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A CROSS-CULTURAL VALIDATION OF ADOLESCENT SELF-CONCEPT IN TWO CULTURES: JAPAN AND SWEDEN

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The psychometric properties of the SDQII (Self-Description Questionnaire II; Marsh, 1992) were examined, and the extent to which Japanese and Swedish adolescents differ in their self-concepts and actual-ideal discrepancies was investigated. Further gender differences were explored. The SDQII and Actual-Ideal Questionnaires (designed for this study) were administered to 144 Japanese and 96 Swedish adolescents (range = 14 to 15 years). The main results show that the psychometric properties of the SDQII were satisfactory in both cultures, making these instruments useful in further investigations. Japanese adolescents generally reported a lower self-concept (with the exception of physical and math self-concepts) and higher self-discrepancies than did the Swedish adolescents. In addition, the gender differences were smaller compared to the influence of the cultural effect.

Keywords: self-concept, self-discrepancy, Self-Description Questionnaire II, cross-cultural, adolescence.

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The constructs of self-concept, self-image and self-esteem play key roles in the integration of personality, which unconsciously and automatically influences our feelings, thoughts, and actions. In attempting to define and distinguish these constructs, self-concept is viewed as the cognitive – descriptive aspects of self-knowledge, and self-esteem as the emotional – evaluative components. Since it is difficult to distinguish emotional and cognitive aspects from each other, the term *self-concept* is usually regarded as including both aspects. Our self-construal, however, differs by culture. Scholars have distinguished between individualism and collectivism (Hofstede, 1983), or independent and interdependent self (Markus & Kitayama, 1991). Western culture places a somewhat greater value on individuals being competent and self-sufficient, while the Eastern culture focuses on fitting in harmoniously with others and gaining a sense of belongingness and interdependence with others (e.g., Markus & Kitayama). One study showed that Sweden was more individualistic, while Japan was more collectivistic (Suh, Diener, Oishi, & Triandis, 1998). Recent studies (e.g., Gudykunst et al., 1996; Matsumoto, 1999) show that the definition of the individualism-collectivism dimension becomes very complex if used for explaining cultural differences in self-construal.

For years there has been a debate in self-concept research about the usefulness of a single one-dimensional global perspective of self-concept such as self-esteem (e.g., Rosenberg, 1965), and a multidimensional perspective of self-concept based on relatively distinct components of self-concept (e.g., emotional, social, academic, physical, etc.) (Shavelson, Hubner, & Stanton, 1976). One of the widely used instruments for one-dimensional assessment, the Rosenberg Self-Esteem Scale (Rosenberg, 1965) is concerned with how individuals feel about themselves in general, but places little emphasis on social or specific situations. Currently, the multidimensional construct is widely accepted in different psychology disciplines (e.g., social and educational psychology).

The Self-Description Questionnaire II (SDQII) (Marsh, 1992) is a self-reporting instrument for adolescents that originated with the multifaceted and hierarchical self-concept model (Shavelson et al., 1976). This instrument has been widely used in such countries as China (Yeung & Lee, 1999), Hong Kong (Marsh, Hau, & Kong, 2002), Germany (Marsh, Köller, & Baumart, 2001), and France (Guérin, Marsh, & Framose, 2003), and they have been found to provide sufficient psychometric properties. A study of Japanese children using a junior version of the SDQ instrument (SDQI) demonstrated the multidimensionality of self-concept among Japanese children (Inoue, 2004).

Kashima et al. (1995) stated that gender differences in self-concept were best summarized by the extent to which people regard themselves as emotionally related to others, while cultural differences were most pronounced on the individualistic dimension of the self, that is, the extent to which individuals see

themselves acting and expressing their opinions on their own. The collective dimension of the self was related to cultural differences, but not to the gender differences. Marsh (1989) found gender differences in specific scales in the SDQII; for example, boys had higher physical, appearance and self-esteem self-concepts while girls had higher verbal and honesty self-concepts, and that gender differences were small for parental relations and school self-concepts. The level of the self-concept decreased during preadolescence and increased during late adolescence and adulthood, and the age and gender interactions were typically small (Marsh, 1989).

Various studies have demonstrated that average levels of self-esteem vary across cultures (e.g., Chan, 2000; Dekovic, Engels, Shirai, de Kort, & Anker, 2002; Farruggia, Chen, Greenberger, Dimitrieva, & Macek, 2004), and that Japanese and other Asians generally reported lower levels of self-esteem than did their Western counterparts (i.e., Americans, British people, and Australians). Despite a number of cross-cultural studies in self-esteem, there seem to be few cross-cultural studies in the multidimensional self-concept (e.g., Marsh & Hau, 2004; Wästlund, Archer, & Norlander, 2001), and furthermore, not before adolescence. As the study focused on adolescents, it seems to be important to use a self-concept instrument including the relationship to different social and psychological factors such as issues with relations with parents and friends.

