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Epidemiology of Behavioral and Emotional Problems among Thai and American Children: Teacher Reports for Ages 6–11

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Abstract—As a sequel to comparisons between reports by parents, we compared behavioral/emotional problems of 6–11-yr-old Thai and American children reported by teachers. These revealed higher ratings for Thai than for American children on nearly all problems showing significant cross-national differences. Thai children were rated higher on both overcontrolled and undercontrolled behavior and had more overcontrolled than undercontrolled problems ($p < 0.0001$). Boys were higher than girls on all 48 problems that showed significant sex differences. The findings underscore (1) the impact of culture on children's problems in the school setting and (2) the importance of surveying teacher as well as parent perspectives.

Keywords: Child psychopathology, cross-cultural, epidemiological, behavioral and emotional problems

Introduction

Theory and research on psychopathology often imply cultural influences on disturbed behavior. Although most of the research has dealt with adults (see Al-Issa, 1982; Marsella, 1979), culture may be influential well before the adult years. Culturally-mediated values and expectations, as well as the associated behavior of parents and other adults toward children, may influence the types of behavior problems youngsters show. One result may be cross-national differences in the prevalence of various child behavior problems. On the other hand, it is possible that many child behavior problems result from such culture-independent forces as biological and perhaps cognitive development. We would therefore expect cross-national similarities in the prevalence of such problems.

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The study of cross-national differences and similarities in child problems may be useful in at least two ways. First, it may enrich our base of general information on the epidemiology of child problems. Second, it can contribute to theory by indicating which patterns of child disturbance are most strongly influenced by social forces and which may be shaped by more culture-transcendent forces.

Our epidemiologic comparison of child problems in the U.S. and Thailand was designed to expand knowledge of the prevalence of child problems across national boundaries. We also sought to contribute to the understanding of cultural influence by comparing two broad syndromes linked theoretically to Thai and U.S. cultural patterns.

The syndromes were the two most frequently identified in factor analytic research with children—overcontrolled problems (e.g. shyness, somatic complaints, depression) and undercontrolled problems (e.g. disobedience, fighting, impulsivity). These syndromes have been found in more than a dozen factor analytic studies (see Achenbach & Edelbrock, 1978) and in research with not only Americans (e.g. Gordon & Gallimore, 1972; Touliatos & Lindholm, 1976), but also British (e.g. Collins, Maxwell & Cameron, 1962), Sicilians (Peterson, 1965), Japanese (Hayashi, Toyama & Quay, 1976) and Greeks, Finns and Iranians (Quay & Parskevopoulos, 1972).

We hypothesized higher rates of overcontrolled problems for Thai children, because Thai adults—95% of whom are Buddhist—are said to be unusually intolerant of such undercontrolled behavior as aggression, disobedience and disrespectful acts in children (Gardiner & Suttipan, 1977; Moore, 1974; Suvannathat, 1979). According to the literature, children are taught to be peaceful, polite and deferent—to strive for *krengchai,* an attitude of self-effacement and humbleness that aims to avoid disturbing others (Phillips, 1965; Suvannathat, 1979).

Thai children are also taught to inhibit and control the expression of anger and other strong emotions (Gardiner, 1968; National Identity Office, 1984; Suwanlert, 1974), in ways that seem to encourage overcontrolled behavior. As one Thai student put it, children are taught 'to collect their feelings and not show the anger' (Gardiner, 1968, p. 225). Some researchers (e.g. Boesch, 1977; Sangsingkeo, 1969; Suwanlert, 1974) have suggested that such Thai customs may foster not only politeness and nonaggression, but inhibition and anxiety as well.

It is possible, then, that cultural differences in childrearing patterns may be associated with cross-national differences in the prevalence of overcontrolled and/or undercontrolled child problems. Through a kind of *suppression–facilitation* process (see Weisz, Suwanlert, Chaiyasit & Walter, 1987; cf. Draguns, 1973), the cultural patterns described above might make overcontrolled problems more likely in Thai than American children and undercontrolled problems less likely in Thai than American youngsters.

Two recent studies have offered partial support for this notion. In one study, Weisz *et al.* (1987a) sampled 760 child clinic admissions in Thailand and the U.S., recording the referral problems noted by parents in both countries at clinic intake. Problems shown by earlier research to load on the overcontrolled syndrome were indeed more often noted for Thai than American children; undercontrolled problems, by contrast, were reported more often for American than Thai youngsters. These findings are consistent with the suppression–facilitation notion advanced above. However, because

the sample included clinic-referred youngsters only, it did not provide a comparison of over- and undercontrolled problems among children in the general populations of the two countries. Moreover, the clinic data were drawn from unstructured problem reports by referring parents, based on methods that were not standardized across cultures.

