

# Life satisfaction, self-concept, and family relations in Chinese adolescents and children

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Subjective well-being across the life span may be affected by both age-specific and age-general factors within a cultural context. Thus, this study explored both developmentally invariant and variable predictors of life satisfaction among 115 second-graders and 74 eighth-graders from Hong Kong. In a regression model, general self-concept and ratings of parental warmth and autonomy/detachment predicted life satisfaction equally across the two age groups. However, social self-concept was a strong predictor of life satisfaction among adolescents only, whereas actual academic test scores predicted life satisfaction only among the children. Mean group differences emerged as well, with adolescents scoring significantly lower in life satisfaction and self-concept and higher in emotional detachment than children. Results are explained in relation to both development and culture.

## Introduction

In many ways, life satisfaction is the ultimate goal of human development. Competent cognitive and academic development can be seen as a means to achieving life satisfaction, whereas social emotional adjustment is synonymous with subjective well-being. Much research has been conducted to identify factors leading to or hindering the attainment of life satisfaction in both Western (e.g., Dew & Huebner, 1994; Heaven, 1989) and Chinese adolescents (J.-P. Leung & Zhang, 2000; J.-P. Leung & Leung, 1992). However, of greater developmental importance is determining the degree to which life satisfaction is similarly or differentially perceived by individuals across stages of development. The Eriksonian concept of development in part emanates from observed shifts in individuals' interests in and concerns over different tasks and activities faced in different phases of life (Erikson, 1968). Individuals, thus, possess internal representations of their life priorities that allow them to derive life satisfaction throughout development. Some internal representations are more or less related to life satisfaction, depending on the order in which the underlying life events are prioritised at a given age. Other representations may be invariant across the developmental span as constant sources of life satisfaction.

The purpose of the present study was to identify both developmentally invariant and different self-representations in predicting life satisfaction across two phases of child development. In two cross-sectional samples of 115 primary school (Grade 2) children and 74 early adolescents (secondary school Grade 2 or North American Grade 8) in Hong Kong, we looked for invariant and different predictors of life satisfaction according to life priorities of these children within their cultural context. For both age groups, family and school constitute major life activities. Thus, we examined internal representa-

tions derived from these two domains of life. Among the hypotheses, we expected parental warmth and general self-concept to invariably predict, and social self-concept, academic performance, and emotional detachment from parents to differentially predict life satisfaction of these two age groups. A second and related objective of the present study was to examine developmental change or stability in life satisfaction and self-concepts in specific domains within the cultural context of these two groups of Chinese children.

## *Self-concept and life satisfaction*

Self-concept and life satisfaction are related to the same self-representation system. Life satisfaction reflects the affect dimension of the self-system (Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993), whereas self-concept represents cognitive appraisals of the self's competencies and weaknesses (Terry & Huebner, 1995). Both systems are ideal for the study of developmental transitions, e.g., from childhood to adolescence, as the latter especially affects individuals' self-perceptions (Harter, 1990). Within the framework of multi-dimensional self-conceptualisation (Harter, 1986), domain-specific self-concepts may follow similar or variable developmental trajectories depending on the developmental relevance and valence of a given domain. Depending on the domain relevance at a given developmental time, different domain-specific self-appraisals (or self-concepts) may similarly or differentially affect individuals' subjective affect such as life satisfaction. Similarly, the association of a domain-specific self-concept with life satisfaction may either fade or strengthen from childhood to adolescence.

