

Bullying in Middle Schools: An Asian-Pacific Regional Study

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This study discusses and compares five types of bullying in middle schools among ten Asia-Pacific countries. The study does this in the following ways. It explores the impact of students' genders and family backgrounds on the bullying, finds interactions of the victimization of bullying and relevant attitudes toward schools, teachers and schoolmates, and reveals the relationships between the experiences of bullying and the difficulties, pressures and achievements of academic study in each country. The findings provide meaningful reference points for understanding students' ethics and behavior education, schools' counseling and support systems (as well as the general improvement of the situation in the Asia-Pacific region), and for cross-cultural education comparisons.

Keywords: bullying, stolen, hurt, made fun of, left out, do things didn't want, cross-cultural comparison, TIMSS

Background

Over the past decades, concerns as to the prevalence of social problems experienced by children and youth has increased, such as bullying and depression. Schools can influence the likelihood of students having these types of problems (McKenzie, 2004; Stover, 2006). Bullying robs children of dignity and could have adverse consequences for their social, emotional, behavioral, and academic development (Dombrowski & Gischlar, 2006). As violence in schools continues, questions have been raised about the ethical and spiritual climate of our youth (Dixon, 2004). Victimized children were often found to have impairments in their psychological, behavioral, cognitive, and academic functioning, and these difficulties also included noncompliance, increased

tantrums, aggression directed toward peers and adults, poor peer relationships, emotional problems, and social-skills deficits as a result of social-cognitive processing distortions (Dombrowski, Ahia, & McQuillan, 2003). Research showed that poor grades, parental abuse, and gang affiliation were significant risk factors associated with higher frequency of fighting (Wright & Fitzpatrick, 2006). Factors most strongly related to bullying were affiliation with risk-taking peers, lower levels of assertiveness and self-esteem, and girls also had higher levels of distress, social anxiety, and association with risk-taking peers (Hektner & De Jong, 2007). Many children survived trauma, adaptively integrating the experience and developing normally, and school psychologists should have a solid working knowledge of etiological and diagnostic implications of posttraumatic stress disorder (Cook-Cottone, 2004). Bullying has influenced the overall development of symptoms and severity of the individual's experiences, and these repeated traumatic events appear to disrupt the individual's sense of trust in self, others, and the world (Carney, 2008). Schools have played a critical role in identifying and preventing child abuse and neglect, and have served as the system that bridged the family and community

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into a social network for children, and schools also can create an ethos of caring and support where all children feel safe, valued and loved (Massey-Stokes, 2004). The research also found relationships between bullying in schools and suicidal ideation among young people (Heled & Read, 2005), which were also affected by student genders (Schepp, Jang, & Koo, 2006). Teachers and students were often unsure how to address these behaviors; from insulting remarks and verbal abuse to violence (Clark & Springer, 2007). A range of socioeconomic, health states, behavioral habits, education, language backgrounds and depressive symptoms were examined as bullying mediators (Jorm, Anstey, Christensen, & Rodgers, 2004).

Singh and McWilliam (2005) have outlined the concepts that cultural globalization, risk taking in society and the sociology of childhood have played important roles in child care/protection. There have been a number of reports about bullying in schools from Asia Pacific countries. In Japan, the public emphasized physical aggression, followed by neglect, economic maltreatment, emotional abuse, verbal abuse, blame, and psychological abuse (Arai, 2006), and these forms of mistreatment have been seen in immigrant contexts (Yoshihama, 2002). From comparisons of the views of Hong Kong students, parents and teachers from the perspectives of emotions, stress management, and interpersonal skills, Wong and his colleagues (2005) found adolescents tended to report more stress from studying and under-report socially undesirable behaviors. In South Korea, the rates of delinquent behavior were much lower among females than among males, and females were much less involved in antisocial, aggressive, and psychopathic delinquent behaviors (Kim & Kim, 2005). While experiencing anger, females were more inclined than males to accept and tolerate verbal abuse, suppress feelings, and attempt to please the abusers in the Philippines (Esteban, 2006). A research program in New Zealand used dramatic processes to create opportunities to prevent child abuse, neglect, and violence (O'Connor, O'Connor, & Welsh-Morris, 2006). There was a strong need for in-service and pre-service education about child abuse among nurses and counselors in Taiwan (Feng & Levine, 2005). In Malaysia, school time constraints, higher administrative costs, negative acceptance/support and problems related to the imposed rigid procedural requirements were among the challenges encountered by schools (Zain, Atan, & Idrus, 2004). There were significant relationships between

gender, age and external control of general, internal control of society and victimization of physical bullying in Chinese adolescents (Bi & Li, 2006). Research has also indicated that staff at all school levels underestimated the number of students involved in frequent bullying, and staff with greater efficiency for handling bullying situations were more likely to intervene and less likely to make the bullying situation worse (Bradshaw, Sawyer, & O'Brennan, 2007).