A second study, however, employed a standardized research instrument and compared general population samples (rather than clinic-referred children) from the U.S. and Thailand (Weisz, Suwanlert, Chaiyasit, Weiss, Achenbach & Walter, 1987b). In this epidemiologic study, 960 Thai and American parents completed a standardized problem checklist on their 6–11-yr-old children. The findings revealed modest but significant nationality differences ($p < 0.01$) on 54 of the 118 problems assessed. Thai children were rated higher than American youngsters on overcontrolled problems, but there was no significant cross-national difference on undercontrolled problems.

Such parent-report data clearly provide important information about child problems. However, after the age of 5, most Thai and American children spend much of their time at school. Teachers thus have an important perspective on children's behavior that may not be duplicated by parents. Teachers have regular, structured opportunities to observe children in group and classroom settings quite different from the home—settings where significant child problems may appear that are simply not evident to parents at home. Moreover, teachers' training and experience may sensitize them to child problems that are not evident to parents (see Achenbach & Edelbrock, 1986). Finally, teachers are often gatekeepers to child mental health care, providing early problem detection and referral for professional help. For all these reasons, epidemiologic research on child problem behavior should include teacher reports on children's behavior at school.

We obtained Thai and American teacher reports on 6–11-yr-olds, using a standardized instrument for uniform assessment of the same problems in both countries. As in the parent-report study, we sought to compare children of these two very different cultures on a broad range of behavioral and emotional problems, as well as on the over- and undercontrolled syndromes.

We also tested for age and sex differences, and interactions of these variables with culture. In Thailand, sex-typing seems in some respects the reverse of U.S. patterns: Thai boys receive more rigorous immersion than girls in such Buddhist ideals as non-aggression. Do such gender differences in socialization lead to a different pattern of sex differences in problem behavior than that found in the U.S.? In our earlier parent-report findings, the answer was no—sex differences in the problem behavior of Thai children closely resembled sex differences found in the U.S., at least for child behavior at home (Weisz *et al.*, 1987b).

Method

Sampling procedures

U.S. sample. The American sample was drawn from public and parochial schools in Nebraska, Tennessee and Pennsylvania. In each participating school, all teachers of regular elementary school classes were asked to complete the Child Behavior Checklist Teacher's Report Form (TRF; Achenbach & Edelbrock, 1986) on one randomly selected boy and girl in their classes. For randomization, all boys and all girls

were separately listed in alphabetical order, and the teacher was told which position to choose—e.g. the fourth boy on the alphabetical roster. Completed TRFs were obtained for 92.8% of all children thus identified. Children in special remedial classes were excluded from the sample.

Thai sample. The Thai sample was obtained from public and private schools within each of the four major regions of Thailand (Northwest, Northeast, Central, South). Because all Thai children are required to complete 7 yrs of elementary school, the schools provided a representative sampling frame for 6–11-yr-olds. We sampled children from 29 public and nine private schools to mirror the proportions of such schools nationwide. From each school, we randomly selected grade levels, classes and one child from each selected class—e.g. the seventh child on the alphabetical class list. We received completed teacher reports for 91.5% of the children thus selected. Children identified as mentally retarded or suffering from mental or emotional disorders were excluded from the sample. Because few Thai schools have special classes, these exclusion criteria were designed to approximate the exclusion of American children attending special classes.

American TRF. The TRF includes demographic questions, questions about the child's adaptive functioning and academic performance, standardized test scores and a list of 118 specific problems (e.g. "argues a lot", "fears going to school", "feels too guilty", plus two open-ended problem items ("other physical problems" and "other problems"). Based on the preceding 2 mnths, teachers score each item 0 ("not true" of the child), 1 ("somewhat or sometimes true"), or 2 ("very true or often true"). Test–retest correlations for total problems ranged from 0.86 to 0.92 (mean = 0.89) for 7- to 14-day intervals across various groups of youngsters. Inter-rater correlations between teachers and teacher aides ranged from 0.45 to 0.59 (mean = 0.52) for various groups of youngsters (Achenbach & Edelbrock, 1986).