The self-discrepancy theory emphasizes a distinction between actual-self and ideal-self (Higgins, 1989). The larger self-discrepancies are a way of measuring the individual's dissatisfaction with himself or herself (Heine & Lehman, 1999). Heine and Lehman's cross-cultural study indicated that Japanese college students had larger self-discrepancies when compared to Canadian counterparts, and larger self-discrepancy was less distressing for the Japanese than for the Canadians. One explanation was that the Japanese seemed to regard themselves in a daily self-critical view. Seeing oneself further away from one's ideal is a motivation for self-enhancement (Heine & Lehman). Previous findings have provided empirical evidence that favorability biases in judging the self are generally less pronounced in Asians compared to Westerners, and there is an ongoing debate about why this is so (e.g., Brown, 2005; Heine, Takata, & Lehman, 2000; Takata, 2003).

The foregoing studies demonstrate the theoretical and empirical complexity of the construct of self-concept and self-esteem and the influence of culture. To our knowledge no validation of a Japanese version of the SDQ for *adolescents* has been performed. It would be interesting to also investigate whether the salient Japanese response style of reporting a lower level of self-concept compared to Western counterparts also appears with the use of the multidimensional self-concept (SDQII).

PURPOSES

The aims in this study were to 1) examine the psychometric properties of the SDQII, 2) examine the extent to which Japanese and Swedish adolescents differ in their self-concepts and actual-ideal discrepancies and 3) explore gender differences.

HYPOTHESES

Our hypothesis was that the Japanese adolescents would generally rate their self-concept lower in most of the subscales, and self-discrepancies higher compared to the Swedish adolescents. In addition, some gender differences in the SDQII were expected according to the early studies. The influence of culture on self-concept was expected to be stronger than the gender effect.

METHOD

PARTICIPANTS

The participants were 144 Japanese (60 boys and 71 girls) and 96 Swedish (38 boys and 45 girls) adolescents attending public schools in middle-class neighborhoods in Japan and Sweden, respectively. The mean age of the Japanese students was 14.3 years (range: 14-15) and 14.5 years (range: 14 to 15) for the Swedish students. There were 7 Japanese and 12 Swedish students who did not complete the questionnaire because they were either absent from school or unwilling to participate. Thirteen Japanese and 13 Swedish adolescents completed the questionnaires but did not mark their gender. These participants were not included in the gender analyses.

PROCEDURE

All of the materials were originally produced in English and then translated into Japanese and Swedish. The Japanese versions were translated by the author, whose mother tongue is Japanese, and the Swedish versions were translated by Swedish university students whose mother tongue is Swedish. Both of the translations were modified by schoolteachers and a principal. After two independent translators had back-translated the Japanese and Swedish versions into English, pilot studies were carried out in both languages. School authorities in both countries were contacted to obtain the necessary consent for this study. These schools were demographically similar regarding the overall population of the school, the size of the town, and the students' general socioeconomic status. The students completed the questionnaires anonymously during regular class hours reserved for the study. It took approximately 20-30 minutes to complete the questionnaires. Only information about age and gender were marked, and the participants had the opportunity to give or withhold consent.

Design

An observational and cross-sectional design, where participants were selected based on an exposure variable (i.e., Japanese or Swedish adolescents) was used.

Instruments

SDQII The SDQII is a 102-item self-report inventory including 11 subscales that measure adolescent self-concept in the following areas: (i) an overall total self-concept (total score of the SDQII), (ii) three academic scales (math, verbal and school) and (iii) seven nonacademic scales (physical, appearance, same-sex relations, opposite-sex relations, parent relations, emotional stability and honesty-trustworthiness) and self-esteem. Each of the 11 SDQII scales is based on simple declarative sentences to which the participants respond on a six-point Likert response scale ranging from 1 = *false* to 6 = *true* (see Appendix). The SDQII test manual, based on an Australian normative sample, showed good psychometric properties of the SDQII (Marsh, 1992).

