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p Department of Child and Adolescent Psychiatry, Buskerud Hospital
q Department of Psychology, Yonsei University
r Peruvian National Institute of Mental Health
s Research & Evaluation Unit, Department of Paediatrics, Women's and Children's Hospital, University of Adelaide
t University of Harran
u Department of Child and Adolescent Psychiatry, University of Zurich
v Aalborg Psychiatric Hospital, Aarhus University Hospital
w Clinical Psychology and Epidemiology, Institute of Psychology, University of Basel
x Department of Child and Adolescent Psychiatry, Erasmus University Medical Center-Sophia Children's Hospital
y Department of Child Psychiatry, Medical University of Warsaw
z Key Laboratory of Mental Health, Institute of Psychology, Chinese Academy of Sciences
aa Department of Psychology, Mykolas Romeris University
CROSS-INFORMANT ASSESSMENT

Cross-Informant Agreement Between Parent-Reported and Adolescent Self-Reported Problems in 25 Societies

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De Los Reyes and Kazdin (2005) observed that modest cross-informant agreement is one of the most robust phenomena in clinical child research. According to De Los Reyes (2011), discrepancies between different informants’ reports of child and adolescent problems pose major challenges for clinical practice, research, and theory related to psychopathology. Hawley and Weisz (2003) noted that “lack of consensus on target problems may well be one of the reasons why it has proven difficult to achieve beneficial effects in everyday clinical treatment” (p. 68).

Modest agreement has been reported in several societies between scale scores from parents’ ratings on the Child Behavior Checklist (CBCL) and adolescents’ ratings on the Youth Self-Report (YSR; Achenbach & Rescorla, 2001). Correlations (rs) have varied somewhat across societies as well as across scales: mean r across scales of .49 in Puerto Rico (Achenbach et al., 1990); rs across scales from .27 to .56 in the Netherlands (Verhulst & van der Ende, 1992); rs of .49 for girls and .57 for boys on Total Problems in Germany (Plück et al., 1997); rs across scales from .27 to .46 in Switzerland (Steinhausen & Winkler Metzke, 1998); rs of .54 to .56 for Internalizing, Externalizing, and Total Problems in the United States (Achenbach & Rescorla, 2001); rs across scales from .35 to .60 in China (Wang, Zhang, & Leung, 2005); mean r across scales of .45 in Lithuania (Zukauskiene, Pilkauskaite-Valickiene, & Malina, 2004), and mean r across scales of .56 in Algeria (Petot, Rescorla, & Petot, 2011). Correlations in the same general range have also been reported in meta-analyses of primarily U.S. samples (Achenbach, McConaughy, & Howell, 1987; Duhig, Renk, Epstein, & Phares, 2000).

One factor contributing to low parent–adolescent agreement could be that parents may tend to report fewer problems or more problems than their adolescents report about themselves. Several studies within single societies have reported that adolescents’ ratings yielded higher problem scores than parents’ ratings (e.g., Begovac, Rudan, Skocić, Filipović, & Šzirovec, 2004; Petot et al., 2011; van der Ende & Verhulst, 2005; Wang et al., 2005). However, to test the generalizability of these findings, comparisons of parent and adolescent self-ratings are needed across many societies with different cultural traditions. For example, parent–adolescent discrepancies may be smaller in societies where cultural values promote familialism and collectivism, such as those with Confucian or Catholic traditions (Schwartz, 2007), than in societies that promote individualism and autonomy.

Another factor contributing to low parent–adolescent agreement could be that parents and adolescents tend to report different kinds of problems. For example, parents may report at least as many externalizing problems as their adolescents report, because such problems are quite apparent. However, parents may report fewer internalizing problems than adolescents report, because parents may not know that their adolescents are feeling...
anxious or depressed unless the adolescents reveal these feelings. We could thus hypothesize greater parent–adolescent agreement for externalizing problems than for internalizing problems. However, we could also hypothesize smaller differences in agreement for externalizing versus internalizing in societies with greater parent–adolescent contact. To determine if societies differ in parent–adolescent agreement on externalizing versus internalizing problems, international comparisons are needed.

When parents and adolescents rate specific problem items, some items (e.g., argues a lot) may be endorsed more frequently than others (e.g., sees things that are not there). Problems endorsed by parents or adolescents may vary across societies. For example, in societies where filial respect is a strong value, being argumentative and disobedient may be harshly sanctioned and thus more widely perceived as a problem than in societies where greater autonomy is fostered. Consequently, international comparisons are needed to determine whether different items tend to receive low, medium, or high ratings in societies with different cultural traditions.

How well individual parent–adolescent dyads agree on their low, medium, and high item ratings can also be examined. For a U.S. nonclinical sample, Youngstrom, Loebere, and Stouthamer-Loeber (2000) reported that parent–adolescent item agreement varied widely across dyads, mean dyadic agreement was modest, and agreement was better for externalizing than for internalizing items. However, systematic comparisons of dyadic item agreement in other societies are needed to determine whether agreement patterns differ from U.S. patterns.