Thai TRF. Thai interviewers administered the Thai translation of the TRF, which was designated as the Thai Youth Checklist Teacher Form (TYC-TF). The TYC-TF format is the same as that for the TRF. Demographic items are followed by items about the child's school functioning, then problem items using the same 0–1–2 rating scale as the TRF. The 118 TRF problem items are listed on the TYC-TF in the same order as on the TRF, except that we divided CBCL item No. 105, "uses alcohol or drugs", into two TYC items, "uses alcohol" and "uses drugs", at the recommendation of Thai judges. (For the present analyses, we combined these two TYC-TF items by using the higher of the two scores.) In addition, 22 other problem items were added at the end of the TYC-TF, but these were not analyzed in the present study.

Each TRF problem item was translated as precisely as possible into Thai using three waves of translation and back translation, as recommended by Draguns (1982), Brislin (1970) and Wagatsuma (1977). In one wave, professional translators translated the TRF, then back-translated it. In two other waves, the same procedures were carried out by two bilingual Thai clinical psychologists and one bilingual Thai anthropologist. We aimed for similarity of meaning and simplicity of expression. The translation was easily understood by most Thai teachers. As an estimate of test–retest reliability, we obtained an intraclass correlation (ICC) of 0.91 ($p < 0.0001$) for problem scores derived from 30 teachers retested after a 1-week interval. An ICC of 0.83 ($p < 0.0001$) was obtained for inter-rater agreement among 30 Thai teacher–student teacher pairs who independently rated the same pupils.

Subjects and research design

The samples included 945 children—359 from Thailand and 586 from the U.S. The original Thai sample had 30 boys and 30 girls at each yearly age from 6 to 11, while the original U.S. sample had 50 boys and 50 girls at each year. Incomplete teacher reports were dropped (1 from the Thai sample, 14 from the U.S.), and years 6–7, 8–9 and 10–11 were combined to form three age groups. This produced a 3 (age group) × 2 (sex) × 2 (culture) design, with cell sizes ranging from 59 to 60 in the Thai sample and 96 to 99 in the U.S. sample.

Child characteristics. Of the 360 Thai youngsters rated by their teachers, all but one were pure Asian and ethnic Thai; the one exception had a caucasian parent. The U.S. sample was 79.0% caucasian, 19.5% black and 1.5% other. Given the central role of Buddhism in Thai culture, we asked parents of our Thai subjects to indicate religious affiliation, if any. Consistent with census data, 95.5% of our sample identified themselves as Buddhist; of the others, 3.1% were Muslim and 1.4% were Christians.

We found five Thai SES schemes based on parent occupation, but none provided validity data or sufficient information for us to code the occupations with confidence. We therefore applied Hollingshead's

(1975) SES system to both U.S. and Thai parent occupations. The mean rating on Hollinghead's 9-step scale (9 = highest SES) was 5.39 for the U.S. sample (SD = 2.39) and 4.27 for the Thai (SD = 2.40). The Thai figures should be viewed with caution, because they reflect application of an American system to a culture for which it was not designed.

Results

We tested group differences in (a) scores for total problems, (b) ratings on each of the 118 specific problem items common to both checklists and (c) composite scores for over- and undercontrolled problems. Because of the numerous statistical tests, we accepted as significant only those group differences reaching $p = 0.01$. Moreover, because our large sample afforded very high statistical power, we interpreted all significant effects in terms of Cohen's (1977) criteria for magnitude: effects are *small* if they account for 1–5.9% of the variance, *medium* if they account for 5.9–13.8% and *large* if they account for > 13.8%. Because five out of each set of 119 comparisons could be significant by chance (using a 0.01 protection level; see Feild & Armenakis, 1974), Tables 1 and 2 indicate with superscripts the five comparisons of each type that were most likely to have achieved significance by chance, on account of their having the smallest F values.

Table 1. Significant ($p < 0.01$) main effects of nationality, sex and age on behavioral and emotional problems