The Actual-Ideal Questionnaire This questionnaire was designed for our study to measure congruency between "actual-self" and "ideal-self". The following eight comparison pairs of traits were included: 1) intelligent vs. less intelligent, 2) shy vs. not shy, 3) relaxed vs. stressed, 4) popular vs. unpopular, 5) useful vs. useless, 6) satisfied vs. dissatisfied, and 7) hopeful vs. hopeless. To reduce the positive and negative response bias, the positive and negative traits were placed in parallel, i.e., 1) "intelligent vs. less intelligent (positive vs. negative)", 2) "stressed vs. relaxed (negative vs. positive)". Each pair is rated on a six-point semantic differential scale. At first the participants were asked to rate their actual-self traits and then their ideal-self. The scores range from 1 for negative traits to 6 for positive traits. The differences between the total score of actual and ideal scales were then combined to yield an overall measure of the discrepancy between the actual and ideal self. As the pair 8) "independent vs. interdependent" is difficult to value in terms of somewhat positive or negative traits, this comparison pair was not included in the total measure of self-discrepancy.

RESULTS

Psychometric Properties of the SDQII

Reliability coefficient for the 11 scales, in both Japanese and Swedish, were acceptable (Japanese: range = .71 to .94, *Mdn* = .83; Swedish: range = .74 to .92, *Mdn* = .86; see Appendix). Internal consistency for the total self-concept scores of Japan and Sweden were .93 and .91, respectively, which can be compared with the manual score of .94 (Marsh, 1992). The corrected item-scale correlations for Japan vary from -.09 to .84 (*Mdn* = .57), and for Sweden from .22 to .85 (*Mdn* = .60), with the manual varying from .35 to .80 (*Mdn* = .61) (Marsh, 1992).

The exploratory factor analysis (Principal Component Analysis), using Kaiser Normalization, was performed on the 51 paired items from Japanese and Swedish SDQII separately and 11 components were designed. The confirmatory factor analysis (CFA) with 11 components explained 71.49% of the variance for the Japanese version (see Table 1), which corresponds to 81.12% for the Swedish version (see Table 2). When compared with the manual, both the Japanese and Swedish versions showed low loadings, and some factors loaded at the same component. Mean correlation among factors (r = .16 for Japanese; r = .27 for Sweden, see Table 3) are comparable with the manual (r = .18).

TABLE 1
FACTOR ANALYSIS FOR THE JAPANESE SDQII

	Components										
	1	2	3	4	5	6	7	8	9	10	11
Phy 1		.90									
Phy 2		.88									
Phy 3		.87									
Phy 4		.83									
App 1			.78								
App 2			.79								
App 3			.84								
App 4			.68								
Sam1								.58			
Sam2											
Sam3											
Sam4								.77			
Sam5											
Opp 1								.70			
Opp 2											
Opp 3									.80		
Opp 4										.74	
Pare1				.75							
Pare2				.83							
Pare3				.59							
Pare4				.73							
Hone1											
Hone2					.78						
Hone3											
Hone4					.58						
Hone5					.68						
Emo1						.76					
Emo2						.69					
Emo3						.59					
Emo4						.73					
Emo5						.76					.55
Math 1							.89				

Table 1 continued

	Components										
	1	2	3	4	5	6	7	8	9	10	11
Math 2							.86				
Math 3							.91				
Math 4							.89				
Math 5							.91				
Verb 1	.69										
Verb 2	.77										
Verb 3	.85										
Verb 4	.79										
Verb 5	.67										
Sch1											
Sch2	.52										
Sch3	.73										
Sch4	.75										
Sch5			.67								
Est 1											
Est 2			.60								
Est 3											
Est 4			.53								
Est 5			.78								

Note: Rotation Method: Confirmatory factor analysis. All loadings above .50 are shown.
Phy = Physical, App = Appearance, Sam = Same-sex Relations, Opp = Opposite-sex Relations, Pare = Parent Relations, Hone = Honesty-trustworthiness, Emo = Emotional Stability, Math = Math, Verb = Verbal, Sch = School, Est = Self-esteem.

TABLE 2
FACTOR ANALYSIS FOR THE SWEDISH SDQII

	Components										
	1	2	3	4	5	6	7	8	9	10	11
Phy 1					.88						
Phy 2					.93						
Phy 3					.82						
Phy 4					.77						
App 1				.85							
App 2				.66							
App 3				.79							
App 4				.89							
Sam1		.75									
Sam2		.57									
Sam3		.49									
Sam4		.86									
Sam5		.68									
Opp 1		.87									