Finally, when scores on instruments for rating problems exceed normatively based cut points, they suggest clinically significant deviance. When two informants rate the same individual, deviance status can be cross-tabulated (Deviance Status × Informant). Relatively little is known about how well parents and adolescents agree in the classification of deviance and whether agreement levels vary across societies. In societies with closer parent–adolescent relationships, parents might be more likely to corroborate the adolescents’ self-reported deviance than in societies with less parent–adolescent closeness.

In summary, studies of single societies have yielded parent–adolescent rs of .27 to .65. For this reason, and because the societies we analyzed differ in race/ethnicity, religion, cultural values, political/economic systems, geographic regions, child-rearing practices, educational systems, and gender roles, we hypothesized that parent–adolescent agreement would vary when we made systematic comparisons across 25 different societies.

PURPOSES OF THE CURRENT STUDY

The purposes of the current study were to use parent and self-ratings of a broad spectrum of adolescent problems to answer the following questions with much greater generalizability than afforded by findings from single societies: (a) How consistently across 25 very different societies do adolescents report more problems than their parents report about them? (b) Do levels of parent–adolescent agreement vary among societies for different kinds of problems? (c) How well do parents and adolescents in different societies agree on which problem items they tend to rate low, medium, or high? (d) How much do dyads in different societies vary in within-dyad parent–adolescent agreement on problem items? (e) How well do parents and adolescents in 25 societies agree on the adolescent’s deviance status?

METHOD

The data for this study comprised ratings on the CBCL and YSR (Achenbach & Rescorla, 2001). Investigators in 25 societies who collected the data agreed to share it for multicultural comparisons. For eight samples, previous reports presented some cross-informant results, but total sample sizes, items, and scales analyzed in those reports varied somewhat from those we analyzed.

Participants

Data were obtained from the samples listed in Table 1. Participants were obtained either through sampling of household registers/addresses (with parents typically completing CBCLs first) or through schools (with adolescents typically completing YSRs first). Hence, the completion rates shown in Table 1 differed somewhat for the two forms. Samples ranged from 301 to 3,106 (N = 27,861 parent–adolescent dyads; 45% boys; 55% ages 11–14 and 45% ages 15–18). Adolescents referred for mental health services had been excluded from the data we received from five societies. Conventions for obtaining informed consent required by each investigator’s research institution were followed.

Measures

Parents and adolescents completed translated versions of the instruments in 22 societies and English-language versions in the United States, Australia, and Jamaica. Translators used simple language to ensure that the translation would be comparable to the fifth-grade reading level of the U.S. text. To verify that translations captured the original meanings, independent
back-translations into English were done, which then guided fine-tuning of the translations.

The CBCL contains 120 items rated on the basis of the previous 6 months as 0 = not true (as far as you know), 1 = somewhat or sometimes true, 2 = very true or often true. When the CBCL was revised in 2001, six items from the 1991 version (Achenbach, 1991) were replaced. Because some samples used the 1991 CBCL, we omitted these six items from our analyses, as well as items not shared by the YSR, plus two open-ended items, leaving 98 items.

Achenbach and Rescorla’s (2001) factor analyses of the CBCL and YSR yielded eight syndromes: Withdrawn/Depressed, Anxious/Depressed, and Somatic Complaints (all loading on a broad-band, second-order factor designated as Internalizing); Rule-Breaking Behavior and Aggressive Behavior (both loading on a broad-band, second-order factor designated as Externalizing); and Social Problems, Thought Problems, and Attention Problems (not loading differentially on either second-order factor). Internalizing and Externalizing scales are scored by summing the 0–1–2 ratings of the items on their constituent syndromes, whereas the broad-band Total Problems scale is scored by summing the ratings of all CBCL problem items. Six Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM–IV]; American Psychiatric Association, 1994) oriented scales (Anxiety Problems, Affective Problems, Somatic Problems, Attention Deficit Hyperactivity Problems, Oppositional Defiant Problems, and Conduct Problems) comprise items identified by experts from 16 societies as very consistent with diagnostic categories of the DSM–IV. Achenbach and Rescorla reported alphas of .90 to .97 for the broad-band scales and .72 to .97 for the syndrome and DSM-oriented scales.

The YSR (Achenbach & Rescorla, 2001), which contains 105 problem items plus 14 items tapping positive qualities, has counterparts of all 17 CBCL problem items. Achenbach and Rescorla (2001) reported alphas of .90 to .95 for the three broad-band scales and .67 to .90 for the 14 narrow-band scales scored from the YSR.

