

Materialism in Chinese adolescents in Hong Kong: Profiles and socio-demographic correlates

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Abstract

Although youth development models suggest that materialistic beliefs have a negative impact on adolescent development, empirical studies in this area are scarce. Based on a sample of 2,474 high school students in Hong Kong, this study examined the profiles of materialism and socio-demographic correlates of adolescent materialism. Results showed that more than a quarter of the respondents agreed that earning money is more important than other things. Significant proportions of the respondents also agreed that adolescents in Hong Kong were materialistic. However, the respondents perceived themselves to be less materialistic as compared to general adolescents in Hong Kong. Regarding socio-demographic correlates of materialism in adolescents, correlation and regression analyses showed that age, gender, parental education, and family intactness were associated with adolescent materialism. Multiple regression analyses further showed that age, gender, and family intactness were significant predictors of adolescent materialism.

Keywords: Chinese adolescents, materialism, high school students, socio-demographic correlates

Introduction

The quest for material possession is a feature of the contemporary world with several contributing factors. First, under Capitalism, there is a basic emphasis on material possession. Without material possession, the economy will shrink. In order to push up the GDP, people are persuaded and encouraged to buy commodities which essentially leads to the development of the “consumption” culture. Second, with technological advances, there are many new products, such as smartphones, personal computers, and fancy electronic devices. Through aggressive marketing strategies, group pressure, and actual needs, possession of such devices is regarded as trendy and a symbol of identity. Hence,

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many people, particularly young people, “chase” after such new products. Third, with the global issue of poverty (i.e., lack of material possession), people tend to develop the mentality that it is better to have more material possessions which can give them a sense of security.

How might materialistic mentality influence adolescent development? In different cultures, over-emphasis on materialism has been regarded as problematic for human development. For example, in the Christian and Catholic traditions, spiritual values are upheld while material values are downplayed. With specific reference to the Chinese culture, materialism is also deemphasized in different social philosophies. In Confucianism, focus is placed on non-material virtues rather than material possession. In Buddhism, material possession is regarded as illusory and the focus is on transcendence of sensory and material urges. In Taoism, the focus is on harmony and non-material experience, such as meditation and harmony with nature.

In different youth developmental models (1), there is also an emphasis on the importance of spiritual values. In the model proposed by the Search Institute, there is an emphasis on positive values which are not materialistic in nature. In particular, the value of “restraint” is the contrary of sensory pleasure and material consumption. In the 5C and 6C models (2, 3), character, compassion, and care are developmental ideals which are non-materialistic in nature. In the positive youth development constructs proposed by Catalano et al. (4), spirituality is a PYD construct which can promote the positive development of young people. This construct is in line with the existential approach which focuses on the importance of life meaning and transcendental development in human development. In the “being” approach, spirituality and character are closely related to the process of thriving which represents the healthy and holistic development of adolescents (5, 6).

According to Huta and Ryan (7), there are two motives underlying human happiness. On the one hand, happiness is determined by hedonic motives where a person seeks instant pleasure and comfort through different means, such as physical activities (e.g., shopping and drinking). On the other hand,

happiness can be brought forth by eudaimonic motives where happiness is determined by one’s intention to achieve development, excellence, authenticity, and meaning (8-11). Based on this framework, materialism can be regarded as hedonic motive which leads to short term happiness only. Similarly, Peterson and colleagues (12) also differentiated hedonic orientation (i.e., life pleasure) from eudaimonic orientation which includes life of engagement and life of meaning. Again, hedonic motives basically underlie materialistic values and behaviors.

Materialism is a hallmark of Capitalism. With particular reference to Hong Kong, it is a melting pot of Western influences and traditional Chinese values. Historically, Hong Kong has also served as an international financial center focusing on business, finance, and trade. Under the Basic Law, the Capitalistic system would continue for 50 years since the handover in 1997. With this backdrop, Shek and Siu (13) argued that materialism is a risk factor for adolescent development in Hong Kong. Developmentally, the over-emphasis on materialism would lead to non-holistic development and selective focus on instrumental or utilitarian values.