Although research programs involving the examination of bullying in schools have been conducted in certain Asia Pacific countries, a systemic comparison and analysis on bullying cross Asia Pacific schools has not been undertaken. As a rapidly developing region, Asia-Pacific countries have similar cultural and societal concepts, traditions, and experiences. In educational research fields, it was especially valuable to compare teachers, students, and school environments among the countries, and discussions of these results can promote communication, collaboration and development within the region (Hinaga, 2004; Marcotullio, 2006; Marginson, 2004; Romano, Goh, & Wahl, 2005). Studies of bullying in schools were meaningful, but bullying was difficult to address, particularly at the secondary school level (Brunner & Lewis, 2007). To gain an insight into the trends and differences of bullying in secondary schools across the region, and relationships between the bullying and factors of students' genders, families, attitudes and academic study, a large international database, and the results of the Third International Mathematics and Science Study (TIMSS) were used. The findings should generate meaningful information and possible explanations for some of the factors, influences and possible remedies at work in the field of bullying in schools of the Asia Pacific region, and provide indications for further possible research.

Methods

Sources for the Data

The TIMSS began in 1995, and it was re-assessed in 1999 and 2003. This study used the items from the TIMSS 2003 Student Questionnaire. The variables mainly included five types of bullying in schools (see Appendices in detail). The students' nationality, genders, family backgrounds, their attitudes toward schools, teachers and schoolmates, and

students' academic study difficulties, pressures and achievement scores (Mathematics and Science) were also included.

Participants

Based on countries available in the TIMSS 2003 database, a total of 54,383 eighth grade students in ten Asian-Pacific countries were chosen as the sample, which included 4,614 Australians, 4,935 Hong Kong Chinese, 5,542 Indonesians, 4,835 Japanese, 5,297 Koreans, 5,287 Malaysians, 3,652 New Zealanders, 6,840 Filipinos, 6,008 Singaporeans, and 5,373 Taiwanese. Sampling weights were used in the data analysis processes (Lepore & Warren, 1997; Marsh & Yeung, 1998), therefore, the results represented all students of the same grade in the ten countries more accurately.

Statistical Analysis

The descriptive methods and figures were used to show the general trends of the five types of bullying in schools. Chi-Square analysis was conducted to compare the bullying between male and female students. Multiple linear regression was applied to analyze the influences of students' family backgrounds on bullying. A t-test was used to reveal the impact of the bullying on students' attitudes toward schools, teachers and schoolmates, and the Spearman Correlation was employed to explore the relationships between students' experiences of bullying and academic study difficulties, pressures and achievement in each country.

Results

Comparisons of Bullying in Schools by Country

General views. Figure 1 shows the rates of the five types of bullying in schools by country. The highest percentage of bullying type were 'made fun of or being called names' in a majority of the schools, and relative low rates were shown for being ostracized by peers ('left out of activities by others') and 'made to do things I did not want to do' with the exception of a few countries. The differences of bullying were significant between the ten participant countries. Students in Philippine had the highest rates of all types of bullying, but the rates in Japan and Korea were lower than those of other countries.

Types of Bullying in schools. In nine countries, most students reported that they had not been bullied in schools. In Korea, Japan and Malaysia, more than fifty percent of students had never been victims of bullies in schools; only in the Philippines was this rate low (fifteen percent). On the other hand, only a few students reported to have experienced more than one type of bullying problem in schools. In seven countries, only two to seven percent of students experienced four or five types of bullying, in Australia (8.5%) and New Zealand (9.3%), the rates were a little higher, but in the Philippines, more than sixteen percent of students had experiences of four or five types of harassment by bullies.