Overview of Data Analyses

CBCL and YSR problem scale scores were positively skewed in every sample, because many adolescents in general population samples have relatively few problems. However, general linear models are very robust with respect to deviations from normality, especially with very stringent criteria for significance and large samples having similar skew (Kirk, 1995). Accordingly, we analyzed untransformed raw scale scores.
First, we used $2 \times 2 \times 25$ analyses of variance (ANOVAs) to test the effects of informant (parents vs. adolescents, repeated measures), age (ages 11–14, 15–18), gender, and society on CBCL and YSR scale scores, with significant effect sizes (ESs) reported as $\eta^2$. Second, we computed cross-informant correlations for each of the 17 scale scores within each society. Third, we computed a $Q$ correlation between the 98 mean CBCL item ratings and the 98 mean YSR item ratings within each society, based on the procedures pioneered by Stephenson (1935, 1953) whereby Pearson correlations are calculated between informants across items. Fourth, we computed $Q$ correlations between CBCL and YSR item ratings within each parent–adolescent dyad, converted these to Fisher’s $z$s, and then submitted them to an ANOVA to test effects of society, age, and gender on the correlations. Fifth, for each society, we cross-tabulated parent–adolescent agreement on deviance status, with deviance on each instrument defined as a Total Problems score equal to or greater than 1 SD above the mean. In view of the high statistical power afforded by our large sample size, we present only findings that are significant at $p < .001$. Even with this stringent alpha level, power was 95% to detect ESs of $\eta^2 < .0025$ (equivalent to $f \leq .045$; Faul, Erdfelder, Buchner, & Lang, 2009).

RESULTS

Informant Differences in Mean Scale Scores

As Table 2 shows, the YSR omnicultural mean (average of the 25 society means; Ellis & Kimmel, 1992) was higher than the CBCL omnicultural mean for every problem scale. A repeated measures ANOVA testing differences between the 25 CBCL and YSR Total Problems scores yielded an ES of 91%, and Mauchly’s (1940) Test of Sphericity indicated that variances were not significantly different for the CBCL versus the YSR. On each scale, the standard deviation of the omnicultural mean was much smaller than the omnicultural mean of the 25 SDs, indicating more variance within than between societies.

The 2 (parents vs. adolescents, repeated measures) $\times$ 2 (age) $\times$ 25 (society) ANOVA for Total Problems score yielded ESs of 22% for informant and 4% for the Informant $\times$ Society interaction (see Table 3). Older adolescents and girls scored slightly higher than younger adolescents and boys (ES < 1%). The ES for society was 7%, with 17 of the 25 societies scoring within 1 SD (6.2 points) of the CBCL omnicultural mean of 21.4 and 16 societies scoring within 1 SD (5.4 points) of the YSR omnicultural mean of 34.6. Societies scoring greater than 1 SD above (or below) the CBCL omnicultural mean did not always score in this same range on the YSR. For example, Japan scored lowest on the CBCL but near the omnicultural mean on the YSR.

As seen in Figure 1, the informant difference was considerably larger in some societies than in others. Within-society ANOVAs for Total Problems scores indicated that the mean YSR score was significantly higher than the mean CBCL score in all societies except Puerto Rico. We also calculated YSR–CBCL Total Problems dyadic discrepancy scores by case. Averaged across cases, mean discrepancy scores ranged from 2.8

<table>
<thead>
<tr>
<th>Scale</th>
<th>CBCL Omnicultural M (SD)</th>
<th>CBCL Omnicultural SD</th>
<th>YSR Omnicultural M (SD)</th>
<th>YSR Omnicultural SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Problems</td>
<td>21.4 (6.2)</td>
<td>16.5</td>
<td>34.6 (5.4)</td>
<td>20.2</td>
</tr>
<tr>
<td>Internalizing</td>
<td>7.1 (2.4)</td>
<td>6.1</td>
<td>11.1 (2.3)</td>
<td>7.6</td>
</tr>
<tr>
<td>Externalizing</td>
<td>6.0 (1.6)</td>
<td>5.7</td>
<td>9.7 (1.2)</td>
<td>6.6</td>
</tr>
<tr>
<td>Anxious/Depressed</td>
<td>3.3 (1.2)</td>
<td>3.1</td>
<td>5.1 (1.2)</td>
<td>3.9</td>
</tr>
<tr>
<td>Withdrawn/Depressed</td>
<td>2.0 (0.8)</td>
<td>2.1</td>
<td>3.1 (0.7)</td>
<td>2.3</td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>1.8 (0.6)</td>
<td>2.2</td>
<td>2.9 (0.6)</td>
<td>2.7</td>
</tr>
<tr>
<td>Social Problems</td>
<td>2.2 (0.8)</td>
<td>2.4</td>
<td>3.5 (0.8)</td>
<td>2.9</td>
</tr>
<tr>
<td>Thought Problems</td>
<td>1.3 (0.6)</td>
<td>1.8</td>
<td>2.9 (0.8)</td>
<td>2.9</td>
</tr>
<tr>
<td>Attention Problems</td>
<td>2.5 (0.6)</td>
<td>2.4</td>
<td>3.6 (0.6)</td>
<td>2.4</td>
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<tr>
<td>Rule-Breaking Behavior</td>
<td>1.6 (0.5)</td>
<td>2.0</td>
<td>3.0 (0.5)</td>
<td>2.6</td>
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<td>Aggressive Behavior</td>
<td>4.4 (1.1)</td>
<td>4.2</td>
<td>6.7 (1.0)</td>
<td>4.6</td>
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<tr>
<td>DSM–Affective Problems</td>
<td>2.1 (0.8)</td>
<td>2.4</td>
<td>3.8 (0.9)</td>
<td>3.3</td>
</tr>
<tr>
<td>DSM–Anxiety Problems</td>
<td>1.6 (0.7)</td>
<td>1.7</td>
<td>2.6 (0.7)</td>
<td>2.1</td>
</tr>
<tr>
<td>DSM–Somatic Problems</td>
<td>1.1 (0.4)</td>
<td>1.6</td>
<td>1.7 (0.5)</td>
<td>1.9</td>
</tr>
<tr>
<td>DSM–Attention Problems</td>
<td>1.9 (0.5)</td>
<td>2.0</td>
<td>2.9 (0.5)</td>
<td>2.0</td>
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<tr>
<td>DSM–Oppositional Problems</td>
<td>2.1 (0.4)</td>
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<td>2.8 (0.4)</td>
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</tr>
<tr>
<td>DSM–Conduct Problems</td>
<td>1.4 (0.4)</td>
<td>2.1</td>
<td>2.8 (0.4)</td>
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</table>