The domain of friendship and social interaction is believed to be more relevant during adolescence than childhood. Early adolescence has been identified as a developmental period

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during which the salience of peer relations increases as the salience of the family decreases (Laursen, 1996; Steinberg & Silverberg, 1986). Coinciding with the onset of puberty, this is also a period when adolescents begin to value friendship as an affective necessity (Richards, Crowe, Larson, & Swarr, 1998). The nature and structure of social interaction also change in late childhood and adolescence. In the early grades of primary schools, friends are chosen based on convenience (Selman, Levitt, & Schultz, 1997). In contrast, middle school adolescents begin to make conscious efforts in apprenticing their social skills, exerting social influence, and establishing peer status. In response, social self-concept in the middle school years affects the subjective affect of adolescents more than that of primary school children. Several empirical studies lend support to this hypothesis. For example, Larson and Richards (1991) reported that middle school children spend more time with friends and less with family than primary school children, and time with friends was a more important determinant of happiness in adolescence. In younger children, family relations were more strongly associated with life satisfaction than friendship relations (Huebner, 1991). Given this developmental characteristic, social self-concept was hypothesised to predict life satisfaction of adolescents more strongly than that of primary school children.

Academic activities, on the other hand, represent a domain that is highly relevant for both primary and secondary school children in Hong Kong. A strong emphasis on academic achievement in Chinese children has long cultural roots. However, perhaps even stronger than these distal influences are the limited opportunities in tertiary education of contemporary China and other East Asian countries that place children into an indefatigable and ceaseless competition from kindergarten into high school. The eight universities operating in Hong Kong, for example, absorb only 18% of the middle school student population, which numbers 75,000 each year. In this academically competitive environment, self-concept of cognitive and academic abilities in both children and adolescents is expected to be highly relevant to their life satisfaction.

However, the actual academic performance as indicated by test scores was hypothesised to be more predictive of life satisfaction in primary school children than adolescents. This hypothesis is based on the observation that adolescents' self-system is more dynamic and multidimensional than younger children's simply because adolescents have wider life experiences than younger children (Eccles, Wigfield, Flanagan, Miller, Reuman, & Yee, 1989). As children grow older and spend more time in schools, competence-related feedback becomes more frequent and more variable. Reliance on test scores as the sole barometer of abilities is complemented and refined by other more implicit means of comparisons. The education system in Hong Kong also deems test scores to be less relevant indicators of abilities in middle schools than in primary schools. Middle schools in Hong Kong are streamed by primary school test scores into bands. (More on Hong Kong school systems in the Method section.) Students within a secondary school have similar test scores. Thus, test scores that are more differentiating in primary than secondary schools were hypothesised to predict primary school children's life satisfaction more strongly than that of adolescents.

Another culturally interesting phenomenon related to children's domains of activities in this study is the surprisingly low emphasis on sports in Hong Kong. In most countries in

both the West and East, sport is an increasingly important aspect of adolescents' lives, with athletic abilities being significant determinants of peer status (e.g., Dong, Weisfeld, Boardway, & Shen, 1996). Due to scarcity of space, many schools in Hong Kong have small sports fields, if they have any. Except for horse racing, commercial sport clubs and competitions are almost nonexistent. There are few organised tournaments or regular sporting events that are participated in by local athletes. Nor is there a system for selecting and training potential athletes, either self-sustained in Hong Kong or linked to Mainland China. Thus, in comparison to many other societies and cultures, youth in Hong Kong may lack an athletic channel through which to develop their potential. This ecological characteristic provides an opportunity to examine domain relevance in regulating the relation between self-concept and subjective affect.