Table 2 continued

	Components										
	1	2	3	4	5	6	7	8	9	10	11
Opp 2	.56	.55									
Opp 3		.80									
Opp 4		.75									
Pare1								.78			
Pare2							.74				
Pare3								.83			
Pare4							.84				
Hone1		.61							.70		
Hone2											
Hone3									.66		
Hone4											
Hons5		.79							.72		
Emo1										.62	
Emo2									.57		
Emo3										.73	
Emo4										.62	
Emo5								.56		.64	
Math 1			.86								
Math 2			.79								
Math 3			.83								
Math 4			.88								
Math 5			.90								
Verb 1	.54										
Verb 2	.70										
Verb 3	.72										
Verb 4	.76										
Verb 5	.84										
Sch1										.59	
Sch2	.82										
Sch3	.80										
Sch4	.74										
Sch5	.65										
Est 1											.75
Est 2										.56	
Est 3											
Est 4											
Est 5											

Note: Rotation Method: Confirmatory factor analysis. All loadings above .50 are shown. Phy = Physical, App = Appearance, Sam = Same-sex Relations, Opp = Opposite-sex Relations, Pare = Parent Relations, Hone = Honesty-trustworthiness, Emo = Emotional Stability, Math = Math, Verb =Verbal, Sch = School, Est= Self-esteem.

TABLE 3
CORRELATIONS AMONG THE SDQII FACTORS AND SELF-DISCREPANCY

	Factor													
Variable	Phy	App	Sam	Opp	Pare	Hone	Emo	Math	Verb	Sch	Est	Totl	Aca	Nona
Japan														
App	–													
Phy	.24*	–												
Sam	.35**	.14	–											
Opp	.27**	.47**	.38**	–										
Pare	-.08	-.08	.31**	-.01	–									
Hone	.13	.01	.26**	.01	.47**	–								
Emo	.18*	.23*	.30**	.25**	.16	.16	–							
Math	.08	.08	-.01	-.08	.10	.15	-.08	–						
Verb	-.04	-.00	.16	-.04	.16	.19*	-.03	.22*	–					
Sch	.09	.27**	.00	-.03	.09	.13	.00	.51**	.61**	–				
Est	.38**	.60**	.43**	.36**	.17	.22**	.39*	.24**	.29**	.48**	–			
Totl	.53**	.45**	.52**	.40**	.42**	.43**	.40*	.50*	.53**	.60**	.80**	–		
Disc	-.03	-.45*	-.16	-.14	-.24*	-.24*	-.32*	-.11	-.22**	-.20*	-.46**	-.50*	–.26*	–.49**
Sweden														
App	–													
Phy	.43**	–												
Sam	.40**	.29**	–											
Opp	.34**	.69**	.45**	–										
Pare	.26*	.17	.58**	.33**	–									
Hone	.09	-.13	.46**	-.13	.61**	–								
Emo	.21	.40**	.44**	.52**	.52**	.26*	–							
Math	.15	.21	-.01	.16	.09	.08	.26*	–						
Verb	.25*	.11	.25*	-.11	.10	-.13	-.00	.12	–					
Sch	.27*	.25	.42**	.04	.37**	.40**	.25*	.44**	.62**	–				
Est	.31**	.65**	.65**	.41**	.52**	.33**	.48**	.28*	.35**	.65**	–			
Totl	.52**	.50**	.64**	.47**	.41**	.48**	.47**	.46**	.46**	.67**	.77**	–		
Disc	-.14	-.61**	-.28**	-.52**	-.21	-.20	-.38**	-.14	-.13	-.26*	-.49**	-.11	-.23	-.20

Note: Phy = Physical, App = Appearance, Sam = Same-sex Relations, Opp = Opposite-sex Relations, Pare = Parent Relations, Hone = Honesty-trustworthiness, Emo = Emotional Stability, Math = Math, Verb =Verbal, Sch = School, Est= Self-esteem, Totl = Total Self, Aca = Academic Self, Nona= Non-academic Self, Disc = Actual-ideal Discrepancy. ** $p < .01$, 2-tailed. * $p < .05$, 2-tailed.