Note: $N = 27,861$. Omnicultural mean (SD) = mean of 25 society means and the standard deviation of that mean; omnicultural SD = mean of 25 society standard deviations; CBCL = Child Behavior Checklist for Ages 6–18 (Achenbach & Rescorla, 2001); YSR = Youth Self-Report (Achenbach & Rescorla, 2001); DSM = Diagnostic and Statistical Manual of Mental Disorders.
in Puerto Rico to 24.3 in Japan (M = 13.22). The range from smallest to largest discrepancy was large in every society (from 99 points in Norway to 275 points in Lithuania; M = 172). In every society, some discrepancy scores were negative (i.e., CBCL > YSR), with the most negative value ranging from −88 in Norway to −185 in Lithuania (M = −69). The maximum YSR–CBCL discrepancy ranged from 54 in Puerto Rico to 171 in Japan (M = 103).

Mean YSR scores exceeded mean CBCL scores for both Internalizing (16% ES) and Externalizing (18% ES).

Both Internalizing and Externalizing had Informant × Society interactions ESs of 3%. The ES for society was 7% for Internalizing and 4% for Externalizing.

Within-society ANOVAs indicated higher scores on the YSR than the CBCL for both scales in all societies except Puerto Rico. Scores were slightly lower for younger than older adolescents on both scales (ESs < 1%). Girls scored higher than boys on Internalizing (ES = 2%), whereas boys scored higher than girls on Externalizing (ES < 1%).

For the syndromes and DSM-oriented scales, ESs for informant ranged from 5% for DSM–Somatic Problems to 18% for Rule-Breaking Behavior, whereas ESs for the Informant × Society interaction ranged from 2% to 6%. ESs for society ranged from 3% to 8%. Older adolescents scored slightly higher than younger adolescents on most scales (ESs < 1%). Girls scored higher on seven scales, whereas boys scored higher on two scales. Within-society ANOVAs indicated that YSR scores were significantly higher than CBCL scores for three scales in all 25 societies, for nine scales in 24 societies (not Puerto Rico), and for five scales in either 22 or 23 societies (see Table 3).

Correlational Analyses of Cross-Informant Agreement on Scale Scores

Omnicultural mean cross-informant rs were comparable for the three broad-band scales: .45 for Total Problems from .16 for Jamaica to .66 for Algeria), .45 for Internalizing (from .21 for Japan to .61 for Algeria), and .46 for Externalizing (from .13 for Jamaica to .66 for Denmark).

Cross-informant rs were slightly smaller for boys (N = 13,028) than for girls (N = 14,833) on Total Problems (.42 vs. .50), Internalizing (.40 vs. .46), and Externalizing (.43 vs. .49), all ps < .001 by Fisher’s z test. On the eight syndromes and six DSM-oriented scales, omnicultural mean cross-informant rs ranged from .34 to .44.
Cross-informant $r$s varied more by society than by kind of problem. Table 4 presents the mean cross-informant $r$ for each society, obtained by averaging the $r$ for each of the 17 problem scales. Three societies had mean cross-informant $r$ < .30, seven societies had mean $r$ of .30 to .49. The omnicultural mean of these 25 $r$s was .41, with the range from .17 (Jamaica) to .58 (Denmark). We used the between-subjects Fisher’s $z$ test to test these societal differences in mean cross-informant $r$, starting with the most extreme values and moving pairwise toward the middle to avoid Type 1 errors. For example, we tested Jamaica (.17) versus Denmark (.58), Japan (.23) versus Algeria (.55), and so forth. The first seven comparisons were significant, after which the differences were not significant at $p < .001$, starting with Iran (.37) versus Australia (.48).