Although adolescent materialism is an important developmental issue, there are relatively few studies in this area, particularly in the Chinese context (14). One notable exception is the work by Shek, Ma, and Lin (15) who developed the 21-item Chinese Adolescent Materialism Scale based on the data collected from 1,658 Chinese high school students. Confirmatory factor analyses finally suggest a three-factor model with 19 items (e.g., “unless I can make a lot of money, I won’t respect myself”; “the most important objective in a woman’s life is to marry a rich man”; “possession of money can make people happy”; “no money, no dignity”) underlying three dimensions (including “acquisition centrality”, “materialistic possessions”, and “hedonistic pursuit”). Using five items derived from the Chinese Adolescent Materialism Scale, Shek and Lin (16) examined adolescent development in different domains, including materialism, ego-centrism, character strengths, and moral development. The present paper is based on the data collected by this scale.

To understand character and moral development in Chinese high school students in Hong Kong, a series of studies have been conducted by a team of researchers at The Hong Kong Polytechnic University (16-20). This paper utilized the data collected in the study of Shek and Lin (16). There are several research objectives in this paper. First, it attempted to examine the materialistic beliefs in Chinese high school students in Hong Kong. Besides perceived materialistic beliefs in high school students, their perception of the materialistic beliefs in Hong Kong adolescents in general was also explored. Second, we compared high school students' perceptions of their own materialistic attitudes and those of Hong Kong adolescents in general. In the social psychology literature, there are research studies showing that one tends to see oneself as more positive than other people (21). Hence, we examined this hypothesis in the present study. Finally, as there are few studies examining psychosocial correlates of materialism, we examined how materialistic beliefs in adolescents are related to age, gender, family intactness, and economic disadvantage in Chinese high school students in Hong Kong.

Methods

The data for the present study were derived from a large-scale study examining their character traits, psychosocial competencies, social behavior, family life, and school life of Chinese high school students in Hong Kong (16). A total of 20 local secondary schools participated in the study, with seven schools admitting students with high academic performance (i.e., Band 1 schools), nine schools admitting students with average academic performance (i.e., Band 2 schools) and six schools admitting students with low academic performance (i.e., Band 3 schools). According to the school size, three to five classes of students were randomly selected to join the study. We recruited 2,474 students (Mean age = 14.76, SD = 1.82; 1,271 females and 1,123 males) in this study, with 1,336 junior high school students and 906 senior high school students. Regarding the economic background of the participants, 239 students were on welfare, who could be regarded as experiencing economic disadvantage.

We obtained consent from the school, parents, and students before collecting the data. During data collection, students were requested to complete a questionnaire containing measures of character attributes, psychosocial competencies, social behavior, family life, and school life. Adequate time was provided to the students. A trained research assistant was present throughout the questionnaire administration process.

Instruments

The abridged version of the Chinese Adolescent Materialism Scale (15) was employed in this study to assess the materialistic beliefs of the respondents. Based on theories and research studies on materialism, 21 items assessing adolescent materialism were designed which showed adequate reliability and validity. In this study, five items from the different dimensions of the scale were employed to assess materialistic beliefs in the respondents. These items included: a) "making money is more important than any other things"; b) "I believe that money is everything"; c) "the rich can get respect from others"; d) "I would abandon some principles for the sake of money"; and e) "the amount of money one makes is a fundamental indicator of one's success". A 5-point Likert Scale was used, with the response options of "strongly disagree = 1", "disagree = 2", "neutral = 3", "agree = 4", and "strongly agree = 5".

To assess the respondents' perceptions of materialism in adolescents in Hong Kong, these five items were used to capture the related views. The items included: a) "Hong Kong adolescents think that making money is more important than any other things"; b) "Hong Kong adolescents believe that money is everything"; c) "Hong Kong adolescents think that the rich can get respect from others"; d) "Hong Kong adolescents would abandon some principles for the sake of money"; and e) "Hong Kong adolescents believe that the amount of money one makes is a fundamental indicator of one's success". Five response options were used, including "strongly disagree = 1", "disagree = 2", "neutral = 3", "agree = 4", and "strongly agree = 5".