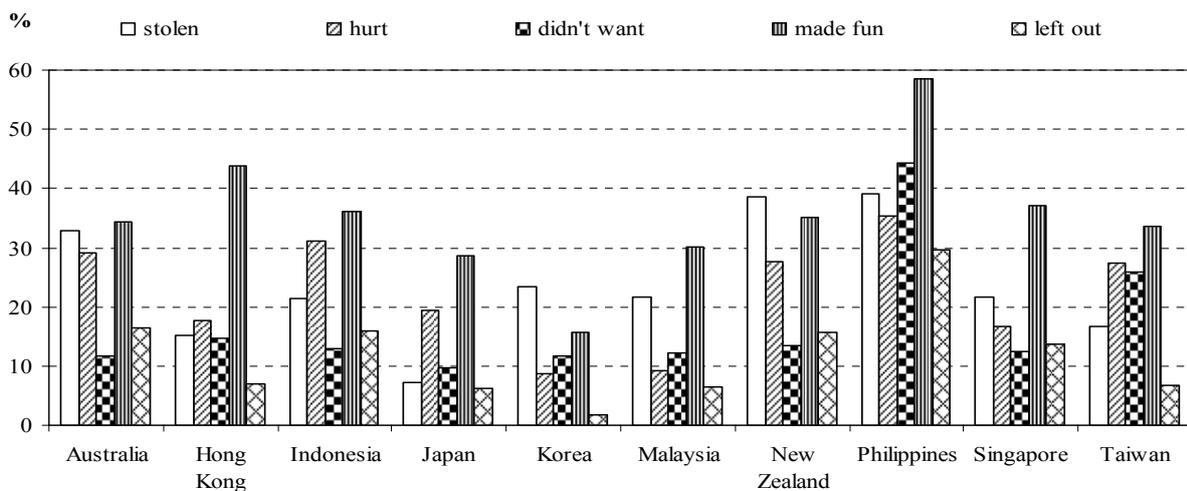


Figure 1. Harassment of Bullying in Schools by Country

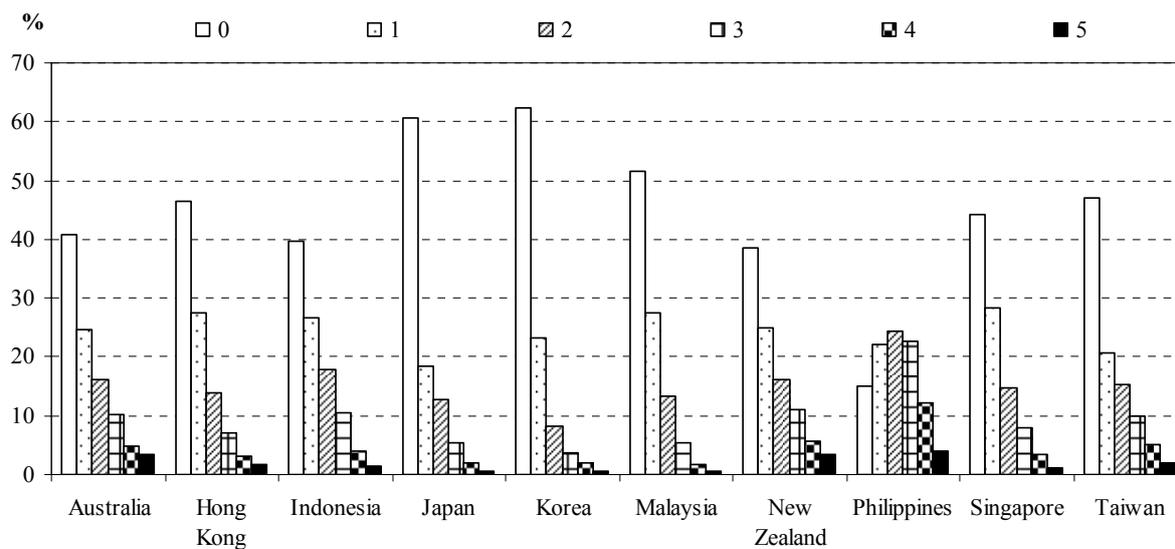


Figure 2. Multifold Bullying by Country

Table 1
Chi-Square to Compare Harassment of Bullying between Male and Female Students

		stolen		hurt		didn't want		made fun		left out	
		%	χ^2 / p	%	χ^2 / p	%	χ^2 / p	%	χ^2 / p	%	χ^2 / p
Australia	F	26.3	95.5	19.8	199.4	9.5	23.2	28.9	63.3	16.8	0.7
	M	39.9	***	38.7	***	14.0	***	40.1	***	16.0	
Hong Kong	F	12.6	24.9	10.0	201.5	11.9	29.8	38.4	62.1	4.6	42.7
	M	17.7	***	25.4	***	17.4	***	49.6	***	9.4	***
Indonesia	F	21.0	0.9	26.8	47.2	8.9	86.5	33.6	13.8	13.7	20.9
	M	22.0		35.4	***	17.4	***	38.4	***	18.2	***
Japan	F	5.7	15.1	8.5	356.5	7.4	29.2	24.5	39.5	6.7	2.6
	M	8.6	***	30.0	***	12.0	***	32.7	***	5.6	
Korea	F	16.4	133.9	2.7	228.4	7.8	74.8	9.9	126.4	1.7	0.8
	M	29.9	***	14.4	***	15.5	***	21.2	***	2.0	
Malaysia	F	18.6	43.7	4.4	206.6	11.8	0.8	26.7	36.9	5.6	10.2
	M	26.2	***	16.0	***	12.6		34.5	***	7.8	**
New Zealand	F	31.5	81.3	18.0	181.5	10.9	21.0	28.8	65.0	15.7	0.0
	M	46.0	***	37.9	***	16.1	***	41.6	***	15.8	
Philippines	F	38.1	4.2	33.2	17.8	41.7	23.3	58.4	0.2	26.2	50.1
	M	40.6	*	38.2	***	47.6	***	58.9		34.1	***
Singapore	F	16.8	82.5	11.6	105.7	11.2	9.2	32.8	47.3	14.7	3.9
	M	26.5	***	21.4	***	13.8	**	41.4	***	12.9	*
Taiwan	F	12.4	71.2	20.5	126.3	22.2	36.8	29.6	35.8	3.8	70.3
	M	21.0	***	34.2	***	29.4	***	37.4	***	9.6	***

all df = 1; * $p < .05$, ** $p < .01$, & *** $p < .001$.

Comparisons of Bullying in Schools between Male and Female Students

The Chi-Square results showed that more male students were victims of four types of bullying in schools than female students were. Many male students 'were hit or hurt by others' than females were in all participant countries. In Japan, Korea, Hong Kong, Malaysia, Australia, New Zealand and Singapore, about double the number or more of male students were categorized as this type of victim than females. Male students also reported more incidence of 'something was stolen', 'were made fun of' or made to 'do things they did not want to do' more than females in nine countries. Nevertheless, in Australia, New Zealand, Singapore, Japan and Korea, both male and female students reported being 'left out of activities by others' in schools at similar rates.