Finally, general self-concept is hypothesised to predict life satisfaction equally for adolescents and primary school children. This is consistent with earlier theorising that self-concept differentially predicts life satisfaction because the valence of the underlying domain relevance changes with development. Empirical evidence also supports invariance of general self-concept in predicting life satisfaction between adolescents (Heaven, 1989; J.-P. Leung & Zhang, 2000) and younger children (Terry & Huebner, 1995). Also of developmental importance, it is a study of normative change of different self-concepts across developmental transitions. Past research suggests that, across many domains, early adolescents first entering middle schools experience a significant drop in self-concept, which is rebuilt during late adolescence (see Harter, 1998, for a review). On the other hand, children in early primary school have an inflated self-concept (Eccles, Midgley, & Adler, 1984; Wigfield, 1994). They tend to be unrealistically optimistic (Eccles et al., 1984). This age difference in self-concept in part also reflects transitional stress experienced by early adolescents. Early adolescence coincides with simultaneous transitions of three kinds. There is the educational transition from primary school to middle school, cognitive emergence of formal operation reasoning, and, in most Chinese children, onset of puberty. The cumulative effects of these transitions result in heightened stress in this age period (e.g., see Eccles & Midgley, 1989, for a review) that often leads to depressed self-perceptions (Eccles, Wigfield, Midgley, Reuman, MacIver, & Feldlaufer, 1993; Harter, 1990; Wigfield, Eccles, MacIver, Reuman & Midgley, 1991). The affect dimension of the self-system also experiences depression during this transition (e.g., Morganti, Nerke, Hulicka, & Cataldo, 1988; Petersen et al., 1993). A 50% decline has been reported in ninth-graders as compared to fifth-graders in self-reports of positive feelings such as "great" and "very happy", supporting the view that adolescence is a time of "deflation of childhood happiness" (p. 85, cited in Arnett, 1999). Given this literature, the four domains of self-concept and life satisfaction were expected to be lower in adolescents than in primary school children.

### *Family relations and life satisfaction*

In Chinese societies, children are inculcated with strong family values and the belief that family and kinship relations are fundamental to happiness in life (Ho, 1986). This socialisation tenet is present throughout childhood and adulthood. In Chinese societies, filial piety and its reciprocal parental

commitment to children's well-being idealise not only young children's parent-child relations but adolescents' and adults' as well. In Hong Kong, which had been a British colony for 150 years until 1997, this Chinese tradition is also juxtaposed with Christian values of love within a nuclear family. In the Western literature, parental warmth has been shown to have an overarching positive effect leading to a wide range of positive experiences in children of different ages (e.g., see Cournoyer, 2000, for a review). According to Kagitcibasi (1996), parental warmth is a universal contributor to well-being among children and adolescents. In a number of Chinese studies, parental warmth has similarly been associated with positive subjective well-being in both children (Stewart, Rao, Bond, McBride-Chang, Fielding, & Kennard, 1998) and adolescents (J.-P. Leung & Zhang, 2000; Yau & Smetana, 1996). Given the empirical literature as well as cultural theorising, a close parent-child relationship as indicated by parental warmth was expected to be an invariant contributor to children's and adolescents' life satisfaction.

In addition to parental warmth, we also examined Steinberg and Silverberg's (1986) measure of autonomy/detachment (A/D). McBride-Chang and Chang (1998) administered A/D to Hong Kong youth. They noted an overall increase in A/D among older adolescents relative to younger ones, as found previously in American adolescents (Steinberg & Silverberg, 1986). In several Western studies (e.g., Fuhrman & Holmbeck, 1995; Ryan & Lynch, 1989; Smetana, 1995), the A/D scale tended to be negatively associated with positive parenting measures (e.g., family cohesion, maternal warmth, authoritative parenting). Thus, this scale has been conceptualised as a measure of emotional detachment from parents (McBride-Chang & Chang, 1998; Ryan & Lynch, 1989). The A/D scale has not been previously administered to children. Its inclusion in the present study allows the examination of the development of emotional detachment and its psychological impact over age. We predicted that adolescents would score higher on this measure than would children based on previous studies demonstrating increased A/D with age in adolescence (McBride-Chang & Chang, 1998; Steinberg & Silverberg, 1986). Because it has not been used in children, a specific age effect on its relationship with life satisfaction is unclear. Because of its negative associations both with positive parenting measures (e.g., parental warmth, Fuhrman & Holmbeck, 1995; Ryan & Lynch, 1989; Smetana, 1995) and with psychological adjustment (Beyers & Goossens, 1999), we expected it to affect life satisfaction negatively.

## Method

### Participants

Participants were 115 second-graders (65 girls, 50 boys) from a single primary school in Hong Kong, 74 second-graders (equivalent to North American eighth-graders; 39 girls, 35 boys) from a secondary school, and both of their parents. Secondary schools in Hong Kong are segregated according to a banding system. Based on various primary school test results, students are placed in secondary schools of one of five bands (from the 2002 school admission, this will be changed to three bands), with Band 1 being the highest and Band 5 being the lowest in terms of academic performance. The present secondary school was a Band 2 school. Among the primary

school children, 113 lived in two-parent households, while 73 of the adolescents lived with both parents.