Data analyses

We used Statistical Package for Social Sciences Version 25 (IBM Corp., Somers, NY, USA) to carry out to answer the questions of the study. First, descriptive statistical analyses based on percentages were performed to understand the responses of the participants to the abridged version of the Chinese Adolescent Materialism Scale. Besides, perceptions of the respondents regarding materialistic beliefs amongst adolescents in Hong Kong in general were examined. Second, respondents' views of their own materialistic attitudes and perceptions of the materialistic attitudes of Hong Kong adolescents in general would be compared using matched-sample ANOVAs. For the socio-demographic correlates, Pearson correlation analysis, linear regression, and multiple regression analyses were performed.

Results

For the first research objective, we conducted descriptive statistical analyses to understand the profiles of materialistic beliefs amongst the respondents via percentage responses. In Table 1 to Table 3, the responses of the students to the items in the 5-item abridged scale in the total, junior form, and senior form samples are presented. There are two observations. First, roughly one-third of the respondents believed that earning money is more important than other things. Second, compared to junior high school students, senior high school students held higher levels of materialistic beliefs than did junior high school students. In Table 4 to Table 6, the respondents' perceptions of the materialistic beliefs in general Hong Kong youth population are outlined. Two observations can be highlighted from the findings. First, high proportions of high school students perceived that adolescents in Hong Kong were materialistic. Second, more senior high school students perceived that young people in Hong Kong were materialistic.

To understand whether there were differences between respondents' perception of their materialistic beliefs and those of general adolescents in Hong Kong, several ANOVAs were carried out (Table 7). Results showed that there were statistically significant

differences between perceived materialism in the respondents and perceived materialism in Hong Kong adolescents on materialism, $F(5,4887) = 362.900$, $p < .001$, partial eta squared = 0.27. For univariate effects (ANOVA), results similarly showed that students and Hong Kong adolescents were statistically significantly different in their scores of each item ($p < 0.001$) and of the composite score ($p < 0.001$). In short, the respondents saw themselves as less materialistic than did Hong Kong adolescents in general.

Table 8 shows the correlations among different variables. While materialistic beliefs in the students were positively correlated with age and family intactness, the related scores were negatively correlated with gender, father education and mother education. However, there was no correlation between student materialism and economic disadvantage. Linear regression analyses were conducted for each predictor separately. As shown in Table 9, except for economic disadvantage, all other variables (age, gender, father education, mother education, family intactness) significantly predicted student materialism. In short, male students showed higher scores than did female students. Both higher paternal education and higher maternal education predicted lower materialism scores of students. Students from non-intact families (i.e., non-first marriage families) were more materialistic than students from intact families (i.e., first marriage families).

To understand the relative contribution of different predictors on materialistic belief scores, multiple regression analysis was further conducted to predict student materialism from student age, gender, father education, mother education, family intactness, and economic disadvantage (Table 10). Results showed that after controlling other variables, student materialism was positively predicted by age and family intactness and negatively predicted by gender. In other words, older students tended to have higher materialism than younger students. Male students had higher materialism than female students. Students from non-intact family had higher materialism than students from intact family. There was no predicting effect of father and mother education and economic disadvantage on student materialism, when controlling other variables.

Table 1. Perception of materialistic beliefs in the respondents (total sample)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Making money is more important than any other things.	187 (7.6%)	610 (24.7%)	797 (32.3%)	934 (37.8%)	623 (25.2%)	118 (4.8%)	741 (30.0%)	2.95	2472
2. I believe that “money is everything”.	587 (23.7%)	857 (34.7%)	1444 (58.4%)	590 (23.9%)	362 (14.6%)	76 (3.1%)	438 (17.7%)	2.39	2472
3. No money, no dignity.	546 (22.2%)	782 (31.8%)	1328 (54.0%)	664 (27.0%)	383 (15.6%)	86 (3.5%)	469 (19.1%)	2.46	2461
4. I would abandon some principles for the sake of money.	1298 (52.8%)	729 (29.6%)	2027 (82.4%)	288 (11.7%)	101 (4.1%)	43 (1.7%)	144 (5.8%)	1.72	2459
5. The amount of money one makes is a fundamental indicator of one’s “success”.	724 (29.3%)	833 (33.8%)	1557 (63.1%)	557 (22.6%)	285 (11.5%)	69 (2.8%)	354 (14.3%)	2.25	2468