Type	Item[a]		Nationality[b]	Sex[c]	Age[d]
U	1.	Acts too young	—	2^{M}	—
U	2.	*Hums, odd noises*	2^{T}	4^{M}	
U	3.	Argues a lot	—	1^{M}	1^{O}
U	4.	*Fails to finish things*	1^{T}	1^{M}	—
	5.	Behaves like opposite sex	1^{Te}	—	—
U	6.	*Defiant, talks back to staff*	—	2^{M}	—
U	7.	Brags	—	5^{M}	—
U	8.	Can't concentrate	6^{T}	4^{M}	—
	9.	Obsessions	—	—	—
	10.	Hyperactive	5^{T}	6^{M}	—
	11.	Too dependent	12^{T}	—	—
	12.	Lonely	2^{T}	—	—
U	13.	Confused	3^{T}	—	—
	14.	Cries a lot	—	—	1^{Ye}
U	15.	*Fidgets, nervous movements*	2^{T}	4^{M}	—
U	16.	Cruel to others	—	3^{M}	—
M	17.	Day-dreams	3	1^{M}	—
	18.	Harms self or suicide	—	—	—
U	19.	Demands attention	—	—	—
U	20.	Destroys own things	—	—	—
U	21.	Destroys others' things	—	—	—
U	22.	*Can't follow directions*	—	1^{Me}	—
U	23.	Disobedient at school	—	3^{M}	—
U	24.	*Disturbs other students*	—	2^{M}	—
U	25.	Poor peer relations	—	—	—
U	26.	Lacks guilt	1^{Te}	1^{Me}	—

Table 1. (continued)

Type	Item[a]	Nationality[b]	Sex[c]	Age[d]
U	27. Easily jealous	—	—	—
	28. Eats nonfood	—	—	—
OG	29. Fears	9^{T}	—	1^{Y}
O	30. Fears school	1^{Te}	1^{M}	—
O	31. Fears own impulses	4^{T}	—	—
O	32. Needs to be perfect	2^{T}	—	—
	33. Feels unloved	2^{T}	—	—
U	34. Feels persecuted	—	—	—
O	35. Feels worthless	—	—	—
	36. Accident prone	5^{T}	1^{M}	—
U	37. Gets in many fights	1^{T}	1^{M}	—
	38. Gets teased a lot	3^{T}	9^{M}	—
U	39. Hangs around bad peers	2^{A}	4^{M}	—
	40. Hears things not there	—	1^{M}	—
U	41. Impulsive	3^{T}	4^{M}	—
O	42. Likes to be alone	1^{T}	1^{Me}	—
U	43. Lying or cheating	4^{T}	1^{M}	—
UB	44. Bites fingernails	—	—	—
M	45. Nervous, highstrung, tense	5^{T}	1^{M}	—
U	46. Nervous movements	1^{T}	1^{Me}	—
O	47. *Overconforms to rules*	14^{T}	—	—
UB	48. *Not liked by other children*	1^{Te}	—	—
U	49. *Has difficulties learning*	1^{T}	—	—
O	50. Too fearful or anxious	6^{T}	—	—
	51. Feels dizzy	10^{T}	—	—
	52. Feels too guilty	7^{T}	—	—
U	53. *Talks out of turn*	1^{A}	3^{M}	—
U	54. Overtired	6^{T}	—	—
	55. Overweight	—	—	—
	56a. Aches or pains	—	—	—
	56b. Headaches	3^{T}	—	—
	56c. Nausea, feels sick	—	—	—
	56d. Problems with eyes	—	—	—
	56e. Skin problems	3^{T}	—	—
	56f. Stomach aches, cramps	—	—	—
	56g. Vomiting	4^{T}	—	—
	57. Physically attacks people	—	5^{M}	—
	58. Picks nose, skin, other	5^{T}	—	—
	59. *Sleeps in class*	3^{T}	—	—
M	60. *Apathetic*	5^{T}	2^{M}	—
U	61. Poor school work	2^{T}	2^{M}	—
UB	62. Clumsy	2^{T}	1^{M}	—
	63. *Prefers older children*	2^{T}	—	—
	64. *Prefers younger children*	5^{T}	—	—
O	65. Refuses to talk	6^{T}	—	—
	66. Compulsions	—	—	—
U	67. *Disrupts class*	2^{A}	4^{M}	—
U	68. Screams a lot	4^{T}	—	—
O	69. Secretive	—	—	—
	70. Sees things not there	1^{T}	—	—
O	71. Self-conscious	—	—	—
U	72. *Messy work*	3^{T}	5^{M}	—
U	73. *Irresponsible*	3^{T}	2^{M}	—

Table 1. (continued)