Students' Family Backgrounds and Bullying in Schools

Family backgrounds was composed of five parts: learning tools in the home, books in the family home, parents' highest education levels, immigration status and language problems. In general, students' family backgrounds did not have a great influences on children's experiences of bullying in schools, and these prediction rates for bullying

(the r square values in regressions) were low (< 1.0% in nine countries, & 1.5% in Japan). However, in every country, at least one element of family background was significantly related with the bullying in schools. The results of the multiple regression revealed that in some schools, students who had more language problems or whose families had more books tended to have more experiences of bullying in schools, but students whose homes had more learning tools (calculators, computers, desk and dictionary) experienced fewer incidence of bullying in schools. In Taiwan, the Philippines, Korea and Indonesia, students who were immigrants (parents or themselves who had immigrant recently) or language problems seemed to be more victimized by bullying, but this was not the case in Hong Kong. Parents' education levels did not have a strong relationship with the suffering from bullying in schools except in cases of the Philippines and Korea.

Bullying in Schools and Students' Attitudes toward Schooling

The results of the t-test revealed that students' experiences of bullying in schools had significantly negative implications for students' attitudes toward schools, teachers and classmates. Almost all t values were positive, which meant that students who had no experience of bullying (No)

Table 2
Multiple Regression for Harassment of Bullying in School by Family Backgrounds

	Learning Condition			Numbers of Books			Parents' Education			Immigrant Condition			Language			r ²
	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	
Australia	-0.06	-3.80	***	0.06	3.59	***	-0.01	-0.75		-0.02	-1.22		0.03	1.84		.006
Hong Kong	-0.04	-2.47	*	0.06	3.90	***	-0.01	-1.00		-0.04	-2.48	*	0.02	1.67		.006
Indonesia	-0.01	-0.83		0.03	2.02	*	0.00	0.15		0.03	2.55	*	-0.02	-1.54		.003
Japan	-0.01	-0.86		0.04	3.05	**	0.03	2.02	*	-0.02	-1.32		0.11	7.62	***	.015
Korea	-0.01	-1.04		0.04	2.47	*	-0.04	-3.04	**	0.04	2.81	***	0.05	3.29	**	.006
Malaysia	-0.03	-1.96	*	0.02	1.41		0.01	0.79		0.02	1.20		-0.01	-0.52		.001
New Zealand	-0.04	-2.17	*	0.02	1.39		-0.01	-0.87		-0.02	-1.08		0.07	3.41	***	.005
Philippines	-0.02	-1.78		-0.01	-0.98		-0.06	-4.41	***	0.04	3.52	***	0.02	1.24		.007
Singapore	-0.08	-5.79	***	0.00	0.17		0.00	0.24		-0.02	-1.56		0.03	2.20	*	.008
Taiwan	-0.02	-1.38		0.03	1.95		-0.01	-0.42		0.05	3.79	***	0.01	0.49		.004

* $p < .05$, ** $p < .01$, *** $p < .001$.

had better attitudes than those who had (Yes). The results from Australia, Japan and Singapore were typical cases of these negative relationships, and students who were bullied in schools tended to have negative attitudes toward schools,

teachers and classmates. Some expectations were that those students who ‘were made fun of by others’ did not have very bad attitudes toward schools or teachers. However, in schools, most bullying was by other students, many

Table 3

T-test Comparison of Students' Attitudes toward School † between Whether Being Bullied in School