TABLE 4

MEANS AND SDS, SKEWNESS, AND KURTOSIS OF THE SDQII VARIABLES BY COUNTRY (JAPAN, SWEDEN), AND GENDER (BOYS, GIRLS)

	Japan								Sweden							
	Boys				Girls				Boys				Girls			
	Mean	(*SD*)	Skewness	Kurtosis	Mean	(*SD*)	Skewness	Kurtosis	Mean	(*SD*)	Skewness	Kurtosis	Mean	(*SD*)	Skewness	Kurtosis
Phy	37.16	(8.90)	0.08	-2.57	31.54	(9.27)	-0.17	-0.69	33.51	(11.67)	-0.56	-0.48	34.79	(10.77)	-0.48	-1.00
App	20.00	(6.27)	-1.64	-0.56	16.82	(5.63)	0.44	-0.56	36.76	(8.88)	1.83	4.18	30.57	(11.58)	-0.52	-0.52
Sam	40.84	(40.84)	-0.34	0.04	40.98	(5.21)	-0.34	-0.73	47.81	(11.92)	-1.30	1.70	52.74	(5.76)	-1.09	1.62
Opp	23.41	(5.31)	-0.03	-0.78	23.31	(4.75)	0.46	0.25	38.17	(9.72)	-1.40	1.75	33.44	(8.97)	-0.29	-0.29
Pare	34.57	(7.13)	-0.77	-0.56	35.96	(6.75)	-0.31	-0.78	38.23	(7.33)	-1.30	3.26	40.27	(6.63)	-1.17	0.87
Hone	34.00	(6.86)	0.31	-0.17	34.48	(8.61)	-0.49	-0.19	44.68	(8.64)	-0.80	1.08	39.45	(9.35)	0.52	-0.93
Emo	42.04	(6.70)	-0.68	1.30	43.72	(5.41)	-0.20	0.42	44.06	(8.56)	-0.50	-0.70	50.19	(7.66)	-0.79	0.18
Math	29.74	(9.58)	0.30	-0.36	33.48	(9.49)	0.54	-0.07	41.97	(11.37)	-0.6	-0.40	43.07	(9.31)	-0.39	-0.50
Verb	36.68	(12.91)	-0.43	-0.41	34.21	(13.72)	0.28	-0.92	37.12	(11.16)	0.07	-0.74	32.62	(12.11)	0.04	-0.42
Sch	28.30	(10.85)	0.25	-0.82	28.94	(9.11)	0.24	-0.12	42.55	(10.54)	-0.81	-0.05	46.45	(9.84)	-0.43	-1.18
Est	33.68	(8.48)	0.02	-0.66	32.45	(7.83)	0.01	-0.20	47.33	(11.48)	-1.34	1.37	47.27	(9.44)	-1.28	1.49
Totl	362.44	(49.08)	-0.09	0.99	357.81	(43.12)	0.05	0.08	486.56	(57.08)	0.47	-0.50	465.10	(50.48)	0.36	0.99
Aca	93.92	(26.49)	-0.11	-0.69	96.31	(25.30)	0.31	0.43	121.31	(26.43)	-0.63	0.56	124.86	(23.34)	0.21	-0.91
Nona	233.44	(27.30)	-0.30	0.67	226.44	(26.46)	-0.17	-0.90	291.60	(35.97)	-0.30	-0.50	284.35	(38.39)	0.01	-0.70

Note: Phy = Physical, App = Appearance, Sam = Same-sex Relations, Opp = Opposite-sex Relations, Pare = Parent Relations, Hone = Honesty-trustworthiness, Emo = Emotional Stability, Math = Math, Verb =Verbal, Sch = School, Est= Self-esteem, Totl= Total Self, Aca = Academic Self, Nona= Non-academic Self.

Cross-Cultural Comparison of the SDQII

A Pillai's MANOVA (2 × 2 factorial design) was conducted with Country and Gender as independent variables and with all SDQII variables as dependent variables. The analysis yielded significant effects for Country ($p < .001$, $Eta^2 = 0.72$, $power = 0.99$), for Gender ($p < .001$, $Eta^2 = 0.24$, $power = 0.99$), and for interaction between independent variables ($p = .010$, $Eta^2 = 0.18$, $power = 0.94$). Descriptive statistics for the SDQII scores (i.e., means, standard deviations, skewness, and kurtosis) are shown in Table 4.