Cross-Informant Agreement on Item Ratings

Within each society, we computed $Q$ correlations between the 98 CBCL mean item ratings and the 98 YSR mean item ratings (see Table 4). The $Q$ correlations were large for all 25 societies, ranging from .72 (Japan) to .94 (Romania), with $M = .85$. This indicates that within every society there was strong agreement between parents and adolescents regarding which items received low, medium, or high ratings. We also computed bisociety $Q$ correlations for the CBCL and YSR separately between mean item ratings in each society and those in

<table>
<thead>
<tr>
<th>Society</th>
<th>CBCL × YSR Mean $r^a$</th>
<th>CBCL × YSR Mean Item $Q^b$</th>
<th>CBCL M Bi-Society $Q^c$</th>
<th>YSR M Bi-Society $Q^d$</th>
<th>CBCL × YSR Mean Dyadic $Q$ (SD)$^e$</th>
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<tr>
<td>Jamaica</td>
<td>.17</td>
<td>.77</td>
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<td>.70</td>
<td>.74</td>
<td>.36 (2.0)</td>
</tr>
<tr>
<td>Australia</td>
<td>.48</td>
<td>.85</td>
<td>.75</td>
<td>.76</td>
<td>.34 (1.8)</td>
</tr>
<tr>
<td>Tunisia</td>
<td>.50</td>
<td>.82</td>
<td>.71</td>
<td>.72</td>
<td>.35 (1.9)</td>
</tr>
<tr>
<td>Germany</td>
<td>.50</td>
<td>.89</td>
<td>.79</td>
<td>.76</td>
<td>.35 (2.2)</td>
</tr>
<tr>
<td>Romania</td>
<td>.50</td>
<td>.94</td>
<td>.73</td>
<td>.73</td>
<td>.38 (2.2)</td>
</tr>
<tr>
<td>Lithuania</td>
<td>.51</td>
<td>.89</td>
<td>.76</td>
<td>.75</td>
<td>.41 (2.0)</td>
</tr>
<tr>
<td>Korea</td>
<td>.53</td>
<td>.87</td>
<td>.68</td>
<td>.67</td>
<td>.42 (2.4)</td>
</tr>
<tr>
<td>Algeria</td>
<td>.55</td>
<td>.87</td>
<td>.71</td>
<td>.72</td>
<td>.37 (1.9)</td>
</tr>
<tr>
<td>Denmark</td>
<td>.58</td>
<td>.86</td>
<td>.75</td>
<td>.75</td>
<td>.40 (1.6)</td>
</tr>
<tr>
<td>$M^f$</td>
<td>.41</td>
<td>.85</td>
<td>.73</td>
<td>.72</td>
<td>.33</td>
</tr>
</tbody>
</table>

Note: CBCL = Child Behavior Checklist for Ages 6–18 (Achenbach & Rescorla, 2001); YSR = Youth Self-Report (Achenbach & Rescorla, 2001).

The table is arranged in ascending order by the mean parent–adolescent $r$ for each society, which was derived by averaging the $r$s between CBCL and YSR scores for all 17 problem scales.

The mean item $Q$ for each society was calculated by correlating the mean item ratings for all parents with the mean item ratings for all adolescents.

The CBCL mean bi-society $Q$ was calculated by computing the $Q$ correlation for mean item ratings on the CBCL for each society with those for every other society and then averaging these 24 $Q$s.

The YSR mean bi-society $Q$ was calculated by computing the $Q$ correlation for mean item ratings on the YSR for each society with those for every other society and then averaging these 24 $Q$s.

The mean dyadic $Q$ for each society was calculated by averaging across all dyads in the society’s sample the dyadic $Q$ derived from correlating the item ratings for each parent–adolescent dyad in the sample. The dyadic SD for each society was the SD of the mean dyadic $Q$.

The mean for each measure represents the omnicultural mean, or the mean of the 25 society means.
every other society, and then we averaged these correlations for each society. As seen in Table 4, these mean bisociety Qs ranged from .65 (Japan) to .80 (Switzerland) for the CBCL (M = .73) and from .61 (Japan) to .78 (United States) for the YSR (M = .72). These findings indicate strong across-society consistency for both parents and adolescents in the items that received low, medium, or high ratings.

When we identified the 25 items with the highest omnicultural mean ratings on the CBCL and the YSR, 21 items were common to both “top 25” lists (see Table 5). The YSR omnicultural mean item rating significantly exceeded the CBCL omnicultural mean item rating for all 21 items (ESs from <1% to 19%, based on repeated measures ANOVAs). Table 5 presents the base rate for endorsements of each item according to parent and adolescent ratings (i.e., the percentage of parents and adolescents who rated it either 1 or 2). For all 21 items, the YSR base rate significantly exceeded the CBCL base rate according to McNemar’s Test. The percentage of ratings of 1 was significantly higher on the YSR than the CBCL for all 21 items, but the percentage of ratings of 2 was significantly higher on the YSR than the CBCL for only 14 of the items. For all 21 items, both parents and adolescents used higher percentages of ratings of 1 (somewhat or sometimes true) than ratings of 2 (very true or often true). Also by McNemar’s Test, the YSR base rate was significantly higher than the CBCL base rate for all other items, including the items only in the CBCL “top 25” list (27. Easily jealous; 22. Disobedient at home; 56b. Headaches; and 11. Clings to adults or too dependent) and items only in the YSR “top 25” list (29. I am afraid of certain animals, situations, or places other than school; 90. I swear or use dirty language; 89. I am suspicious; and 53. I eat too much).