Type	Item[a]		Nationality[b]	Sex[c]	Age[d]
U	74.	Showing off or clowning	—	7^{M}	—
O	75.	Shy or timid	—	—	—
U	76.	*Explosive & unpredictable*	3^{T}	2^{M}	—
U	77.	*Easily frustrated*	—	1^{Me}	—
U	78.	*Inattentive*	2^{T}	2^{M}	—
	79.	Speech problems	—	—	—
M	80.	Stares blankly	1^{T}	—	—
O	81.	*Hurt by criticism*	1^{T}	—	—
UB	82.	*Steals*	—	—	—
UB	83.	Stores up unneeded things	—	—	—
	84.	Strange behavior	—	—	—
	85.	Strange ideas	2^{T}	—	—
M	86.	Stubborn, sullen, irritable	5^{T}	—	—
U	87.	Moody	7^{T}	—	—
M	88.	Sulks a lot	19^{T}	—	1^{Oe}
U	89.	Suspicious	9^{T}	—	—
U	90.	Swearing, obscene language	7^{T}	2^{M}	1^{Oe}
	91.	Talks about killing self	—	—	—
U	92.	*Underachieving*	1^{T}	2^{M}	—
U	93.	Talks, too much	—	2^{M}	—
U	94.	Teases a lot	2^{T}	3^{M}	—
U	95.	Temper tantrums, hot temper	—	1^{M}	1^{Oe}
	98.	*Tardy*	1^{T}	—	—
O	99.	Too concerned with neatness	6^{T}	—	—
U	100.	*Fails to carry out tasks*	5^{T}	2^{M}	—
	101.	Truancy, skips school	1^{Te}	—	—
M	102.	Underactive, lacks energy	8^{T}	1^{M}	1^{Ye}
O	103.	Unhappy, sad, depressed	1^{T}	—	—
U	104.	Unusually loud	1^{T}	2^{M}	—
	105.	Uses alcohol or drugs	—	—	—
O	106.	*Overanxious to please*	—	—	—
	107.	*Dislikes school*	—	—	—
O	108.	*Fears making mistakes*	—	—	—
	109.	Whining	—	—	—
	110.	*Unclean appearance*	7^{T}	1^{M}	—
O	111.	Withdrawn from others	—	—	—
O	112.	Worrying	4^{T}	—	—
	Total problem score		5^{T}	3^{F}	—

Note. Problems are designated with their TRF item numbers and brief labels indicating item wording. Numbers in the table indicate the percentage of variance in item ratings accounted for by each independent variable where the effect was significant at $p < 0.01$. Items in italics were rated by teachers but not by parents.

[a]O = problem loads on overcontrolled syndrome for both boys and girls aged 6–11 (Achenbach & Edelbrock, 1986); U = problem loads on undercontrolled syndrome for both boys and girls; OB/OG = problem loads on overcontrolled syndrome for boys/girls only; UB/UG = problem loads on undercontrolled syndrome for boys/girls only; M = problem loads on both over- and undercontrolled syndromes for some age/sex groups.

[b]T = Thais had higher ratings than Americans, A = vice versa.

[c]M = Boys had higher mean ratings than girls, F = vice versa.

[d]O = Older children scored higher, Y = younger children scored higher.

[e]Not significant when adjusted for the number of $p < 0.01$ findings expected by chance, using a 0.01 protection level (Feild & Armenakis, 1974).

Table 2. Significant ($p < 0.01$) interactions between culture and sex

Problem	Probability	Variance (%)
31. Fears impulses	0.0003	1
32. Needs to be perfect	0.0009	1
36. Accident prone	0.003	< 1[a]
59. Sleeps in class	0.003	< 1
60. Apathetic	0.0001	1
61. Poor school work	0.002	1
72. Messy work	0.003	< 1
75. Shy or timid	0.005	1
90. Swearing, obscene language	0.005	< 1[a]
100. Fails to carry out tasks	0.004	< 1[a]
101. Truant	0.005	< 1[a]
108. Fears making mistakes	0.004	< 1[a]
110. Unclean appearance	0.002	1

[a]Not significant when adjusted for the number of $p < 0.01$ findings expected by chance, at 0.01 protection level (Feild & Armenakis, 1974).

Total problem scores

We first performed a 3 × 2 × 2 (age × sex × culture) ANOVA on the total problem score—i.e. the sum of all 1 and 2 ratings on the 118 specific problems and two open-ended items that were identical for the TYC and TRF. The main effect of culture, $F(1,933) = 56.06$, $p < 0.001$, revealed that Thai children had higher total problem scores than American children. The difference was 11.6 points on the 240-point scale (means: 30.9 versus 19.3). The culture effect accounted for 5.43% of the variance in total problem scores, a small effect by Cohen's (1977) criteria.

The main effect of sex, $F(1,933) = 32.61$, $p < 0.0001$, revealed higher problem scores for boys than girls (means = 28.0 versus 19.4). This effect accounted for 3.16% of the variance in total problems, a small effect by Cohen's (1977) criteria. The main effect of age was not significant, neither were any interactions; all Fs < 6.0, all ps < 0.02.