Country The Univariate *F*-test showed significant effects for appearance [$F_{(1, 132)} = 163.25$, $p < .001$, $Eta^2 = 0.55$, $power = 0.99$]; same-sex [$F_{(1, 132)} = 87.67$, $p < .001$, $Eta^2 = 0.40$, $power = 0.99$]; opposite-sex [$F_{(1, 132)} = 132.67$, $p < .001$, $Eta^2 = 0.50$, $power = 0.99$]; parent relations [$F_{(1, 132)} = 13.58$, $p < .001$, $Eta^2 = 0.09$, $power = 0.96$]; emotional stability [$F_{(1, 132)} = 31.62$, $p < .001$, $Eta^2 = 0.19$, $power = 0.99$]; honesty-trustworthiness [$F_{(1, 132)} = 10.34$, $p = 0.002$, $Eta^2 = 0.07$, $power = 0.89$]; verbal [$F_{(1, 132)} = 36.02$, $p < .001$, $Eta^2 = 0.21$, $power = 0.99$]; school [$F_{(1, 132)} = 95.44$, $p < .001$, $Eta^2 = 0.42$, $power = 0.99$]; self-esteem [$F_{(1, 132)} = 96.05$, $p < .001$, $Eta^2 = 0.42$, $power = 0.99$]; total self [$F_{(1, 132)} = 135.49$, $p < .001$, $Eta^2 = 0.51$, $power = 0.99$]; academic self [$F_{(1, 132)} = 37.72$, p < .001, $Eta^2 = 0.22$, $power = 0.99$] and non-academic self [$F_{(1, 132)} = 112.48$, $p < .001$, $Eta^2 = 0.46$, $power = 0.99$]. The Japanese rated themselves with lower values on all of these variables as compared to the Swedish adolescents. However, there were no differences between countries in regard to physical ($p = .25$) and math ($p = .71$).

Gender The Univariate *F*-test showed significant effects for appearance [$F_{(1, 132)} = 18.87$, $p < .001$, $Eta^2 = 0.13$, $power = 0.99$], opposite-sex [$F_{(1, 132)} = 7.73$, p = .006, $Eta^2 = 0.06$, $power = 0.79$], and honesty-trustworthiness [$F_{(1, 132)} = 8.21$, $p = .005$, $Eta^2 = 0.06$, $power = 0.81$]. Descriptive analyses showed that the boys scored higher on appearance and opposite-sex, but lower on honesty-trustworthiness compared to the girls. There were no other significant gender differences ($ps < .05$).

Interaction The Univariate *F*-test showed significant effects for interaction between independent variables for opposite-sex [$F_{(1, 132)} = 5.00$, $p = .027$, $Eta^2 = 0.04$, $power = 0.60$] and honesty-trustworthiness [$F_{(1, 132)} = 4.82$, $p = .030$, $Eta^2 = 0.04$, $power = 0.59$]. Interaction analysis indicated that there were no differences between boys and girls concerning those two variables in the Japanese sample. Swedish boys however scored higher compared to Swedish girls regarding the opposite-sex, but lower in honesty-trustworthiness as compared to Swedish girls. There were no other interaction effects ($ps < .05$). In sum, the gender differences were smaller than the effects of the countries.

TABLE 5

DESCRIPTIVE STATISTICS (MEANS, STANDARD DEVIATIONS, SKEWNESS, KURTOSIS) AND *T* TEST OF THE ACTUAL-IDEAL QUESTIONNAIRE BY COUNTRY (SWEDEN, JAPAN)

	Sweden				Japan			*t*-test		
	Mean (*SD*)		Skew-ness	Kurt-osis	*Mean* (*SD*)	Skew-ness	Kurt-osis	*d*	*t*	*p*
Actual-self										
1) Intelligent – Less intelligent	5.18	(1.77)	-1.25	0.77	2.79 (1.36)	0.42	-0.60	2.40	10.27	.000
2) Outgoing – Shy	3.18	(2.09)	0.50	-1.08	3.13 (1.48)	0.34	-0.15	0.05	0.23	.821
3) Relaxed – Stressed	4.83	(1.64)	-0.43	-0.38	2.97 (1.42)	0.30	-0.61	1.86	8.49	.000
4) Popular – Unpopular	4.98	(1.67)	-0.63	-0.04	4.01 (1.22)	-0.06	0.69	0.97	4.59	.000
5) Useful – Useless	5.07	(1.72)	-0.88	0.19	3.07 (1.12)	0.24	0.32	2.00	10.38	.000
6) Satisfied – Dissatisfied	5.30	(1.74)	-0.95	0.18	3.99 (1.56)	-0.01	-0.37	1.32	5.66	.000
7) Hopeful – Hopeless	5.55	(1.65)	-1.21	0.83	3.97 (1.29)	-0.09	-0.54	1.58	7.40	.000
Sum of the scales (1–7)	34.10	(6.38)	-1.22	2.23	24.33 (4.49)	0.53	-0.79	9.77	12.20	.000
8) Independent – Interdependent	5.32	(1.79)	-0.81	-0.29	3.31(1.69)	-0.49	-0.43	2.00	8.35	.000
Ideal-self										
1) Intelligent – Less intelligent	6.16	(1.45)	-2.37	5.44	5.16 (1.09)	-1.37	1.39	0.99	5.26	.000
2) Outgoing – Shy	2.35	(1.93)	1.44	0.99	3.04 (1.63)	-0.64	1.10	-0.69	-2.67	.006
3) Relaxed – Stressed	5.83	(1.78)	-1.62	1.67	5.18 (1.09)	-1.37	1.74	0.65	2.90	.004
4) Popular – Unpopular	5.65	(1.92)	-1.32	0.52	5.71 (1.37)	-1.00	1.00	-0.06	-0.24	.809
5) Useful – Useless	6.05	(1.62)	-2.02	3.41	5.07 (1.22)	-1.21	0.79	0.98	4.60	.000
6) Satisfied – Dissatisfied	6.13	(1.60)	-2.12	3.69	6.09 (1.26)	-1.79	3.98	0.04	0.18	.856
7) Hopeful – Hopeless	6.17	(1.46)	-2.12	4.64	5.35 (1.08)	-2.13	4.89	0.82	4.30	.000
Sum of the scales (1–7)	38.32	(6.12)	-2.12	8.29	35.79 (4.93)	-5.32	-0.48	2.53	3.29	.003
8) Independent – Interdependent	5.96	(1.69)	-1.75	2.21	3.23 (1.81)	-0.40	-0.49	2.73	10.80	.000
Total actual – ideal discrepancy	4.24	(7.30)	1.00	2.48	11.18 (5.73)	-0.07	-0.54	-6.95	-6.87	.000