Table 2. Perception of materialistic beliefs in the respondents (junior high school students sample)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Making money is more important than any other things.	117 (7.9%)	384 (25.9%)	501 (33.7%)	577 (38.9%)	344 (23.2%)	63 (4.2%)	407 (27.4%)	2.90	1485
2. I believe that “money is everything”.	395 (26.6%)	519 (34.9%)	914 (61.5%)	363 (24.4%)	178 (12.0%)	31 (2.1%)	209 (14.9%)	2.28	1486
3. No money, no dignity.	387 (26.1%)	500 (33.7%)	887 (59.8%)	364 (24.5%)	195 (13.1%)	37 (2.5%)	232 (15.6%)	2.32	1483
4. I would abandon some principles for the sake of money.	856 (57.9%)	404 (27.3%)	1260 (85.3%)	152 (10.3%)	43 (2.9%)	23 (1.6%)	66 (4.5%)	1.63	1478
5. The amount of money one makes is a fundamental indicator of one’s “success”.	497 (33.6%)	505 (34.1%)	1002 (67.7%)	312 (21.1%)	131 (8.8%)	36 (2.4%)	167 (11.3%)	2.12	1481

Table 3. Perception of materialistic beliefs in the respondents (senior high school students sample)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Making money is more important than any other things.	70 (7.1%)	226 (22.9%)	296 (30.0%)	357 (36.2%)	279 (28.3%)	55 (5.6%)	334 (33.8%)	3.02	987
2. I believe that “money is everything”.	192 (19.5%)	338 (34.3%)	530 (53.8%)	227 (23.0%)	184 (18.7%)	45 (4.6%)	229 (23.2%)	2.55	986
3. No money, no dignity.	159 (16.3%)	282 (28.8%)	441 (45.1%)	300 (30.7%)	188 (19.2%)	49 (5.0%)	237 (24.2%)	2.68	978
4. I would abandon some principles for the sake of money.	442 (45.1%)	325 (33.1%)	767 (78.2%)	136 (13.9%)	58 (5.9%)	20 (2.0%)	78 (8.0%)	1.87	981
5. The amount of money one makes is a fundamental indicator of one’s “success”.	227 (23.0%)	328 (33.2%)	555 (56.2%)	245 (24.8%)	154 (15.6%)	33 (3.3%)	187 (18.9%)	2.43	987

Table 4. Perception of materialistic beliefs in Hong Kong adolescents (total sample)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Adolescents in HK believe making money is more important than any other things.	109 (4.4%)	456 (18.5%)	565 (22.9%)	792 (32.1%)	914 (37.0%)	199 (8.1%)	1113 (45.1%)	3.26	2470
2. Adolescents in HK believe "Money is everything".	152 (6.2%)	479 (19.4%)	631 (25.6%)	748 (30.3%)	864 (35.0%)	225 (9.1%)	1089 (44.1%)	3.22	2468
3. Adolescents in HK believe "No money, no dignity".	177 (7.2%)	434 (17.6%)	611 (24.8%)	736 (29.9%)	880 (35.7%)	237 (9.6%)	1117 (45.3%)	3.23	2464
4. Adolescents in HK believe they would abandon some principles for the sake of money.	332 (13.5%)	566 (23.0%)	898 (36.5%)	756 (30.7%)	645 (26.2%)	166 (6.7%)	811 (32.9%)	2.90	2465
5. Adolescents in HK believe "The amount of money one makes is a fundamental indicator of one's "success".	193 (7.8%)	486 (19.7%)	679 (27.5%)	715 (29.0%)	798 (32.3%)	275 (11.1%)	1073 (43.4%)	3.19	2467