### Dyadic Q Correlations for Item Ratings

To examine within-dyad agreement on 0–1–2 ratings of items, we calculated Q correlations between the 98-item ratings by each parent and adolescent. Within-society mean dyadic Qs ranged from .22 for Jamaica to .42 for Korea, with an omnicultural mean of .33. Large standard deviations in all societies indicated substantial within-society variation across dyads in item agreement. Dyadic Qs were much lower than the Qs between mean item ratings (see Table 4), indicating greater variance within than between societies. ESs from 25 (society) × 2 (gender) × 2 (age) ANOVAs on dyadic Qs converted to

<table>
<thead>
<tr>
<th>Item</th>
<th>CBCL M Rating</th>
<th>YSR M Rating</th>
<th>CBCL(^a) Base Rate</th>
<th>YSR(^b) Base Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Argues a lot(^c)</td>
<td>.71</td>
<td>.75</td>
<td>57%</td>
<td>64%</td>
</tr>
<tr>
<td>32. Feels like he/she has to be perfect(^c)</td>
<td>.54</td>
<td>.62</td>
<td>40%</td>
<td>48%</td>
</tr>
<tr>
<td>69. Is secretive or keeps things to self(^c)</td>
<td>.52</td>
<td>.66</td>
<td>38%</td>
<td>52%</td>
</tr>
<tr>
<td>19. Demands a lot of attention(^c)</td>
<td>.50</td>
<td>.60</td>
<td>40%</td>
<td>47%</td>
</tr>
<tr>
<td>8. Has trouble concentrating or paying attention</td>
<td>.47</td>
<td>.66</td>
<td>42%</td>
<td>57%</td>
</tr>
<tr>
<td>71. Self-conscious or easily embarrassed(^c)</td>
<td>.43</td>
<td>.57</td>
<td>34%</td>
<td>45%</td>
</tr>
<tr>
<td>86. Stubborn, sullen, or irritable</td>
<td>.42</td>
<td>.76</td>
<td>38%</td>
<td>60%</td>
</tr>
<tr>
<td>10. Can’t sit still, restless or hyperactive(^c)</td>
<td>.42</td>
<td>.55</td>
<td>34%</td>
<td>46%</td>
</tr>
<tr>
<td>63. Prefers being with older kids</td>
<td>.41</td>
<td>.61</td>
<td>32%</td>
<td>43%</td>
</tr>
<tr>
<td>75. Too shy or timid</td>
<td>.41</td>
<td>.59</td>
<td>33%</td>
<td>47%</td>
</tr>
<tr>
<td>41. Impulsive or acts without thinking(^c)</td>
<td>.40</td>
<td>.54</td>
<td>33%</td>
<td>50%</td>
</tr>
<tr>
<td>45. Nervous, high strung, or tense</td>
<td>.40</td>
<td>.56</td>
<td>34%</td>
<td>47%</td>
</tr>
<tr>
<td>93. Talks too much</td>
<td>.39</td>
<td>.76</td>
<td>30%</td>
<td>58%</td>
</tr>
<tr>
<td>87. Sudden changes in mood or feelings</td>
<td>.39</td>
<td>.68</td>
<td>34%</td>
<td>55%</td>
</tr>
<tr>
<td>42. Would rather be alone than with others</td>
<td>.38</td>
<td>.50</td>
<td>31%</td>
<td>40%</td>
</tr>
<tr>
<td>17. Daydreams, or gets lost in own thoughts</td>
<td>.38</td>
<td>.71</td>
<td>34%</td>
<td>57%</td>
</tr>
<tr>
<td>44. Bites fingernails</td>
<td>.38</td>
<td>.55</td>
<td>25%</td>
<td>35%</td>
</tr>
<tr>
<td>95. Temper tantrums or hot temper</td>
<td>.36</td>
<td>.55</td>
<td>28%</td>
<td>45%</td>
</tr>
<tr>
<td>112. Worries</td>
<td>.36</td>
<td>.60</td>
<td>29%</td>
<td>50%</td>
</tr>
<tr>
<td>61. Poor school work(^c)</td>
<td>.33</td>
<td>.49</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>54. Overtired without good reason</td>
<td>.33</td>
<td>.53</td>
<td>29%</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Note:** The 21 items in common from the “top 25” lists for both the CBCL and YSR are arranged in descending order by CBCL omnicultural mean item rating. CBCL = Child Behavior Checklist for Ages 6–18 (Achenbach & Rescorla, 2001); YSR = Youth Self-Report (Achenbach & Rescorla, 2001).

\(^a\)CBCL base rate = percentage of cases rated 1 or 2 on CBCL for full sample of 27,861.

\(^b\)YSR base rate = percentage of cases rated 1 or 2 on YSR for full sample of 27,861. By McNemar’s Test, the YSR base rate significantly exceeded the CBCL base rate for all 21 items.