### Procedure

Following parental consent, questionnaire data were obtained from both students and their parents. Primary school students were allotted a single class period in which to complete all questionnaires. Four primary school classes participated. In each classroom, questions were read aloud by an undergraduate psychology major while children rated each item. Four other psychology majors monitored the children's progress throughout the questionnaire completions. They were available to answer questions about individual items, reread questions, and ensure that students fill out the questionnaires at an appropriate pace.

Secondary school adolescents completed the questionnaires after school. All volunteers came to one of two after-school sessions and completed the questionnaires individually. Five undergraduate psychology majors were on hand to answer questions about the questionnaires when needed. Both the primary and secondary students received McDonald's coupons in appreciation for their participation.

### Demographics

One parent completed all demographic information for the present study. The questionnaire included information on both parents' education levels and ages, as well as parents' marital status, the numbers of children and adults in the family, and fathers' income levels. Education level was measured on a 6-point scale ranging from 1 = primary school to 6 = graduate school. Father's income was assessed on a 5-point scale ranging from 1 = HK\$6000 to 5 = more than HK\$40,000 per month (Hong Kong dollars are pegged to US dollars at a fixed rate of 7.8). These demographic statistics are given in Table 1. Because the adolescent group was 6 years older than the child group, ages of students, mothers, and fathers of these groups differed significantly. Furthermore, there were predictably more children in the families of the adolescents than in those of the children, whose families were younger. However, there were no significant differences in the samples on parents' education levels; most parents had completed secondary school, and many had had some college training as well. In addition, across groups, the numbers of adults in the families and fathers' income levels were not significantly different, suggesting that the groups of children and adolescents were adequately matched.

### Measures

All the measures have been translated into Chinese by other researchers or the present research team and have been checked by an independent bilingual person for truthfulness of meaning and by teachers of the participating students for appropriate language use. As presented below, all the instruments have been used previously with Chinese participants of similar age and background.

*Life satisfaction* was measured by Huebner's (1994) 40-item questionnaire, the Multidimensional Students' Life Satisfaction Scale. Examples of items are "I look forward to going to school" and "I wish I lived somewhere else". The instrument

**Table 1**  
*Comparisons of adolescents and children on demographic variables*

Variable	Adolescents	Children	T-value
	Mean (SD)	Mean (SD)	
Age	13.6 (0.6)	7.8 (0.5)	71.4***
Mother's age	40.5 (7.2)	37.7 (5.1)	3.1**
Father's age	45.5 (5.6)	41.4 (6.6)	4.3***
Mother's education	2.9 (1.0)	3.2 (1.3)	-1.6
Father's education	3.1 (1.2)	3.5 (1.6)	-1.8
Father's income	2.7 (1.1)	2.9 (1.1)	-1.1
Number of children	2.3 (0.9)	2.0 (0.7)	2.4*
Number of adults	2.7 (1.2)	2.7 (0.9)	-0.1

\* $p < .01$ ; \*\* $p < .005$ ; \*\*\* $p < .001$ .

has been previously used with Hong Kong adolescents (Y.W. Leung, 2001). The questionnaire can be used as five subscales measuring satisfaction within different domains or as a single scale of overall life satisfaction. A single scale was used in the present study. The obtained internal consistency reliability for this measure was .86 in this study.