Results of the Actual-Ideal Questionnaire

The Independent sample *t* test revealed significant cultural differences on the total score of actual and ideal self, respectively (see Table 5). Swedish adolescents had a higher mean rate on actual-self (sum of actual 1 to 7), and ideal-self (sum of ideal 1 to 7) compared to Japanese adolescents [*t* (12.20), $d = 9.77$, $p < .001$]. Concerning the comparison of the pair "independent vs. interdependent (actual/ideal 8) the Swedish adolescents showed a significantly higher rate on "independent" for the actual-self [*t* (8.35), $d = 2.00$, $p < .001$] and for the ideal-self compared to the Japanese adolescents [*t* (10.80), $d = 2.73$, $p < .001$] (see Table 5). Finally, a significant cultural difference emerged with respect to the actual-ideal discrepancy rating. The Japanese mean rate of actual-ideal discrepancy was significantly larger than the Swedish mean rate [*t* (-6.87), $d = -6.95$, $p < .001$]. Independent sample t tests revealed a small but significant gender difference; girls from the two countries had larger self-discrepancy when compared to boys [*t* (1.97), d = -1.92, $p < .05$].

Relationship between the SDQII and Self-discrepancy

Correlations (Pearson's *r*) were conducted to examine the relationship between the self-concept scales and self-discrepancy. Table 3 shows significant negative associations between Japanese self-discrepancy and appearance ($r = -.45$), parental relations ($r = -.24$), honesty-trustworthiness ($r = -.24$), emotional stability ($r = -.32$), verbal ($r = -.22$), school ($r = -.20$), and self-esteem ($r = -.46$). Of the three derived scales, significant negative correlations were only shown for Japanese adolescents' total self ($r = -.50$), academic self ($r = -.26$), and non-academic self ($r = -.49$). Further, the table shows significant negative correlations between Swedish self-discrepancy and appearance ($r = -.61$), same-sex relations ($r = -.28$), opposite-sex relations ($r = -.52$), emotional stability ($r = -.38$), school ($r = -.26$), and self-esteem ($r = -.49$).

DISCUSSION

The main results showed that 1) the psychometric properties of the SDQII had satisfactory results in both cultures, 2) the Japanese generally reported lower self-concepts (with the exception of physical and math self-concepts) and higher self-discrepancies than the Swedish adolescents and 3) the gender differences were smaller compared to the influence of the cultural effect. These findings seem to be consistent with those of previous cross-cultural self-concept research (e.g., Wästlund et al., 2001), and in adolescent self-esteem (e.g., Chan, 2000; Dekovic et al., 2002; Farruggia et al., 2004), as well as self-discrepancy (Heine & Lehman, 1999). The nonsignificant cultural difference concerning the subscale physical self-concept gives support to the statement by Marsella (1993)

and Kanagawa et al. (2001) that the Japanese value competition in specific activities such as sports. Nonsignificant differences in the math self-concept could result from decreases in adolescents' average mathematic achievement in both countries, which might be a consequence of social or educational changes during the 1990s (Mullis, Martin, Gonzalez, & Chrostowski, 2004). The overall findings from the SDQII showed that whether it was focused on the term *unidimensional self-esteem* or the *multidimensional self-concept*, the Japanese students tended to respond in a way that seemed to reflect more cultural differences than the actual meanings. The present study offers a limited explanation for the questions in the ongoing debate (e.g., Brown, 2005, Heine et al., 2000; Takata, 2003) about why this is the case.