\(^c\)YSR percentage of cases rated 2 was not significantly higher than CBCL percentage of cases rated 2, by McNemar’s Test.
Fisher’s zs were 6% for society and ≤1% for gender and age, with slightly higher mean dyadic Qs for girls than boys (.40 vs. .33) and for older than younger groups (.39 vs .35). The mean dyadic Q was slightly larger for Externalizing (.35) than for Internalizing (.32). When Internalizing and Externalizing Qs were converted to Fisher’s zs for a repeated measures ANOVA, the difference was significant but the ES was less than 1%. For dyads with a YSR-CBCL Total Problems score discrepancy of 5 points or less in either direction (N = 6,492), Internalizing Q = .39 and Externalizing Q = .41, a non-significant difference. Dyads who agreed well on overall level of problems had only slightly better dyadic agreement on Internalizing and Externalizing items than dyads that were more discrepant on Total Problems score.

Cross-Informant Agreement on Deviance Status

Last, we tested parent/adolescent agreement regarding whether the adolescent’s problem scores fell in the deviant range on Total Problems, defined as a score equal to or greater than 1 SD above the mean calculated by gender and age group within each society. Agreement, defined as both CBCL and YSR scores equal to or greater than 1 SD above the mean (i.e., deviant) or both CBCL and YSR scores below this cutpoint (i.e., nondeviant), ranged from 71% for Jamaica to 85% for Algeria (omnicultural M = 79%). Dyads thus disagreed on deviance status for 15% to 29% of cases across the societies.

In all societies, most adolescents whose YSR Total Problems scores were in the nondeviant range also had CBCL Total Problems scores in the nondeviant range (from 83% for Jamaica to 91% for Algeria, M = 87%). In addition, most adolescents whose CBCL Total Problems scores were in the nondeviant range had YSR Total Problems scores in the nondeviant range (from 81% for Jamaica to 91% for Algeria, M = 87%). When the YSR Total Problems score was in the deviant range, the CBCL Total Problems score was in the deviant range on average less than half the time (from 24% for Jamaica to 58% for Algeria, M = 42%). In addition, when the CBCL Total Problems score was in the deviant range, the YSR Total Problems score was in the deviant range on average less than half the time (27% for Jamaica to 58% for Algeria, M = 42%). Although it was thus common in all societies both for parents to not corroborate deviance based on self-report and for youths to not corroborate deviance based on parental report, non-corroboration rates varied widely across the 25 societies.

DISCUSSION

We tested societal effects on cross-informant agreement by comparing CBCL and YSR data from 25 societies varying widely in ethnicity, religion, cultural values, history/geography, education, and politics/economics (N = 27,861 parent–adolescent dyads). Findings indicate multiculturual consistencies in many aspects of cross-informant agreement but also some important differences.

YSR mean scores were significantly higher than CBCL mean scores in most societies for most problem scales. However, the magnitude of the informant effect varied significantly across societies, as indicated by Informant × Society ESs of 3 to 8%. Informant ESs also varied considerably across different kinds of problems (from 5 to 22%) but were comparable for Internalizing (16%) and Externalizing (18%). Adolescents tended to rate themselves higher than their parents rated them on all kinds of problems, and significantly more adolescents than their parents endorsed each of the 98 problems.

Mean cross-informant rs for problem scale scores varied considerably across societies (.17–.58, M = .41). Mean rs reported in previous single-society studies—.49 in Puerto Rico (Achenbach et al., 1990), .45 in Lithuania (Zukauskiene et al., 2004), and .56 in Algeria (Petot et al., 2011)—tended to be higher than many of our societal mean rs. Cross-informant rs also varied somewhat across problem scales (.34–.46) but were comparable for Internalizing (.45) and Externalizing (.46), indicating that agreement was not greater for Externalizing problems (often considered to be public and observable) than for Internalizing problems (often considered to be private and less observable).

Large Q correlations between mean item ratings by parents and adolescents were found in every society (range = .72–.94), indicating that parents and adolescents in every society tended to agree on which problem items they rated low, medium, or high. Consistent with Youngstrom et al. (2000), parent–adolescent item agreement varied widely across dyads, and mean dyadic agreement was modest in every society. However, the 6% societal ES for mean dyadic Q correlations indicates that societies varied somewhat in dyadic agreement. Also consistent with Youngstrom et al. (2000), the mean dyadic Q was larger for Externalizing than for Internalizing, but the ES was less than 1%.

With great consistency across societies, most parents and adolescents agreed on deviance status (71%–85% of cases across societies). In each society, disagreements were about evenly divided between parental noncorroboration of self-reported deviance and adolescent non-corroboration of parent-reported deviance.

Societal Similarities and Differences

Although adolescents, on average, reported more problems than their parents reported about them in every society, some societies had very large mean YSR-CBCL
Total Problems score discrepancies (notably Japan and Jamaica), whereas other societies had much smaller discrepancies (notably Puerto Rico and Algeria). Mean cross-informant $r$s for scale scores also differed widely across societies, with Jamaica and Japan generally having the lowest and Denmark, Korea, and Algeria generally having the highest. Mean item $Q$s were generally high in all societies, but they were lowest for Japan (.22) and highest in Romania (.94). Mean dyadic $Q$s were modest in all societies, but they were lowest in Jamaica (.22) and highest in Korea (.42). Parent–adolescent agreement on deviance status was high in all societies, but it ranged from 71% in Jamaica to 85% in Algeria.