*Autonomy/detachment* was measured using a 14-item version of Steinberg and Silverberg's (1986) original Emotional Autonomy Scale. This original scale consisted of four aspects of autonomy-individuation, deidealisation of parents, nondependence on parents, and perceptions of parents as people separate from their roles as parents. The last subscale, perceptions of parents as people, has been demonstrated to develop relatively slowly (Steinberg & Silverberg, 1986). Furthermore, in a study of Hong Kong youth (McBride-Chang & Chang, 1998), this dimension was stronger in younger adolescents relative to older adolescents, in stark contrast to the other three dimensions, which increased with grade level, as predicted. For these reasons, the six-item perceptions of parents as people subscale was not included in the autonomy/detachment scale. Items were presented on a 4-point Likert scale ranging from "strongly agree" to "strongly disagree". Item analyses revealed that item 14 of the original scale, "My parents would be surprised to know what I'm like when I'm not with them" loaded poorly with the other items and was, therefore, not included in subsequent analyses using the total score for this scale. This revised 13-item scale had an internal consistency reliability of .73 in the present study.

*Parental warmth* was measured using a 5-item questionnaire for parents. Items included "I show my child through actions that I love him/her", "I tell my child (in words) that I love him/her", and "I praise my child when I am pleased with his/her behaviour". Similar items have been used with Chinese parents elsewhere (Berndt, Cheung, Lau, Hau, & Lew, 1993). Internal consistency reliabilities were .64 for mothers and .69 for fathers in the present sample. Combining the two parents together resulted in much improved reliability of .82. The combined scale was used as a measure of parental warmth.

*Self-concept* was obtained by the Perceived Competence Scale for Children (Harter, 1982). The scale has four subscales tapping domain-specific self-concept in cognitive and academic, social, physical and sports, and general self-worth. Each of these four subscales consists of seven items measured on a specially designed 4-point scale. (See Harter, 1982, for detailed scaling and item information.) The scale has previously been used with Chinese children (Stigler, Smith, & Mao, 1985). Internal consistency reliabilities estimated in the present

sample for academic, social, sports, and general, respectively, were .80, .81, .76, and .75.

Test scores were obtained from official school records. Scores in the three subject areas considered to be of utmost importance by schools—Chinese, mathematics, and English—were obtained. We combined the scores into a composite. Because the two schools used different scales in reporting these marks, within-school standardisation was taken to create a  $z$ -score composite to measure academic performance.

## Results

Means, standard deviations, and correlation coefficients of all the variables used in the study are presented in Table 2. The same statistics are also reported for adolescents and primary school children separately in Table 3.

### *Normative developmental differences*

Multivariate analysis of variance was conducted to examine the hypotheses that children scored higher on life satisfaction and self-concept measures and lower on emotional detachment than adolescents. Also examined in the MANOVA was gender as an additional factor. The multivariate  $F$ -test was significant for age,  $F(6, 180) = 22.85$ ,  $p < .001$ , and for gender,  $F(6, 180) = 6.02$ ,  $p < .05$ , but not for a gender by age interaction. Univariate  $F$  tests suggest significant age differences in life satisfaction,  $F = 9.51$ ,  $p < .001$ , academic self-concept,  $F = 17.76$ ,  $p < .001$ , sports self-concept,  $F = 10.59$ ,  $p < .001$ , and emotional detachment,  $F = 18.07$ ,  $p < .001$ . However, no significant difference was found in general self-concept and social self-concept. The significant mean differences are in the directions as hypothesised. That is, children had higher means in life satisfaction and self-concept measures but a lower mean in emotional detachment than adolescents. The means are reported in Table 3. Univariate tests revealed two gender effects. Boys scored statistically higher on sports self-concept (male mean = 18.97, female mean = 17.73,  $t = 2.12$ ,  $p < .05$ ) and slightly higher on emotional detachment (male mean = 33.40, female mean = 32.24,  $t = 1.91$ ,  $p < .06$ ). Additional analyses showed that girls had much higher academic test scores than boys. These results are within expectations. For example, the Hong Kong Equal Opportunities Commission (1999) reported that girls consistently outperformed boys in both primary and secondary school in Hong Kong. A similar gender difference has been widely