The negative associations between the ratings of self-concept and self-discrepancy among both countries indicated that adolescents with greater self-discrepancy tended to have lower levels of self-concept. Associations between self-discrepancies and depression have been reported (Choi & Lee, 1998; Moretti & Wiebe, 1999). The present study did not concern depression; however, Cheng (1997) argued that the actual-ideal discrepancy is defined by the independent self characterized by Western culture, and that a discrepancy between the actual and the undesired self (the self that a person hopes to never be) was a stronger prediction of depression among Chinese adolescents than the actual-ideal discrepancy.

Supporting the findings of Kashima et al. (1995), the gender differences in self-concept were smaller compared to the influence of the cultural effect between the two countries. Consistent with earlier findings (e.g., Marsh, 1992), stereotypical gender differences in the SDQII were shown only among the Swedish adolescents. Swedish boys had more positive appearance and opposite-sex relation self-concepts than did the Swedish girls, while the Swedish girls had more positive honesty-trustworthiness than the Swedish boys. Consistent with the early findings (e.g., Hankin, Roberts, & Gotlib, 1997), this study showed that girls from both countries had larger actual-ideal discrepancies than the boys.

Some limitations should be addressed. First, the result from the factor analysis could have shown a better result if the sample size had been greater. Second, in the trait "shy vs. not shy" (scale 2 in the Actual-Ideal Questionnaire), our value judgment from the Swedish point of view was that the adjective "shy" was a negative loading. However, Japanese adolescents seemed to value the term rather positively. That might be one explanation of why no significant cultural difference was found in just that scale. This is a good example of item bias associated with ambiguous item wording. Third, using only two countries for comparison in this study limits comprehensive investigation of the cross-cultural difference.

In sum, the fact of the sufficient psychometric properties of the SDQII in both countries makes these instruments useful for further investigations. However, the favorability bias in self-concept in the cross-cultural comparison must be considered.

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APPENDIX

Scale Descriptions SDQII and Internal consistency in Japanese and Swedish

1) Physical (Phy: reliability = .90 for Japan, .89 for Sweden): Self-perceptions of skills and interest in sports and physical activities; 8 items
2) Appearance (App: reliability = .90 for Japan, .89 for Sweden): Self-perceptions of their physical attractiveness; 8 items
3) Same-Sex Relations (Sam: reliability = .85*/.79** for Japan, .92*/.82** for Sweden): Self-perceptions of their popularity with peers of the same sex; 10 items
4) Opposite-Sex Relations (Opp: reliability = .83*/.83** for Japan, .90*/.87** for Sweden): Self-perceptions of their popularity with peers of the opposite sex; 8 items.
5) Parent Relations (Pare: reliability = .82 for Japan, .74 for Sweden): Self-perceptions of interactions with parents; 8 items
6) Honesty-Trustworthiness (Hone: reliability = .72 for Japan, .75 for Sweden): Self-perceptions of truthfulness and dependability; 10 items
7) Emotional Stability (Emo: reliability = .71 for Japan, .79 for Sweden): Self-perceptions of emotional well being and freedom from psychopathology; 10 items
8) Math (Math: reliability = .94 for Japan, .88 for Sweden): Self-perceptions of ability, enjoyment, and interest in mathematics and reasoning; 10 items
9) Verbal (Verb: reliability = .81 for Japan, .81 for Sweden): Self-perceptions of ability, enjoyment, and interest in English and reading; 10 items
10) School (Sch: reliability = .86 for Japan, .86 for Sweden): Self-perceptions of school ability, enjoyment, and interest in school subjects; 10 items
11) Self-esteem (Est: reliability = .82 for Japan, .86 for Sweden): Self-perceptions of self-worth, self confidence, self satisfaction; 10 items

* boys only, ** girls only

Three derived scales
Total Self (Totl: reliability = .93 for Japan, .91 for Sweden: Sum of the 11 individual scales which reflect an adolescent's self-ratings in various areas of self-concept; scale 1-11).
Academic Self (Aca: Particular subject areas; scale 8-10).
Non-academic self (Nona: Social, emotional, and physical self-concepts into more specific areas; scale 1-7)