Table 5. Perception of materialistic beliefs in Hong Kong adolescents (junior high school students sample)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Adolescents in HK believe making money is more important than any other things.	78 (5.3%)	291 (19.6%)	369 (24.9%)	485 (32.7%)	519 (35.0%)	111 (7.5%)	630 (42.5%)	3.20	1484
2. Adolescents in HK believe "Money is everything".	109 (7.4%)	317 (21.4%)	426 (28.8%)	442 (29.8%)	490 (33.1%)	123 (8.3%)	613 (41.4%)	3.14	1481
3. Adolescents in HK believe "No money, no dignity".	128 (8.6%)	288 (19.4%)	416 (28.1%)	441 (29.8%)	490 (33.1%)	134 (9.0%)	624 (42.1%)	3.14	1481
4. Adolescents in HK believe they would abandon some principles for the sake of money.	235 (15.9%)	352 (23.8%)	587 (39.7%)	443 (29.9%)	351 (23.7%)	99 (6.7%)	450 (30.4%)	2.82	1480
5. Adolescents in HK believe "The amount of money one makes is a fundamental indicator of one's "success".	146 (9.9%)	320 (21.6%)	466 (31.5%)	422 (28.5%)	455 (30.7%)	137 (9.3%)	592 (40.0%)	3.08	1480

Table 6. Adolescents' perception of the materialism of their peers in Hong Kong (senior grades)

Items	1	2	1+2	3	4	5	4+5	Mean	n
	n	n	n	n	n	n	n		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
1. Adolescents in HK believe making money is more important than any other things.	31 (3.1%)	165 (16.7%)	196 (19.9%)	307 (31.1%)	395 (40.1%)	88 (8.9%)	483 (49.0%)	3.35	986
2. Adolescents in HK believe "Money is everything".	43 (4.4%)	162 (16.4%)	205 (20.8%)	306 (31.0%)	374 (37.9%)	102 (10.3%)	476 (48.2%)	3.33	987
3. Adolescents in HK believe "No money, no dignity".	49 (5.0%)	146 (14.9%)	195 (19.8%)	295 (30.0%)	390 (39.7%)	103 (10.5%)	493 (50.2%)	3.36	983
4. Adolescents in HK believe they would abandon some principles for the sake of money.	97 (9.8%)	214 (21.7%)	311 (31.6%)	313 (31.8%)	294 (29.8%)	67 (6.8%)	361 (36.6%)	3.02	985
5. Adolescents in HK believe "The amount of money one makes is a fundamental indicator of one's "success".	47 (4.8%)	166 (16.8%)	213 (21.6%)	293 (29.7%)	343 (34.8%)	138 (14.0%)	481 (48.7%)	3.36	987

Table 7. Differences in Items and Composite Scores of Materialism between Students and HK Adolescents (N = 2,441 for students, N = 2,452 for Hong Kong adolescents)

	Students	HK Adolescents	<i>F</i>	partial η^2
	<i>M (SD)</i>	<i>M (SD)</i>		
			362.900*** [^]	0.27
1. Making money is more important than any other things	2.95(1.00)	3.26(0.99)	118.798***	0.024
2. I believe that “money is everything”.	2.39(1.09)	3.22(1.05)	734.150***	0.131
3. No money, no dignity.	2.47(1.10)	3.23(1.07)	604.468***	0.110
4. I would abandon some principles for the sake of money.	1.73(0.95)	2.90(1.13)	1553.422***	0.241
5. The amount of money one makes is a fundamental indicator of one’s “success”.	2.25(1.08)	3.19(1.11)	909.078***	0.157
Composite Score	2.35(0.79)	3.16(0.89)	1125.202***	0.187

Note.***p < .001; [^]Adjusted Bonferroni value = .008.