		stolen		hurt		didn't want		made fun		left out	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Australia	Mean	2.91	2.73	2.89	2.73	2.87	2.67	2.89	2.78	2.87	2.74
	SD	0.89	0.96	0.90	0.96	0.90	1.01	0.90	0.94	0.90	0.99
	df / t(p)	4591	6.2***	4593	5.5***	4591	4.9***	4582	3.8***	4587	3.6***
Hong Kong	Mean	2.79	2.70	2.79	2.71	2.77	2.76	2.77	2.77	2.78	2.72
	SD	0.76	0.86	0.76	0.84	0.76	0.85	0.76	0.79	0.77	0.88
	df / t(p)	4920	2.6***	4916	2.8**	4917	0.4	4921	0.2	4920	1.4
Indonesia	Mean	3.47	3.50	3.48	3.47	3.49	3.42	3.49	3.46	3.48	3.49
	SD	0.54	0.55	0.54	0.55	0.54	0.58	0.54	0.56	0.54	0.56
	df / t(p)	5495	-1.9	5476	0.2	5461	3.2**	5443	1.8	5463	-0.7
Japan	Mean	2.91	2.70	2.94	2.75	2.92	2.69	2.97	2.73	2.93	2.46
	SD	0.82	0.89	0.81	0.85	0.82	0.88	0.81	0.85	0.81	0.89
	df / t(p)	4815	4.7***	4816	6.2***	4810	5.9***	4815	9.2***	4814	9.5***
Korea	Mean	2.83	2.73	2.83	2.59	2.82	2.67	2.83	2.67	2.81	2.47
	SD	0.72	0.79	0.72	0.87	0.73	0.82	0.73	0.78	0.74	0.89
	df / t(p)	5246	4.3***	5244	6.7***	5244	4.7***	5244	5.6***	5245	4.4***
Malaysia	Mean	3.34	3.28	3.34	3.26	3.35	3.21	3.34	3.31	3.34	3.21
	SD	0.62	0.69	0.63	0.69	0.63	0.69	0.63	0.65	0.63	0.71
	df / t(p)	5197	2.9**	5202	2.6*	5200	4.9***	5189	1.4	5196	3.6***
New Zealand	Mean	3.01	2.91	3.00	2.89	2.99	2.83	2.98	2.95	2.98	2.91
	SD	0.83	0.93	0.84	0.93	0.84	1.02	0.85	0.90	0.86	0.93
	df / t(p)	3625	3.3***	3632	3.5***	3627	4.0***	3616	1.0	3622	1.7
Philippines	Mean	3.58	3.57	3.58	3.56	3.60	3.55	3.58	3.57	3.62	3.48
	SD	0.64	0.68	0.66	0.66	0.63	0.69	0.65	0.67	0.62	0.72
	df / t(p)	6745	0.4	6756	1.0	6718	2.9**	6719	0.2	6757	7.9***
Singapore	Mean	3.24	3.14	3.23	3.15	3.23	3.10	3.25	3.17	3.24	3.06
	SD	0.72	0.82	0.73	0.81	0.73	0.83	0.73	0.76	0.73	0.84
	df / t(p)	5951	4.1***	5952	3.3**	5950	4.6***	5950	4.1***	5952	6.5***
Taiwan	Mean	2.78	2.71	2.79	2.70	2.79	2.70	2.79	2.72	2.78	2.63
	SD	0.80	0.88	0.81	0.85	0.80	0.86	0.81	0.84	0.81	0.92
	df / t(p)	5361	2.1*	5360	3.4***	5359	3.4***	5360	3.0**	5359	3.4***

†Attitudes toward school: Like being in school (range 1-4, disagree to agree)

* $p < .05$, ** $p < .01$; *** $p < .001$.

victimized students had very negative attitudes toward teachers, and they thought that teachers did not care about the students or did not want students to do their best. The results in the Philippines were somewhat different from other countries, and there were no significant differences in

students' attitudes toward schools, teachers and classmates between whether they were hurt or made fun of by others. One possible explanation could be that the bullying problems are a relatively common experience there.

Table 4

T-test Comparison of Students' Attitudes toward Teachers † between Whether are Bullying in School

		stolen		hurt		didn't want		made fun		left out	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Australia	Mean	3.28	2.98	3.24	3.01	3.21	2.90	3.23	3.08	3.20	3.07
	SD	0.72	0.84	0.74	0.84	0.75	0.90	0.75	0.81	0.76	0.84
	df / t(p)	4591	12.6***	4592	9.1***	4590	8.9***	4581	6.4***	4587	4.3***
Hong Kong	Mean	3.14	2.94	3.13	3.03	3.13	3.00	3.12	3.10	3.12	2.96
	SD	0.59	0.71	0.59	0.67	0.59	0.72	0.60	0.63	0.60	0.77
	df / t(p)	4916	8.3***	4912	4.3***	4913	5.1***	4917	0.9	4916	4.6***
Indonesia	Mean	3.54	3.53	3.54	3.53	3.55	3.46	3.54	3.53	3.55	3.48
	SD	0.46	0.49	0.46	0.47	0.45	0.53	0.46	0.47	0.45	0.53
	df / t(p)	5496	0.6	5480	0.9	5463	5.1***	5445	0.5	5466	4.3***
Japan	Mean	2.99	2.78	3.00	2.91	3.00	2.79	3.00	2.93	2.99	2.82
	SD	0.64	0.76	0.63	0.71	0.63	0.75	0.63	0.70	0.64	0.79
	df / t(p)	4816	5.9***	4817	3.8***	4811	6.7***	4816	3.1**	4815	4.2***
Korea	Mean	3.05	2.92	3.03	2.90	3.03	2.91	3.03	2.98	3.02	2.96
	SD	0.56	0.63	0.57	0.70	0.57	0.64	0.57	0.62	0.57	0.81
	df / t(p)	5249	7.2***	5246	4.6***	5246	4.8***	5246	1.8	5247	0.9
Malaysia	Mean	3.68	3.62	3.67	3.58	3.68	3.54	3.67	3.65	3.67	3.52
	SD	0.47	0.52	0.47	0.54	0.47	0.55	0.48	0.49	0.47	0.55
	df / t(p)	5198	3.4***	5204	4.2***	5201	6.6***	5190	1.1	5197	5.7***
New Zealand	Mean	3.34	3.15	3.32	3.14	3.29	3.12	3.29	3.23	3.29	3.16
	SD	0.68	0.81	0.70	0.82	0.72	0.86	0.73	0.77	0.73	0.81
	df / t(p)	3630	7.8***	3637	6.8***	3632	4.9***	3621	2.4*	3627	4.0***
Philippines	Mean	3.64	3.57	3.62	3.60	3.67	3.54	3.63	3.60	3.69	3.42
	SD	0.59	0.66	0.62	0.62	0.57	0.67	0.61	0.63	0.56	0.71
	df / t(p)	6749	4.9***	6763	1.2	6726	8.8***	6728	1.7	6765	16.6***
Singapore	Mean	3.43	3.27	3.41	3.29	3.41	3.29	3.42	3.36	3.42	3.25
	SD	0.62	0.71	0.63	0.70	0.63	0.69	0.63	0.66	0.63	0.72
	df / t(p)	5953	7.6***	5955	5.4***	5953	4.9***	5953	3.5***	5955	7.2***
Taiwan	Mean	3.32	3.15	3.32	3.21	3.32	3.21	3.30	3.27	3.30	3.19
	SD	0.67	0.76	0.67	0.72	0.67	0.73	0.68	0.71	0.69	0.75
	df / t(p)	5361	6.8***	5359	5.5***	5358	4.9***	5359	1.8	5358	2.8**

