems	.74	.74	0.00	1.00
Somatic Problems	.76	.67	2.96	.09
ADH Problems	.83	.81	0.38	.54
Oppositional Problems	.80	.81	0.07	.79
Conduct Problems	.86	.85	0.17	.68
Syndrome Scales				
Anxious/Depressed	.80	.86	4.34	.04
Withdrawn/Depressed	.75	.80	1.55	.21
Somatic Complaints	.79	.69	5.07	.02
Social Problems	.78	.76	0.26	.61
Thought Problems	.75	.69	1.60	.21
Attention Problems	.85	.83	0.51	.48
Rule-Breaking Behavior	.73	.75	0.21	.65
Aggressive Behavior	.90	.90	0.00	1.00
Broad Band Scales				
Internalizing	.88	.89	0.29	.59
Externalizing	.91	.92	0.53	.47
Total Problems	.92	.92	0.00	1.00

Note: DSM = Diagnostic and Statistical Manual of Mental Disorders; ADH = Attention Deficit/Hyperactivity.

from non-anxious youths, as evidenced by significant F tests and AUC values significantly greater than chance level (i.e., AUC > .50). However, AUC values for the younger group fell in the "poor" range, whereas the AUC values for the older group fell in the "fair" range. AUC values between groups did not significantly differ.

Attention Deficit/Hyperactivity (ADH) Problems scale. As seen in Table 5, younger youths' reports on the ADH Problems scale were able to discriminate youths with ADHD diagnoses from youths without ADHD. AUC values for both the younger and older groups fell in the "fair" range and did not significantly differ.

Oppositional Problems scale. As seen in Table 5, younger youths' reports on the Oppositional Problems scale were able to discriminate youths with diagnoses of oppositional defiant disorder (ODD) from youths without ODD, as well as youths with any disruptive behavior diagnosis (i.e., ODD, Conduct Disorder [CD] or disruptive behavior disorder not otherwise specified) from youths without any disruptive behavior diagnosis. AUC values for the younger group fell in the "fair" range and did not significantly differ from the older group.

Affective, Conduct, and Somatic Problems scales. Given that there were insufficient numbers of youths diagnosed with CD (younger, $n = 7$; older, $n = 26$; affective disorders younger, $n = 22$; older, $n = 17$), and somatic disorders ($n = 0$), concurrent validity analyses were omitted for the corresponding scales.[6]

Parent–Child Agreement Across Younger and Older Youths

Results of the parent–child agreement analyses across younger and older youths appear in Table 6 and

[6]Despite having insufficient power for these analyses, we conducted these analyses on the younger and older subsamples for illustrative purposes. The seven younger youths with CD scored higher on the *DSM*-oriented Conduct Problems scale ($M = 9.43$, $SD = 3.87$) than the 174 younger youths without CD ($M = 2.67$, $SD = 3.32$), $t(179) = 5.38$, $p < .001$. The 26 older youths with CD also scored higher on the *DSM*-oriented Conduct Problems scale ($M = 9.17$, $SD = 4.50$) than the 119 older youths without CD ($M = 3.40$, $SD = 3.08$), $t(143) = 7.91$, $p < .001$. With respect to the *DSM*-oriented Affective Problems scale, the 22 younger youths with any affective disorder (i.e., major depressive disorder, dysthymic disorder, mood disorder not otherwise specified) scored higher on this scale ($M = 7.77$, $SD = 3.46$) than the 159 younger youths without affective disorders ($M = 5.24$, $SD = 3.89$), $t(179) = 2.91$, $p = .004$. The 17 older youths with any affective disorder also scored higher on the *DSM*-oriented Affective Problems scale ($M = 7.65$, $SD = 2.96$) than the 129 older youths without affective disorders ($M = 4.27$, $SD = 4.07$), $t(144) = 3.31$, $p = .001$.