Individual problems

Next we carried out 3 × 2 × 2 (age × sex × culture) ANOVAs on each the 118 specific problems common to the TRF and TYC-TF. Table 1 summarizes the results.

Cross-national differences. Thai–U.S. differences were significant for 71 of the 118 problems. By Cohen's criteria, 53 of the differences were small, nine medium and two large. The other seven accounted for < 1% of the variance. All 11 of the medium and large effects involved higher scores for Thai than American children, but there were no obvious patterns among these items. Of the 60 other items showing cross-national differences, only four revealed higher scores for Americans than Thais (No. 17, "daydreams"; No. 39, "hangs around children who get in trouble"; No. 53, "talks out of turn"; No. 67, "disrupts class discipline").

Age differences. As Table 1 shows, significant age effects occurred on seven of the 118 specific problems—barely more than the five expected by chance. All seven effects were small by Cohen's (1977) criteria, with the following four reflecting scores that increased significantly with age: No. 3, "argues a lot"; No. 88, "sulks a lot"; No. 90, "swearing/obscene language"; No. 95, "temper tantrums". Three items showed significant decreases with age: No. 14, "cries a lot"; No. 29, "fears"; No. 102, "underactive".

Sex differences. Table 1 also shows significant sex effects on 48 of the 118 items. Of these, 40 were small in magnitude by Cohen's (1977) criteria, three were medium and none was large. All 48 sex differences resulted from higher scores among boys than girls.

Culture × age interactions. The item-by-item analyses revealed culture × age interactions on four of the 118 items, which is fewer than the five expected by chance. Of these four, one resulted partly from the fact that age group differences were significant ($p < 0.01$) among Americans but not among Thais on No. 108, "fears making mistakes". For No. 47, "overconforms to rules", there was an age difference among Thais but not Americans. For the remaining two items, no component effects were significant.

Culture × sex interactions. As Table 2 shows, there were culture × sex interactions on 13 items. On seven of the items, boys scored significantly higher than girls among Thais but not among Americans: No. 32, "needs to be perfect"; No. 36, "accident prone"; No. 60, "apathetic"; No. 61, "poor school work"; No. 100, "fails to carry out tasks"; No. 101, "truant"; No. 110, "unclean appearance". On one problem, No. 75, "shy or timid", American girls scored higher than boys, but Thai boys and girls did not differ reliably. On two problems, Nos 72, "messy work", and 90, "swearing/obscene language", boys scored higher in both cultures, but by a much wider margin in Thailand. No component effects were significant in the remaining culture × sex interactions.

Composite overcontrolled and undercontrolled scores

To compare over-and undercontrolled problems, we computed two composite scores for each child, following a procedure developed in earlier research (Weisz *et al.*, 1987b). To calculate each child's overcontrolled score, we summed all 1 and 2 ratings on those problems that fit the empirically-derived internalizing syndrome for that child's age and sex in principal components analyses as described by Achenbach and Edelbrock (1986). This total was divided by the number of all problems (out of the 118 total) that load on that syndrome for the child's age and sex. The resulting mean scores were multiplied by 100 to yield the overcontrolled scores. Undercontrolled scores were computed in an analogous manner using the externalizing syndrome derived by Achenbach and Edelbrock (1986).*

*As noted elsewhere (Weisz *et al.*, 1987b), a limitation of this procedure is that it is based on principal components analyses of data from American samples. One of our long-term objectives is to apply principal components analysis to TYC data from clinic-referred Thai children to assess problems among Thai youth.

A 3 × 2 × 2 (age × sex × culture) ANOVA of overcontrolled scores revealed two significant effects. A main effect of culture, $F(1,933) = 96.52$, $p < 0.0001$, revealed that overcontrolled scores were higher for Thai children (mean = 35.9) than for Americans (mean = 19.7). The effect accounted for 9.1% of the variance and was thus "medium" by Cohen's (1977) standards. A culture × sex interaction, $F(1,933) = 15.61$, $p < 0.0001$, resulted primarily from the fact that there was a significant sex effect among the Thai subjects, $F(1,353) = 12.37$, $p < 0.0005$, but not among Americans. In Thailand, boys had higher overcontrolled scores than girls (means = 40.8 and 31.4); in the U.S., the reverse was true (means = 18.8 and 21.2), but not significantly so.