† Attitudes toward teachers: Teachers care about students and want students to do their best (range 1-4, disagree to agree)

* $p < .05$, ** $p < .01$; *** $p < .001$.

Table 5

T-test Comparison of Students' Attitudes toward Students † between Whether are Bullying in School

		stolen		hurt		didn't want		made fun		left out	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Austra- lia	Mean	2.78	2.54	2.78	2.53	2.73	2.51	2.80	2.53	2.73	2.58
	SD	0.83	0.92	0.84	0.90	0.85	0.95	0.83	0.89	0.85	0.93
	df / t(p)	4586	8.9***	4588	9.0***	4586	5.5***	4577	10.1***	4582	4.3***
Hong Kong	Mean	2.58	2.52	2.60	2.46	2.59	2.48	2.59	2.55	2.58	2.49
	SD	0.76	0.84	0.75	0.85	0.76	0.85	0.76	0.79	0.76	0.87
	df / t(p)	4915	2.2*	4911	4.8***	4912	3.6***	4916	2.0*	4915	2.2*
Indo- nesia	Mean	2.96	2.96	2.97	2.91	2.97	2.86	2.99	2.89	2.95	3.01
	SD	0.61	0.66	0.61	0.65	0.61	0.68	0.61	0.64	0.62	0.64
	df / t(p)	5460	-0.1	5447	3.3**	5433	4.3***	5415	5.7***	5435	-2.6*
Japan	Mean	2.68	2.45	2.70	2.52	2.69	2.49	2.73	2.51	2.69	2.35
	SD	0.72	0.81	0.71	0.78	0.71	0.81	0.70	0.76	0.71	0.81
	df / t(p)	4808	5.7***	4809	7.0***	4803	5.6***	4808	9.3***	4808	7.6***
Korea	Mean	2.69	2.56	2.68	2.48	2.68	2.53	2.69	2.53	2.66	2.54
	SD	0.71	0.78	0.72	0.80	0.72	0.80	0.72	0.77	0.72	0.90
	df / t(p)	5238	5.6***	5236	5.7***	5236	4.8***	5236	5.7***	5237	1.7
Malay- sia	Mean	3.34	3.31	3.34	3.22	3.34	3.24	3.35	3.28	3.34	3.22
	SD	0.67	0.73	0.67	0.77	0.67	0.75	0.66	0.73	0.67	0.81
	df / t(p)	5198	1.0	5203	3.6***	5201	3.4***	5190	3.5***	5197	3.1**
New Zealand	Mean	2.86	2.73	2.86	2.67	2.82	2.77	2.87	2.70	2.84	2.68
	SD	0.81	0.89	0.83	0.88	0.83	0.92	0.82	0.89	0.84	0.90
	df / t(p)	3616	4.4***	3624	6.2***	3618	1.2	3607	6.0***	3613	4.1***
Philip- pines	Mean	3.48	3.45	3.48	3.46	3.50	3.43	3.46	3.48	3.52	3.35
	SD	0.69	0.71	0.69	0.70	0.68	0.72	0.70	0.70	0.67	0.75
	df / t(p)	6745	1.6	6758	1.0	6722	4.1***	6721	-0.7	6762	9.2***
Singa- pore	Mean	3.07	2.95	3.07	2.95	3.06	2.92	3.10	2.95	3.07	2.88
	SD	0.79	0.87	0.79	0.92	0.80	0.90	0.78	0.85	0.79	0.90
	df / t(p)	5948	4.6***	5950	4.2***	5948	4.6***	5948	7.2***	5950	6.1***
Taiwan	Mean	2.74	2.71	2.75	2.68	2.75	2.68	2.76	2.68	2.73	2.73
	SD	0.80	0.84	0.80	0.83	0.79	0.84	0.79	0.83	0.80	0.90
	df / t(p)	5359	0.8	5359	2.9**	5357	3.0**	5359	3.3***	5358	0.1

†Attitudes toward students: Students try to do their best (range 1-4, disagree to agree)

* $p < .05$, ** $p < .01$; *** $p < .001$.