**Table 2***Correlation coefficients, means, and standard deviations of the variables used in the study*

	1	2	3	4	5	6	7	8
1 Life satisfaction	1.00							
2 Test scores	.30	1.00						
3 General self-concept	.46	.12	1.00					
4 Social self	.34	.07	.56	1.00				
5 Academic self-concept	.38	.19	.61	.36	1.00			
6 Sports self-concept	.34	-.11	.53	.54	.45	1.00		
7 Parental warmth	.32	.09	.23	.14	.28	.22	1.00	
8 Emotional detachment	-.38	-.02	-.10	-.06	-.24	-.17	-.27	1.00
Mean	119.37	0.00	22.53	17.48	19.56	18.29	24.65	32.76
SD	14.96	1.00	3.66	3.22	3.80	4.05	2.74	4.18

**Table 3***Correlation coefficients, means, and standard deviations of the variables in children and adolescents separately*

	1	2	3	4	5	6	7	8
1 Life satisfaction	1.00	.38	.39	.28	.28	.32	.29	-.22
2 Test scores	.18	1.00	.09	.10	.12	.11	.17	-.07
3 General self-concept	.57	.16	1.00	.64	.59	.65	.21	.04
4 Social self	.47	.02	.44	1.00	.55	.65	.14	-.08
5 Academic self-concept	.43	.31	.64	.16	1.00	.64	.11	-.01
6 Sports self-concept	.28	-.42	.32	.44	.13	1.00	.22	-.03
7 Parental warmth	.22	.01	.17	.18	.28	.07	1.00	-.02
8 Emotional detachment	-.50	.05	-.15	-.13	-.18	-.04	-.14	1.00
Adolescent Mean	115.08	0.00	21.95	17.58	18.16	17.09	23.40	35.93
SD	13.41	1.00	3.43	3.33	3.87	4.23	2.87	3.14
Child Mean	122.12	0.00	22.90	17.41	20.46	19.06	25.45	30.72
SD	15.31	1.00	3.77	3.16	3.49	3.75	2.34	3.44

Off diagonal are coefficients of adolescents,  $N = 74$ , and above the diagonal are coefficients of children,  $N = 115$ .

reported in the West as well (see Halpern, 1992 for a review). Because gender was not a focus of the present study, these three gender differences will not be discussed further.

### *Age-related predictions of life satisfaction*

To test the hypotheses regarding age-related interaction effects in the prediction of life satisfaction, multiple regression involving interaction variables was used (see Aiken & West, 1991, for details). An interaction term was created for each of the predictors of life satisfaction by multiplying school type, which is a dummy variable representing primary versus secondary school, with the specific predictor. Each interaction effect was tested separately. In each separate test, all the predictors including the one whose interaction was being tested were entered into the regression equation first. The interaction term was then entered. An  $F$ -test of regression increment was used to determine whether a common or different regression slope associated with the concerning predictor fit the two age groups, while statistically controlling other predictors. As hypothesized, only the interactions involving social self-concept,  $F = 5.04$ ,  $p < .01$ , and test scores,  $F = 5.96$ ,  $p < .01$ , were significant. Other predictors did not show significant age-related interaction effects.

Path analysis was then conducted to test two regression models. The first was an age-invariant model that excluded the two age-differential predictors, social self-concept and test

scores. Tested in the combined sample of children and adolescents, the results of this model are presented in Table 4. All the predictors were statistically significant except sports self-concept and academic self-concept. Academic self-concept was not significant when general self-concept was in the equation. When general self-concept was not included, as reported in Table 4, academic self-concept was significant, while statistically controlling other predictors. This finding suggests that academic self-concept was an important part of these children's general self-concept and contributed to similar variations in life satisfaction.

The second model allowed social self-concept and test scores to be freely estimated in children and adolescents separately while restraining the other "common" predictors to be equal across the two groups. The resulting separate regression coefficients of social self-concept and test scores from the two samples, respectively, are also included in Table 4. As shown in Table 4, social self-concept, which was almost zero in the child sample, was a robust predictor of life satisfaction in adolescents. Also as hypothesized, test scores were predictive of life satisfaction in children but not in adolescents.