Downloaded by [Harvard College] at 05:15 22 August 2011

TABLE 5
Youth Self-Report *DSM*-Oriented Anxiety, ADH, and Oppositional Problems Scale Means and ROC AUC Values for Younger (7–10) and Older (11–14) Youths With and Without Related Diagnoses Anywhere in Their Diagnostic Profile

			ANOVA				*ROC*			
Sample	*DSM Scale*	*Diagnostic Groups*	*n*	*M (SD)*	*F*	*p*	*AUC*	*SE*	*z*	*p*
Younger	Anxiety	SAD/GAD/SPEC	55	4.16 (2.59)						
		No SAD/GAD/SPEC	126	2.55 (2.10)	19.50	<.003	.68	.045		
Older	Anxiety	SAD/GAD/SPEC	23	4.83 (2.42)						
		No SAD/GAD/SPEC	123	2.50 (2.23)	20.53	<.003	.77	.050	1.34	.18
Younger	Anxiety	Any Anxiety	65	4.05 (2.47)						
		No Anxiety	116	2.48 (2.12)	20.12	<.003	.69	.041		
Older	Anxiety	Any Anxiety	30	5.00 (2.53)						
		No Anxiety	116	2.31 (2.05)	37.01	<.003	.80	.047	1.76	.08
Younger	ADH	ADHD-PI/PH/C	34	7.11 (3.09)						
		No ADHD-PI/PH/C	147	4.40 (3.40)	18.17	<.003	.72	.042		
Older	ADH	ADHD-PI/PH/C	24	7.45 (2.76)						
		No ADHD-PI/PH/C	122	5.26 (3.30)	9.28	.003	.70	.055	0.29	.77
Younger	ADH	Any ADHD	48	7.14 (2.94)						
		No ADHD	133	4.10 (3.34)	31.01	<.003	.75	.037		
Older	ADH	Any ADHD	34	7.61 (2.46)						
		No ADHD	112	5.02 (3.31)	17.89	<.003	.74	.044	0.17	.86
Younger	Oppositional	ODD	50	3.80 (2.17)						
		No ODD	131	1.90 (1.97)	31.97	<.003	.75	.039		
Older	Oppositional	ODD	31	4.97 (2.11)						
		No ODD	115	3.00 (2.30)	18.61	<.003	.73	.047	0.33	.74
Younger	Oppositional	Any Disruptive	58	3.96 (2.29)						
		No Disruptive	123	1.70 (1.73)	54.38	<.003	.79	.035		
Older	Oppositional	Any Disruptive	57	5.02 (2.18)						
		No Disruptive	89	2.39 (1.92)	58.70	<.003	.81	.037	0.39	.70

Note: All Area Under the Curve (AUC) values were significantly greater than .50, $p < .001$. *DSM = Diagnostic and Statistical Manual of Mental Disorders*; ADH = Attention Deficit/Hyperactivity; ROC = receiver operating characteristic; ANOVA = analysis of variance; SAD/GAD/SPEC = youths with separation anxiety disorder, generalized anxiety disorder, and/or specific phobia; Any Anxiety = youths with separation anxiety disorder, generalized anxiety disorder, specific phobia, obsessive-compulsive disorder, posttraumatic stress disorder, panic disorder, social phobia, and/or anxiety disorder not otherwise specified; ADHD-PI/PH/C = youths with ADHD-PI, ADHD-PH, or ADHD-C; Any ADHD = youths with ADHD-PI, ADHD-PH, ADHD-C, or ADHD-NOS; ODD = oppositional defiant disorder; Any Disruptive = youths with oppositional defiant disorder, conduct disorder, or disruptive behavior disorder not otherwise specified.

Downloaded by [Harvard College] at 05:15 22 August 2011

revealed that *younger* youths' parent–child agreement correlation coefficients were nonsignificant ($p > .01$) for nearly all internalizing scales but significant for some externalizing scales. The *older* youths evidenced significant parent–child correlations on both internalizing and externalizing scales, although primarily among the externalizing scales. These results are consistent with previous findings that parent–child agreement is worse among younger youth (Grills & Ollendick, 2003) and is greater for externalizing problems (e.g., Christensen, Margolin, & Sullaway, 1992). It is worth noting however that the low reliability associated with the younger youths' reports likely attenuated their parent–child agreement correlation coefficients relative to the older youths.