Table 6

Correlation between Harassment of Bullying in Schools and Difficult Levels in Learning

	Australia	Hong Kong	Indonesia	Japan	Korea	Malaysia	New Zealand	Philippines	Singapore	Taiwan
Learning Difficulty Levels										
Stolen	0.082***	0.080***	0.037**	0.009	0.019	0.065***	0.071***	0.102***	0.071***	0.035**
Hurt	0.063***	0.028	0.047***	0.003	0.004	0.052***	0.055***	0.080***	0.075***	0.044**
Didn't want	0.113***	0.067***	0.041**	0.021	0.039**	0.017	0.117***	0.139***	0.096***	0.065***
Made fun	0.061***	0.025	0.026	0.030*	0.009	0.062***	0.054**	0.082***	0.070***	0.041**
Left out	0.094***	0.044**	0.045***	0.053***	0.018	0.067***	0.073***	0.169***	0.072***	0.043**

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7

Correlation between Harassment of Bullying in Schools and Psychological Pressure for Learning

	Australia	Hong Kong	Indonesia	Japan	Korea	Malaysia	New Zealand	Philippines	Singapore	Taiwan
Psychological Pressure Levels										
Stolen	0.037*	0.010	0.025	0.030*	0.029*	0.020	0.042	-0.001	-0.011	0.010
Hurt	0.037*	0.028	-0.023	0.063***	0.003	-0.021	0.063***	-0.028*	-0.003	0.024
Didn't want	0.030*	0.031*	-0.009	0.021	0.020	0.001	0.055***	-0.082***	0.000	0.025
Made fun	0.050***	0.039**	-0.014	0.065***	0.058***	0.005	0.078***	-0.012	-0.003	0.025
Left out	0.047**	0.052***	0.005	0.034*	-0.039**	-0.020	0.044**	-0.136***	0.024	0.040**

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 8

Correlation between Harassment of Bullying in Schools and Academic Achievements

	Australia	Hong Kong	Indonesia	Japan	Korea	Malaysia	New Zealand	Philippines	Singapore	Taiwan
Academic Achievements										
Stolen	-0.096***	-0.108***	-0.096***	-0.068***	-0.037**	-0.098***	-0.153***	-0.130***	-0.168***	-0.094***
Hurt	-0.028	-0.067***	-0.012	0.022	-0.041**	-0.087***	-0.039*	-0.046***	-0.115***	-0.063***
Didn't want	-0.096***	-0.038**	-0.027*	-0.047**	-0.001	-0.002	-0.148***	-0.157***	-0.094***	-0.056***
Made fun	-0.002	0.020	0.053***	0.007	0.066***	-0.053***	-0.025	-0.053***	-0.111***	-0.014
Left out	-0.053***	-0.014	-0.146***	-0.054***	-0.062***	-0.063***	-0.012	-0.259***	-0.017	-0.045***

* $p < .05$, ** $p < .01$, *** $p < .001$.

Bullying in Schools Influenced Academic Study

From Table 6, students who had academic difficulties were more likely to be bullied in schools. It was especially true in Australia, New Zealand, Philippines, Singapore and Taiwan, but it was not very noticeable in Korea and Japan. In Japan, students with study difficulties experienced more occurrences of being 'left out activities by others'.

What were students' views and pressures of academic study when they were bullied in schools? Table 7 presented that in Australia, New Zealand, Japan, and Hong Kong, students had higher pressures from academic study when they were bullied in schools. This meant that these victimized students had greater needs and pressures to study well for better future jobs/universities and to change the current situation of being bullied in schools. However, this was not true in the Philippines, Indonesia, Malaysia and Singapore.

Basically, there were negative relationships between the experiences of bullying in schools and students' academic achievements (see Table 8). Students who had lower achievement scores tended to report more incidences of being bullied in schools, except for being 'made fun of by others'. Only in Malaysia, the Philippines and Singapore, students with poor achievements reported being 'made fun of by others' more, but in Korea and Indonesia, these students tended to have fewer incidence of being bullied in schools.

All correlation coefficients of the ten countries in Table 6 were positive, and most were statistically significant, and in Table 8, basically, bullying had significantly negative impacts upon students' academic achievements, except being for the type being 'made fun of by others' in a few countries. These consistent coefficients showed that students' experiences of bullying in schools were associated with their levels of learning difficulty and hindered their academic learning in the Asia-Pacific countries examined here.

Discussion and Conclusions

Usage of an international database may reveal important educational status, tendencies, lessons, focuses, and key topics for further research, and reveal existing

relationships and developing trends at a worldwide level. However, it is impossible to solve particular problems through reference to an international database, especially for explanations of internal reasons in the procedures and results (Lai, Chang, & Ye, 2006). Some important findings in this study may be discussed and concluded from the results.

The most common type of bullying in the Asia Pacific middle schools is of 'students being made fun of or being called names'. Of course, the highest percent does not equate to a similar situation in all countries, and the differences of bullying among the ten participant countries are very large. Most students (> 64%) experience almost no bullying, but a few (2-9%) students are manifold types of bullied victims in schools. In the Philippines, the situation (high rates) is more serious.