## Discussion

Life satisfaction has traditionally been of research interest in adult development. According to J.-P. Leung and Zhang

**Table 4**  
*Age-invariant and age-specific predictors of life satisfaction*

	Regression coefficient		Standard error	T-value
	Nonstandardised	Standardised		
<i>Age-invariant predictors</i>				
Parental warmth	0.75	0.14	0.35	2.14*
Emotional detachment	-1.06	-0.30	0.23	-4.67**
General self-concept	1.45	0.36	0.33	4.38**
Sports self-concept	0.21	0.06	0.27	0.78
Academic self-concept	0.11	0.03	0.31	0.35
Academic self-concept <sup>a</sup>	0.78	0.20	0.28	2.73**
<i>Age-specific predictors</i>				
<i>Social self-concept</i>				
Adolescents	1.06	0.26	0.46	2.29*
Children	0.02	0.00	0.57	0.04
<i>Test scores</i>				
Adolescents	1.64	0.12	1.54	1.06
Children	5.23	0.34	1.26	4.14**

<sup>a</sup>Academic self-concept and other predictors, except general self-concept, were entered into the regression equation.

\* $p < .05$ ; \*\* $p < .01$

(2000), only recently have researchers started to examine this construct in adolescence and cross-culturally. Few studies have investigated young children's life satisfaction and, to our knowledge, the present study represents one of the first to focus on age invariance and differences in explaining life satisfaction from a set of school- and family-related self-representations. Our findings that some self-representations were age invariant and others were age specific lead to a broader abstraction that a person's subjective affect depends on the degree to which domain-specific activities are developmentally salient to the person's age group. Self-representations concerning age-relevant activities contribute more to a person's life satisfaction whereas those related to activities that cease to be important with development contribute less. What is age salient and what is less relevant to a great degree is determined by developmental characteristics that are regarded as conspecific or universal. For example, the finding that social self-concept was a stronger correlate of life satisfaction for adolescents than for children in Hong Kong implicitly underpins a strong universal developmental influence. The hypothalamus-regulated growth spurt in early adolescence gives a child never-before-experienced physical and mental capacity and desire, for example, to socialise outside the family. Responding to this developmental outcome, the child's self-system ties self-appraisal of social abilities more closely to subjective affect. Hong Kong adolescents in the present study indeed reacted to this developmental change similarly to their Western counterparts (e.g., Richards et al., 1998). In this case, potential cultural or contextual deviations are deemed secondary to the valence of a universal developmental trend.

However, in other aspects of development, social context may exert strong influence. Several of the present findings implicitly suggest societal influences on the self-system. First, contrary to the West as well as to other Asian regions (e.g., Dong et al., 1996), sports-related self-concept was not correlated with life satisfaction for either adolescents or children. In this case, culture or social context provides a plausible explanation because the finding coincides with, as

mentioned earlier, the apparent lack of public interest in athletic activities as well as the lack of concerted efforts or a system to integrate sport competition into social entertainment in Hong Kong. Second, academic self-concept was found to predict life satisfaction equally strongly in adolescents and children. This finding implicitly suggests the influence of a cultural tradition that values learning and academic activities as a major dimension of Chinese socialization. More proximally, the finding reflects ongoing competitions among students for limited tertiary education placements in Hong Kong. Also true of other countries in the region, resource limitation, together with a tradition that emphasises social stratification through schooling, creates a social context where a child's happiness hinges on his/her perceived ability to do well in schools.

Finally, test scores were more predictive of children's than adolescents' life satisfaction. This finding can be seen as contradicting a common-sense belief that, as children grow older, schooling and career issues become more relevant. However, in the special social situations represented by Hong Kong and, to varying degrees, by other Asian countries as well, academic performance can be seen as more relevant when a child is younger than when older. The education system in Hong Kong enforces a strict and elaborate testing sequence. If children do poorly in primary schools, they may not (and almost certainly will not) attain test results good enough to be placed into a good secondary school, which, as mentioned earlier, is streamed into bands by test scores. Once placed in a good secondary school, however, the odds for getting into tertiary education are greatly improved. On the other hand, children placed into lower-ranked secondary schools have little chance for a university education. Thus (very unfortunately), primary school test scores determine not only a child's secondary school placement but whether or not, in the child's mind, she will have a "good" and "happy" life.