A 3 × 2 × 2 (age × sex × culture) ANOVA of undercontrolled scores revealed two significant effects. A main effect of culture, $F(1,933) = 28.98$, $p < 0.0001$, indicated that undercontrolled scores were higher in the Thai sample than in the U.S. sample (means: 31.6 and 21.8). The effect, accounting for 2.9% of the variance, was small by Cohen's criteria. A main effect of sex, $F(1,933) = 42.39$, $p < 0.0001$, showed that boys had higher undercontrolled scores than girls (means: 31.2 and 19.7). The effect was small, accounting for 4.2% of the variance.

As a complement to the separate ANOVAs of over- and undercontrolled scores, we conducted a 3 × 2 × 2 × 2 (age × sex × culture × problem type) repeated measures ANOVA, with over- vs undercontrolled problem type as a within subjects factor. There were two significant effects involving problem type. One was a problem type × culture interaction, $F(1,933) = 15.32$, $p < 0.0001$ (2% of the variance). Testing component effects of the interaction, we found a significant effect of problem type for the Thai sample, $F(1,358) = 14.69$, $p < 0.0001$, but not for the U.S. Overcontrolled scores were significantly higher than undercontrolled scores in the Thai sample ($p < 0.0001$; means = 35.92 and 31.57); the reverse was true (non-significantly) for the U.S. We also found a problem type × sex interaction, $F(1,933) = 29.84$, $p < 0.0001$ (3% of the variance). Testing components of the interaction, we found effects of problem type for boys and girls (both $ps < 0.0002$). Boys had higher undercontrolled than overcontrolled scores (means = 31.25 and 26.78); girls showed the reverse pattern (means = 19.71 and 24.98).

Discussion

Are cultural differences associated with differences in the prevalence of children's behavioral/emotional problems as viewed by teachers? The findings presented here suggest that the answer may be yes, at least when American and Thai cultures are compared. Moreover, the findings suggest that information from teachers may present a somewhat different picture than information from parent reports.

The cross-national differences identified here were greater than those shown by parent reports in an earlier study by Weisz *et al.* (1987b). That study revealed significant cross-national differences on 54 of 118 problems, with most differences quite modest. The present study revealed cross-national differences on 71 of 118 problems, with 11 of the differences qualifying as medium or large, according to Cohen's (1977) criteria.

In the parent report study, 32 problems were significantly more common in Thai than U.S. children, while 22 were more common in U.S. than Thai children. By contrast, of the 71 cross-national differences found for teacher reports, 67 involved higher ratings for Thai than American children. Of the 22 problems on which Americans were rated higher than Thais in parent reports, only two showed similar significant differences in teacher reports.

The earlier parent-report findings also differed from the present findings in regard to total problems. Thai youngsters averaged only three points higher than Americans (on a 240-point scale) when parent ratings were used (Weisz *et al.*, 1987b), but almost 12 points higher when teacher ratings were used. Means for U.S. parents (20.7) and teachers (19.3) were similar, whereas the mean for Thai teachers (30.9) was considerably higher than that for Thai parents (24.2) or either group of U.S. informants. Clearly, Thai teacher reports generated the highest problem scores and were most responsible for differences between the present and previous findings. Yet a comparison between the Thai parent and teacher total scores for the 95 items that are the same on the CBCL and TRF showed no significant difference between total scores, $F(1,356) = 2.03$, $p > 0.15$. Mean total scores for items common to the two instruments were 19.6 for parents and 21.2 for teachers. The higher scores reported by teachers are thus accounted for by the school behavior items that are specific to the teacher rating form.

Overall, the pattern of findings suggests the need to focus on Thai children in the school setting and/or on Thai teachers in explaining the findings. It is possible that Thai children find certain aspects of the school setting particularly stressful or certain school-related tasks particularly problematic. Alternatively, it may be that Thai teachers are particularly sensitive to problem behavior specific to school tasks (Srignampong, 1983). Thai teachers do apply rigorous standards of conduct to their pupils; perhaps they have a lower threshold for identifying problems than either Thai parents or American teachers or parents (see Weisz, Suwanlert, Chaiyasit, Weiss, Walter & Anderson, 1988, for a discussion of the threshold phenomenon).