Conventional categories such as individualist/collectivist, East/West, Asian/Caucasian, or rich/poor do not appear to provide compelling explanations for the societal similarities and differences we found. Societies one might expect to be similar in agreement based on these categories were quite different, whereas societies one might expect to be different in agreement were quite similar. For example, Japan and Jamaica differ in population size, race/ethnicity, history, culture, religion, economic development, and geography, but they both had quite low agreement. Puerto Rico shares many of these features with Jamaica, but agreement was quite high in Puerto Rico. Korea and Hong Kong share many features with Japan, but Korea and Hong Kong tended to have high agreement.

Although conventional dichotomies such as East/West do not appear to explain the pattern of findings obtained in this research, it is possible that familialism might explain some of the differences we found. For example, Schwartz (2007) suggested that societies with Confucian or Catholic traditions might have stronger familialism than societies that promote more individualism and autonomy. One might thus speculate that Puerto Rico manifested higher agreement than Jamaica because it is more Catholic and hence more promoting of familialism than Jamaica, even though they are both Caribbean islands with a history of colonialism, racial mixing, and a relatively modest standard of living. Similarly, although Japan, Hong Kong, and Korea are all economically advanced Asian societies, one might speculate that Japan had lower parent–adolescent agreement than Hong Kong and Korea because of a less pronounced Confucian tradition. Future research conducted from an emic perspective (Pike, 1967) might explore dose-response relationships between familialism and cross-informant agreement. For example, one might measure familialism, religiosity, and cross-informant agreement in Puerto Rican families in the United States versus Puerto Rico, or familialism, Confucian values, and cross-informant agreement in various Asian societies.

Limitations

Limitations of the current study include that societies varied somewhat in sampling procedures, completion rates, and whether referred adolescents were excluded. Furthermore, the data were collected from 1985 in Puerto Rico to 2007 in Peru. Correlations computed between year of data collection and CBCL and YSR Total Problems scores (.35, $p = .088$ and .43, $p = .031$, respectively) indicated that “earlier” samples tended to have lower problem scores than “later” samples. However, Puerto Rico was the earliest sample and had the highest mean CBCL Total Problems score of all societies. Year of data collection was not significantly correlated with mean cross-informant $r$ ($r = -24, p = .24$). Because the pre-2001 forms were used in some societies, we excluded the six items that were changed in 2001, leaving 98 items for analysis. A further limitation is that, despite rigorous translation and back-translation processes, differences in the meanings of items due to translation might have contributed to societal differences. In addition, for most societies, we could not identify CBCLs completed by fathers versus mothers. However, insofar as we could identify informants, they were predominantly mothers. Finally, parents and adolescents in every society were instructed to complete their forms independently, but it is possible that some respondents communicated with each other, which might have affected cross-informant agreement.

Implications and Future Directions

Using five different analytic methods, we found considerable consistency but also some important differences in relations between parent ratings and self-ratings of adolescents’ problems in population samples from 25 societies. Although scores in some societies were lower than in others, $Q$ correlations for mean item ratings indicated that the items were being interpreted similarly in all societies. The most striking cross-society differences were in the magnitudes of informant effects (hence in YSR–CBCL score discrepancies) and magnitudes of mean cross-informant $r$s. Conventional categories for categorizing societies (East/West, individualist vs. collectivist) did not seem to explain the differences we found. That is, societies apparently dissimilar in such features had similar levels of YSR–CBCL discrepancies and cross-informant $r$s, whereas societies similar in such features had different levels of YSR-CBCL discrepancies and cross-informant $r$s. Studies that explore within-society variables such as familialism may be needed to determine why YSR-CBCL discrepancies were so much larger in Korea than in Puerto Rico and why the mean cross-informant $r$ was so much larger in Korea than in Japan.
Our samples were selected to be representative of general populations, but our findings have some important clinical implications. It is important for clinicians to be aware of typical levels of agreement between adolescents and their parents across many variations in ethnicity, religion, language, and other characteristics. That is, clinicians should be aware that both within-dyad item Q correlations and YSR–CBCL Total Problems score discrepancies varied widely across dyads in every society. Moreover, our findings showed that self-reported deviance was corroborated by parents' reports less than 50% of the time, and vice versa. Furthermore, it is important to remember that, on average, adolescents across 25 very different societies reported more problems than their parents reported about them. However, on average, parents and adolescents tended to rate the same items as low, medium, or high. This indicates that low within-dyad agreement is not caused by differences in the kinds of problems typically endorsed by adolescents versus parents.

Research is needed to compare cross-informant data for clinical samples in multiple societies, analogous to our study of population samples. Our findings from 25 societies provide valuable normative baselines against which to compare findings for clinical samples. Such research can determine whether clinically referred adolescents also report more problems than their parents report about them and whether the dyads also differ markedly in parent–adolescent agreement as measured by Q correlations in different societies. In addition, cross-informant discrepancies and Q correlations should be tested as predictors of response to treatment and of clinical outcomes in different societies. For example, when parents and adolescents agree on the problems, treatment may be more effective than when they disagree. This would argue for family-based assessment procedures that facilitate communication between parents and adolescents regarding the goals of treatment.

REFERENCES