Table 8. Correlation among variables

Variables	1	2	3	4	5	6
1. Age	-					
2. Gender ^b	0.01	-				
3. Father Education ^c	-0.14***	-0.01	-			
4. Mother Education ^c	-0.13***	-0.00	0.51***	-		
5. Family Intactness ^d	0.10***	0.05*	-0.09***	-0.08 ^a	-	
6. Economic Disadvantage ^e	-0.02	-0.14***	0.21***	0.16***	-0.17***	-
7. Materialism	0.18***	-0.09 ^a	-0.08**	-0.08 ^a	0.10***	-0.03

Note. *p < .05, **p < .01, ***p < .001, ^ap = 0.001; ^bMale = 1, Female = 2; ^cThe 0-9 values of Father and Mother Education were recoded into three categorical values: Primary and below = 1, Secondary = 2, Above secondary = 3. The value “0” (Do not know) was recoded as missing value (999). ^dFamily Intactness was recoded from variable “Parents’ current marital status”: First marriage = 1, Non-first marriage = 2. ^eEconomic Disadvantage was recoded from two variables: “Household on CSSA” and “Results of application of Textbook Assistance Scheme”: On CSSA and/or receiving textbook allowance = 1, other condition = 2.

Table 9. Results of linear regression independently for each predictor

Predictors	Student Materialism			
	β	<i>t</i>	<i>F</i>	<i>R</i> ²
Age	0.19	9.25***	85.596***	0.035
Gender ^b	-0.10	-4.91***	24.117***	0.010
Father Education ^c	-0.06	-2.62**	6.847**	0.004
Mother Education ^c	-0.08	-3.25 ^a	10.565 ^a	0.006
Family Intactness ^d	0.09	4.17***	17.349***	0.007
Economic Disadvantage ^e	-0.01	-0.31	0.098	0.000

Note. *p < .05, **p < .01, ***p < .001, ^ap = 0.001; ^bMale = 1, Female = 2; ^cThe 0-9 values of Father and Mother Education were recoded into three categorical values: Primary and below = 1, Secondary = 2, Above secondary = 3. The value “0” (Do not know) was recoded as missing value (999). ^dFamily Intactness was recoded from variable “Parents’ current marital status”: First marriage = 1, Non-first marriage = 2. ^eEconomic Disadvantage was recoded from two variables: “Household on CSSA” and “Results of application of Textbook Assistance Scheme”: On CSSA and/or receiving textbook allowance = 1, other condition = 2.

Table 10. Results of Multiple Regression

Predictors	Student Materialism			
	β	<i>t</i>	<i>F</i>	<i>R</i> ²
Age	0.17	6.33***	12.594***	0.052
Gender ^b	-0.09	-3.52***		
Father Education ^c	-0.03	-0.83		
Mother Education ^c	-0.04	-1.33		
Family Intactness ^d	0.08	2.83**		
Economic Disadvantage ^e	-0.01	-0.40		

Note. *p < .05, **p < .01, ***p < .001, ^ap = 0.001; ^bMale = 1, Female = 2; ^cThe 0-9 values of Father and Mother Education were recoded into three categorical values: Primary and below = 1, Secondary = 2, Above secondary = 3. The value “0” (Do not know) was recoded as missing value (999). ^dFamily Intactness was recoded from variable “Parents’ current marital status”: First marriage = 1, Non-first marriage = 2. ^eEconomic Disadvantage was recoded from two variables: “Household on CSSA” and “Results of application of Textbook Assistance Scheme”: On CSSA and/or receiving textbook allowance = 1, other condition = 2.

Discussion

Despite the importance of the topic of materialism in adolescent development, research studies in this area are surprisingly few. As such, the current study was conducted to understand materialistic beliefs in Chinese high school students in Hong Kong. In particular, we assessed students' perceptions of materialistic beliefs in themselves as compared to adolescents in general. Besides, we also explored the socio-demographic correlates of materialistic beliefs in Chinese high school students in Hong Kong. The current study is pioneer in the field of adolescent materialism as no similar studies have been conducted before.