Several limitations to the current study should be noted. First, reliability of the younger and older youths' scale scores were estimated via Cronbach's alpha coefficients. The addition of test–retest data of both younger and older youths would have provided an additional statistic with which to estimate reliability. In addition, concurrent validity estimates may have been inflated due the concurrent validity analyses being based on the same informant (i.e., both the YSR and ChIPS diagnostic data were derived from youth reports only). Future studies should also investigate the degree to which these reliability and validity statistics differ among *older* adolescent samples. Normative data for *younger* youths should also ideally be gathered—particularly for the broad band scales—to further increase the clinical utility of the YSR scales.

Implications for Research, Policy, and Practice

Despite these limitations, practitioners and researchers seeking empirically supported assessment tools for younger youth may administer and interpret the YSR *broad band* internalizing and externalizing scales. Caution should be exercised however if narrow band scores are interpreted, given the lower reliability

TABLE 6
Parent–Child Agreement Between Corresponding YSR and CBCL Scales for Both Younger (7–10) and Older (11–14) Subsamples

	Correlations		
YSR and CBCL Scales	*Younger (n)*	*Older (n)*	*Fisher's z Test (z)*
DSM Oriented			
Affective Problems	.140 (184)	.225** (146)	0.79
Anxiety Problems	.160* (183)	.360** (145)	1.92*
Somatic Problems	.162* (183)	.219** (145)	0.53
ADH Problems	.047 (184)	.404** (146)	3.41***
Oppositional Problems	.216** (184)	.425** (146)	2.09*
Conduct Problems	.246** (184)	.614** (145)	4.14***
Syndrome			
Anxious/Depressed	.167* (184)	.282** (145)	1.08
Withdrawn/Depressed	.008 (183)	.159 (146)	1.36
Somatic Problems	.126 (183)	.170* (145)	0.40
Social Problems	.197** (184)	.283 (146)	0.82
Thought Problems	.097 (184)	.042 (146)	0.49
Attention Problems	.084 (184)	.352** (146)	2.53**
Rule-Breaking Behavior	.162* (184)	.536** (145)	3.88***
Aggressive Behavior	.231** (184)	.461** (146)	2.35**
Broad Band			
Internalizing	.059 (184)	.215** (146)	1.42
Externalizing	.233** (184)	.515** (146)	2.97**

Note: YSR = Youth Self-Report; CBCL = Child Behavior Checklist; *DSM = Diagnostic and Statistical Manual of Mental Disorders.*
*$p < .05$. **$p < .01$. ***$p < .003$.

Downloaded by [Harvard College] at 05:15 22 August 2011

evidenced in the present study. More research is needed to better understand the psychometric properties of the narrow band scales among younger samples, particularly given that they evidenced promising results in other domains (i.e., factor structure, concurrent validity).

Given that YSR was designed to be completed by youth with fifth-grade reading skills, practitioners and researchers administering the YSR to younger youths should be prepared to provide assistance to children who have difficulty understanding items. The ASEBA manual (Achenbach et al., 2001) has reported guidelines for "respondents who cannot complete forms independently" (p. 6), indicating that interviewers may read the questions to youths and record their responses for them.

REFERENCES

Achenbach, T., McConaughy, S., & Howell, C. (1987). Child/adolescent behavioral and emotional problems:Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *11*, 213–232.

Achenbach, T., & Rescorla, L. (2001). *The Manual for the ASEBA School-Age Forms & Profiles*. Burlington: University of Vermont, Research Center for Children, Youth, and Families.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Bentler, P. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, *107*, 238–246.

Browne, M., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. Bollen & J. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.

Christensen, A., Margolin, G., & Sullaway, M. (1992). Interparental agreement on child behavior problems. *Psychological Assessment*, *4*, 419–425.

Ebesutani, C., Bernstein, A., Nakamura, B., Chorpita, B., & Weisz, J. (2010). A psychometric analysis of the Revised Child Anxiety and Depression Scale—parent version in a clinical sample. *Journal of Abnormal Child Psychology*, *38*, 249–260.