Teacher reports of various child problems are certainly influenced by the actual occurrence and intensity of those problems. However, it is important to recognize that teacher judgements about what *constitutes* a problem may also be influenced by cultural context, in at least three ways. First, the cultural milieu may color teachers' judgements about what is *appropriate* for children at a given age, thus influencing whether teachers report, for example, that their pupil is "too fearful" (No. 50). Second, cultural milieu may color teachers' judgements about what is *usual* for children at a given age, thus influencing whether they report, for example, that their pupil is "unusually loud" (No. 104). Third, teacher reports may be influenced by culture-bound definitions of concepts embedded in the problem items. For example, the Thai definition of "swearing" (No. 90) includes language Americans might consider merely impolite—e.g. calling a peer *ai-hia,* essentially a "low-down monitor lizard". The extent and effects of these three types of cultural differences will probably remain difficult to gauge with precision, in part because the differences often cut in both directions. For example, in some respects the U.S. definition of "swearing" is broader than the Thai definition; "God damn" and other forms of "taking the Lord's name in vain" are generally not considered to be swearing in Thailand. Thus, cultures

may differ in all three respects described here, but the nature, scope and effects of these differences may not be well understood without additional research.

To summarize the discussion so far, the present findings suggest that Thai and American teachers differ substantially in one or both of the following ways: (1) they are confronted with pupils who behave differently in classroom settings, with Thai pupils more prone to behavioral and emotional problems at school than American pupils; (2) they apply different judgements to the behavior they observe in their pupils. To better understand whether (1) or (2) or both provides the most appropriate explanation of the present findings, we may need to carry out observational research in Thai and American classroom settings, coding those behaviors from the TYC-TF and the TRF that are both observable and high enough in base rate to warrant this approach.

Turning now to sex differences, the present findings must again be contrasted with those of our earlier parent report study (Weisz *et al.*, 1987b). Across the two cultures, parents rated boys higher than girls on undercontrolled problems, but not on overcontrolled problems or total problems. At the level of specific problems, the parent report study revealed 21 significant sex differences, 14 of which involved higher scores for boys than girls. In the present study, boys were rated higher than girls on every comparison that showed a significant difference: total problems, overcontrolled problems, undercontrolled problems and 48 specific problems.

Sex effects on overcontrolled scores and on ratings for eight of the individual problems were qualified by sex × culture interactions, indicating sex differences in the Thai but not the U.S. sample. Nonetheless, 40 specific problems, as well as undercontrolled scores and total problem scores, showed sex effects that were robust across the Thai and U.S. samples. And not one specific problem or composite score showed significantly higher scores for girls than boys. Boys were even rated higher than girls on problems often stereotypically linked to girls, such as No. 30 "fears school" and No. 45 "nervous, highstrung, tense". Other research on school behavior in Thailand (e.g. Suboosan, 1983) and the U.S. (e.g. Achenbach & Edelbrock, 1986) has shown that boys have more behavior problems than girls, but the consistency of the gender differences found here—across both undercontrolled and overcontrolled problems—is unusual and noteworthy.

Unlike the sex differences, the age differences found here were small and barely exceeded chance expectations.

Finally, we consider the present findings in light of the *problem suppression–facilitation model*—the idea that culturally mediated values, expectancies and child-rearing practices may suppress the development of certain types of child problems and foster the development of others. The model and much of the literature on Thai culture are consistent with the findings of two previous studies, indicating that Thai children show proportionally more overcontrolled behavior than American children (Weisz *et al.*, 1987a,b).

In the parent-report study, we discussed the notion that the traditional, Buddhist-influenced Thai emphasis on quietness, inhibition and deference might foster development of overcontrolled problems. The present findings are consistent with this reasoning in that overcontrolled problems were again found to be more prevalent in Thai than in American children. However, undercontrolled problems were also

reported to be more prevalent in the Thai than in the American sample, a finding which does not appear to support the model. Two other aspects of the present findings mitigate this negative implication and suggest that the suppression–facilitiation model may fit the data reasonably well: (1) the Thai–American difference was significantly greater for overcontrolled than for undercontrolled problems ($p < 0.0001$); (2) in the Thai sample, overcontrolled problems were significantly more prevalent than undercontrolled problems ($p < 0.0001$), whereas in the U.S. sample, the difference was non-significant and in the reverse direction. The second finding is particularly important: it suggests that even when reporting source (Thai teachers) is held constant, there is still evidence that Thai children are particularly susceptible to overcontrolled problems.

Taken together, the present findings and the earlier parent-report findings carry an important implication for students of culture and psychopathology: it may be overly simplistic to discuss "the impact of culture on child problem behavior" without specifying the intracultural setting in which child behavior will be studied (e.g. home versus school) and the individuals who will be reporting on the children's behavior (e.g. parents versus teachers). As we have seen here, "cultural effects" on child behavior may differ substantially according to where the children are observed and who does the observing.

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