Male students have more serious experiences of bullying in schools than female students. Only in some countries, are females 'left out of activities by other students' as often as males are. We should pay attention to the very high percentage of males (20-30%) that 'were hit or hurt by other students', and these differences are significant at the statistically highest level (error less than one thousandth) without any expectations. These results basically matched the conclusions of the Western countries that boys are physically victimized more than girls are (Davidson & Demaray, 2007).

Family backgrounds have medium relationships with bullying in schools. Students' immigration status and language problems have some positive relationships with experiences of bullying, but it is not confirmed in some countries. Learning tools (which homes are wealthy or provide good learning environments) are negatively related with the suffering of bullies in schools, but the numbers of books at home tend to be positively related to bullying in schools. The relationships between family backgrounds and bullying confirmed Peckham's finding (2007) that certain students are more susceptible to becoming victims of bullying, and both victims and bullies are often involved in other forms of victimization outside the school, such as within the family and community.

A meaningful finding of this study is that all types of bullying in secondary schools are closely related with students' attitudes toward schools, teachers, classmates, and their academic progress. Basically, these relationships are negative except for those students who 'were made fun of by

others', the case of which do not seem very serious. The relationships between study pressures and bullying vary by country. In Australia, Japan and New Zealand, the experiences of bullying pushed students to study harder to get good grades, but this type of pressure does not exist in the Philippines, Indonesia, Malaysia and Singapore. It seems to be a vicious circle, more experiences of bullying results in bad attitudes toward schools, complaints about teachers, dislike of one's classmates, poor academic achievements - difficulties and pressures for study - more experiences of bullying. Students in this vicious circle are more likely to engage in violence or create an unsafe school environment. These students should be the focus of greater attention by teachers, counselors and administrators.

School professionals are confronted with myriad challenges throughout their working day, and recognizing and reporting child mistreatment is one of these challenges (Dombrowski & Gischlar, 2006). In middle schools, administrators, counselors, teachers and parents should pay more attention and focus on the prevention of bullying. One of the most effective anti-bullying strategies for secondary students and staff members is an ongoing conversation on social responsibility (Brunner & Lewis, 2008). Future studies and discussions aimed at acquiring a deeper understanding of the processes involved in bullying should include the influences of teachers, students, schools, families and communities in each country. When comparing other countries, we strongly suggest that educational researchers should explore shortcomings and problems in each country, and should seek out, discuss and design effective methods to improve students' schooling.

Note

¹ The term 'country' in this paper is from the TIMSS unit, which does not involve any political argument.

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Appendix

Items from TIMSS 2003 Student Questionnaire (8th grade)

3. How often do you speak <language of test> at home?
Answer: 1-Never; 2-sometimes; 3-Almost always; 4-always
4. About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)
Answer: 1-0-10; 2-11-25; 3-26-100; 4-101-200; 5->200
5. Do you have any of these items at your home?
 a) Calculator
 b) Computer
 c) Study desk/table for your use
 d) Dictionary
Answer: Yes or No
 [Means of a) - d): Learning condition]
6. a) What is the highest level of education completed by your mother (or stepmother or female guardian)?
 b) What is the highest level of education completed by your father (or stepfather or male guardian)?
Answer: rang 1-- 8, education level from low to high
 [Means of a) & b): parents' education]
- 8/11. How much do you agree with these statements about learning mathematics/science?
 a) I usually do well in mathematics/science (opposite)
 c) Mathematics/science is more difficult for me than for many of my classmates
Answer: 1-Disagree a lot; 2-Disagree a little; 3-Agree a little; 4-Agree a lot
 [Means of a) & c) both 8 & 11 (4 items): difficult level in learning]
- 9/12. How much do you agree with these statements about mathematics/science?
 c) I need to do well in mathematics/science to get into the <university> of my choice
 e) I need to do well in mathematics/science to get the job I want

Answer: 1-Disagree a lot; 2-Disagree a little; 3-Agree a little; 4-Agree a lot

[Means of c) & e) both 9 & 12 (4 items): psychological pressure for learning]

16. In school, did any of these things happen during the last month? (Main Items)

- a) Something of mine was stolen
 b) I was hit or hurt by other student(s) (e.g., shoving, hitting, kicking)
 c) I was made to do things I didn't want to do by other students
 d) I was made fun of or called names
 e) I was left out of activities by other students

Answer: Yes or No

28. How much do you agree with these statements about your school?

- a) I like being in school (Attitude toward school)
 b) I think that students in my school try to do their best (attitude toward students)
 c) I think that teachers in my school care about the students
 d) I think that teachers in my school want students to do their best

Answer: 1-Disagree a lot; 2-Disagree a little; 3-Agree a little; 4-Agree a lot

[Means of c) & d): attitude toward teachers]

22. a) Was your mother (or stepmother or female guardian) born in <country>?
 b) Was your father (or stepfather or male guardian) born in <country>?

Answer: Yes or No

[Means of a) & b): family immigrant]

23. a) Were you born in <country>?
Answer: Yes or No
 b) If you were not born in <country>, how old were you when you came to <country>?
Answer: 1-Younger than 5 years old; 2-5 to 10 years old; 3-Older than 10 years old
 [1-a)-yes; 2-b)-1; 3-b)-2; 4-b)-3: student immigrant]
 {Immigrant condition: combine family and student immigrant}