The findings on the association between life satisfaction and family relations render culturally and developmentally consistent interpretations. As expected, Steinberg and Silverberg's emotional A/D scale was negatively associated with life

satisfaction, whereas parental warmth was positively predictive of life satisfaction. These results are in line with other studies of Hong Kong adolescents (J.-P. Leung & Leung, 1992; Man, 1991), showing the same connection between parent-child relations and life satisfaction. Similar findings have also been reported in the West (e.g., Dew & Huebner, 1994). Similarly, the results on the normative comparisons between children and adolescents confirm developmental theories derived primarily from Western research. Children had higher life satisfaction as well as higher self-concept than adolescents in most of the domains. This finding is developmentally reassuring in that adolescence is known to be an emotionally stressful period (Steinberg & Silverberg, 1986), whereas childhood is blessed with positive self-perceptions (Eccles, Midgley, & Adler, 1984). The findings are also consistent with previous studies in the West that show declines in self-concepts during the transition from primary school to middle school (Marsh, 1989; Wigfield et al., 1991). In Marsh's study for example, physical, academic, and appearance related self-concept of Australian adolescents all reached the lowest level around Grade 8, which is equivalent to the age of the present sample. Also, consistent with the present finding on life satisfaction, Western research suggests that adolescents were more critical and self-conscious and thus less happy than preadolescents (Simmons, Rosenberg, & Rosenberg, 1973). A previous study of Hong Kong children in different grade levels (Man, 1991) has also noted a decline in life satisfaction with age. Finally, as hypothesized, children scored lower than adolescents on the A/D scale. This finding supports our interpretation of this scale as one of emotional detachment from parents that increases with age. Initiated in this study, this scale proves useful for developmental studies of pre-adolescence.

Among the normative comparisons between the two age groups, general self-concept and social self-concept did not show the expected age difference. There are two possible explanations, which again reflect both universal developmental trends and contextual influences. First, there are many individual differences in responding to developmental transitions or in experiencing transitional stresses (Block & Robbins, 1993). The duration as well as onset of a transitional effect also varies among individuals, who were found to show larger than normal fluctuations in their self-representations during this period (Hoge, Smit, & Hanson, 1990). Other research also suggests that adolescents rebuild their depressed self-concept and subjective affect at different speeds (Harter, 1998). Thus, it is difficult to time the peaks and troughs of the self-representation system of an age group uniformly. The other explanation is sample specific. Allocation to secondary schools in Hong Kong is streamed by abilities. The present sample of adolescents was from Band 2 middle schools. This stratum of the Hong Kong adolescent population may well enjoy higher than average general self-concept because they are highly regarded in this society. However, their academic self-concept is not necessarily enhanced and, according to Marsh and Parker (1984), could be more depressed when derived from within-school comparisons that do not benefit from the big-fish-little-pond effect. That is, in this system, a high ability child no longer finds himself/herself a "big fish" in a pond with fish of similar size. However, academic streaming may serve to group children of similar interests and thus facilitate social interaction. It may be that Hong Kong adolescents have a less depressed social self-concept. Future studies could compare Hong Kong with other Asian regions that do not adopt ability

streaming to better understand the contextual effect on adolescent self-concept.

This study has several methodological limitations that can be improved in future research to draw more confident inferences. The age-split sample size was moderate and thus potentially attenuates the statistical power. The sampling method has also failed to represent the full ability spectrum of the Hong Kong schools. Including school stratification in future research will enable more detailed analyses of the self-system within this particular cultural context. Some of the cross-cultural interpretations have been made by implicit comparisons with the existing literature. Future studies that include samples from more than one culture can make direct comparisons in drawing cross-cultural inferences.

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