Edelbrock, C., Costello, A., Dulcan, M., Conover, N., & Kalas, R. (1986). Parent–child agreement on child psychiatric symptoms assessed via structured interview. *Journal of Child Psychology and Psychiatry*, *27*, 181–190.

Feldt, L. S. (1969). A test of the hypothesis that Cronbach's alpha or Kuder-Richardson coefficient twenty is the same for two tests. *Psychometrika*, *34*, 363–373.

Feldt, L. S., Woodruff, D. J., & Salih, F. A. (1987). Statistical inference for coefficient alpha. *Applied Psychological Measurement*, *11*, 93–103.

Ferdinand, R. (2008). Validity of the CBCL/YSR *DSM*–IV scales anxiety problems and affective problems. *Journal of Anxiety Disorders*, *22*, 126–134.

Flesch, R. (1951). *How to test readability*. New York: Harper & Brothers.

Fristad, M. A., Cummins, J., Verducci, J. S., Teare, M., Weller, E. B., & Weller, R. A. (1998). Study V: Children's Interview for Psychiatric Syndromes (ChIPS) psychometrics in two community samples. *Journal of Child and Adolescent Psychopharmacology*, *8*, 237–245.

Grills, A. E., & Ollendick, T. H. (2003). Multiple informant agreement and the anxiety disorders interview schedule for parents and children. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*, 30–40.

Kolko, D., & Kazdin, A. (1991). Motives of childhood firesetters: Firesetting characteristics and psychological correlates. *Journal of Clinical Child & Adolescent Psychology*, *32*, 535–550.

Kolko, D., & Kazdin, A. (1993). Emotional/behavioral problems in clinic and nonclinic children: Correspondence among child, parent and teacher reports. *Journal of Child Psychology and Psychiatry*, *34*, 991–1006.

McCarthy, C., & Weisz, J. R. (2002). Correlates of expressed emotion in mothers of clinically-referred youth: an examination of the five-minute speech sample. *Journal of Child Psychology and Psychiatry*, *43*, 759–768.

Meyer, G., Finn, S., Eyde, L., Kay, G., Moreland, K., Dies, R., et al. (2001). Psychological testing and psychological assessment: A review of evidence and issues. *American Psychologist*, *56*, 128–165.

Muris, P., Meesters, C., Eijkelenboom, A., & Vincken, M. (2004). The self-report version of the Strengths and Difficulties Questionnaire: Its psychometric properties in 8- to 13-year-old non-clinical children. *British Journal of Clinical Psychology*, *43*, 437–448.

Nunnally, J., & Bernstein, I. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

SPSS, Inc. (2006). *S.P.S.S. 15.0 base user's guide*. Upper Saddle River, NJ: Prentice Hall.

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, *25*, 173–180.

Teare, M., Fristad, M. A., Weller, E. B., Weller, R. A., & Salmon, P. (1998). Study II: concurrent validity of the *DSM-III-R* Children's Interview for Psychiatric Syndromes (ChIPS). *Journal of Child and Adolescent Psychopharmacology*, *8*, 213–219.

Treutler, C., & Epkins, C. (2003). Are discrepancies among child, mother, and father reports on children's behavior related to parents' psychological symptoms and aspects of parent–child relationships? *Journal of Abnormal Child Psychology*, *31*, 13–27.

Vreugdenhil, C., van den Brink, W., Ferdinand, R., Wouters, L., & Doreleijers, T. (2006). The ability of YSR scales to predict *DSM*/DISC-C psychiatric disorders among incarcerated male adolescents. *European Child & Adolescent Psychiatry*, *15*, 88–96.

Yeh, M., & Weisz, J. (2001). Why are we here at the clinic? Parent–child (dis) agreement on referral programs at outpatient treatment entry. *Journal of Consulting and Clinical Psychology*, *69*, 1018–1025.

Downloaded by [Harvard College] at 05:15 22 August 2011