Based on the responses of the participants to the abridged version of the Chinese Adolescent Materialism Scale, we examined the profiles of materialistic beliefs in high school students in Hong Kong. Several observations can be highlighted from the findings. First, amongst junior secondary school students, roughly one-quarter of them (27.4%) agreed that earning money is more important than other things. The related proportion was higher in senior high school students (33.8%). Besides, roughly one-quarter of the senior high school students agreed that owning money can earn respect of other people. These observations are disturbing because many students employed money or material possessions to be a yardstick to define success and personal achievement. In future, studies should be conducted to examine how materialistic beliefs might contribute to the developmental outcomes in adolescents.

Interestingly, when the participants were asked about materialistic attitudes amongst Hong Kong adolescents in general, the participants saw that quite a high proportion of Hong Kong adolescents showed materialistic attitudes: 40% and 49% of junior and senior high school students agreed that Hong Kong adolescents defined success in terms of richness, respectively; 42.1% and 50.2% of junior and senior high school students agreed that Hong Kong adolescents equated money with respect from others, respectively. ANOVAs results also revealed that the participants saw themselves to be less materialistic than did adolescents in Hong Kong in general. In other words, students generally perceived that they were less materialistic as compared to adolescents in

general. This observation is generally in line with the social psychology literature that people tend to see themselves as better than others (i.e., social desirability effect).

Regarding sociodemographic correlates of materialistic beliefs in Chinese adolescents, several observations can be highlighted. First, older adolescents showed higher materialism; senior high school students showed stronger endorsement of materialistic beliefs than did junior high school students. There are several factors contributing to this observation. First, when adolescents grow older, their understanding of the importance of money would increase. Second, students in senior forms may actually spend more, hence underscoring the importance of money in the lives of adolescents. Third, older adolescents may be more susceptible to peer influence in material possession which may be used to define their identities.

Regarding gender differences in materialistic beliefs, findings showed that being male was associated with a higher level of materialistic beliefs. There are several possible explanations for this. First, as males are the breadwinners of the family, they would attach higher importance to money and material possession. Second, as males are more instrumental and pragmatic, they would see monetary and material possession to be more important. In future studies, we should further examine how such gender differences would be translated into gender differences in other areas, such as psychological well-being and interpersonal relationships.

The present findings also showed that both paternal and maternal education were related to adolescent materialistic beliefs. There are two possible explanations of the findings. First, higher parental education implies higher income for the family, which would reduce the importance of material possession. Second, parents with higher education might nurture their children to develop in a more holistic manner, particularly to look at the world from different angles. Further research is needed to understand how parents would socialize children, particularly in terms of the development of happiness from a hedonic or eudemonic motive.

Finally, materialistic beliefs were higher in high school students in non-intact families than in intact families. There are studies showing that parenting and

family functioning are less favorable in non-intact families than in intact families. The present study shows that the development of materialistic beliefs is adversely affected in non-intact families which is not systematically examined in previous studies. Furthermore, non-intact families might suffer from economic problems which may underscore the importance of material possession. However, as the present findings do not show any relationship between economic disadvantages and materialistic beliefs in adolescents, more research in this area is needed.

Although the present study is a pioneer study in the field, there are several limitations. First, although the sample was large, the students were not randomly selected. Hence, the generalizability of the findings should be carefully examined. It is suggested that random samples should be used in future studies. Second, as only five items were used to assess materialistic beliefs, it would be helpful to use more items in future studies. Of course, in a survey assessing many constructs, the issue of overloading the respondents should be carefully considered. Finally, regarding the socio-demographic of adolescent materialism, as the effect sizes were not large, there is a need to replicate the findings.

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Ethical compliance

The authors have stated all possible conflicts of interest within this work. The authors have stated all sources of funding for this work. If this work involved human participants, informed consent was received from each individual. If this work involved human participants, it was conducted in accordance with the 1964 Declaration of Helsinki. If this work involved experiments with humans or animals, it was conducted in accordance with the related institutions' research ethics guidelines.

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