

Journal of School Choice: International Research and Reform
Rethinking the ‘Tiger Parent’ stereotypes: Parents’ choice of primary school for their kindergarten children in Hong Kong
 --Manuscript Draft--

Manuscript Number:	WJSC-20190032R3
Article Type:	Empirical Analysis
Keywords:	Parental preferences; Parental values; Asia; School choices; Child well-being; Primary school
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Response to Reviewers:	The editor has two minor requests, and these are now addressed and highlighted in yellow. From editor: I do request one final, minor change. Please number the tables on pages 6 and 7, and if possible compare the income and education of the respondents to that of Hong Kong kindergarten parents generally, if those figures can be found. That would give us some idea of the representativeness of your sample. If the sample is not representative (or if we are not sure), we can publish the work, though you would need to note that as one of the limitations of the study.

1 **Rethinking the ‘Tiger Parent’ stereotypes: Parents’ choice of primary school for their**
2 **kindergarten children in Hong Kong**

3

4

5

Abstract

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7 which can be reflected in the primary school choice for their children. While some extant Hong Kong
8 studies conducted a decade ago corroborated the above contention, we aim to provide an updated account
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Introduction

Amy Chua’s memoir ‘Battle Hymn of The Tiger Mother’ (2011), with its huge and controversial influence on the media and the general public, has thrust Asian parenting into the limelight. Tiger parenting, as inferred by Chua, is highly demanding and controlling, which has an excessive focus on children’s academic performance while overriding all of their children’s preferences or desires. Abboud and Kim (2005), authors of another earlier book about Asian parenting, also made a clear message denying children’s happiness compared to academic success. Although these books are based on immigrated Asian parents in the U.S., plentiful critics and scholars believe they have reinforced the impression of *all* contemporary Asian parenting (Li & Xie, 2017; Juang, Qin, & Park, 2013).

To be specific, the tradeoff between academic success and happiness pursuit in parenting has been sharply reflected in the parental choice of primary school for their children in Asia, such as in Hong Kong. While western parents have been traditionally known to consider happiness of their children as an overarching criterion when selecting schools (e.g., Bussel, 1998; Coldron & Boulton, 1991; Petch, 1986; Woods, Bagley, & Glatter, 1998a), Hong Kong parents are reported to rely heavily on academic performance metrics (Fung & Lam, 2011; Ngan & Chung, 2004). While some scholars were concerned that this strong and even partial focus on academic pursuit could do harm to children’s psychological and social wellbeing (Supple & Cavanaugh, 2013); others argued that the academic-oriented Asian parenting largely owes to unreasonable stereotyping (Way et al., 2013), and contended that parental choice for their children is not static but also changes with time (Li & Xie, 2017). Juan et al. (2013) called it a ‘clear limitation’ that parenting research fails to address the temporal parental changes considering the drastic social and economic changes taken place in Asia in recent years.

Considering a lack of recent and comprehensive research on Hong Kong parents’ school choice, our study aims to provide an updated account of the decision criteria of Hong Kong parents when selecting primary schools for their children in kindergartens. In reference to previous studies highlighting Hong Kong parents’ focus on academic-oriented factors while selecting schools, we also attempt to ascertain to what extent this research corresponds with or deviates from those results. In addition, parents’ education and income levels will also be investigated to understand their influence on parental choice. Researching parents’ reasons of school choice will not only reflect trends in Hong Kong parenting style, but also will

1 help inform schools and government policy makers to fine-tune their strategies under the current market
2 mechanism – schools are financed by taxes and school fees, which turns parents into consumers of
3 education (Beal & Beal, 2013; Damaso & Lima, 2019; Dronkers, Felouzis, & van Zanten, 2010).

4 5 **‘Child-centred’ and ‘academic-centred’ parental school choice**

6 Parents’ choice of primary school is important for the development of their children, as school factors
7 (e.g., school work, teacher support) significantly affect the well-being of young children (Suldo, Riley, &
8 Shaffer, 2006; Ng & Yuen, 2015) that in turn has long term effects on their essential adult life outcomes
9 (Carneiro, Crawford, & Goodman, 2007; Feinstein, 2000). The importance of primary school choice
10 accordingly leads to deliberation on the parents’ side while making decisions. Rhodes et al. (2019)’s
11 review paper reveals a number of reasons influencing this decision process, including teacher quality,
12 students’ needs, and school reputation.

13 Most of these factors, according to Wood, Bagley and Glatter’s (1998b) well-cited book on
14 parental school choice in the UK, can be grouped under two thematic concerns – ‘child-centred’ and
15 ‘academic-centred’ – based on 6000 parental questionnaires, 124 interviews with parents, and 109
16 interviews with key personnel in schools. While ‘academic-centred’ factors are predominantly related to
17 academics (e.g., examination results; academic standards), ‘child-centred’ factors are based on ‘children’s
18 perspectives and social relationships’ (e.g., child’s preference and happiness) (p. 126). Although the
19 categorisation risks imposing a dichotomous perspective which cannot represent the exhaustive lists of
20 factors, the categorisation is found effective by Woods et al. in identifying broad patterns in parental
21 choice. The categorisation also aligns with one of our research goals to ascertain the controversial
22 ‘academics vs. happiness’ tradeoff in Hong Kong parenting.

23 24 **Parental choices of primary schools in Hong Kong**

25 There are different types of primary schools available for children in Hong Kong. Around 80% of primary
26 students are in public schools where no school fees are charged (Census and Statistics Department, 2016).
27 Parents with a particular public school choice in mind may apply for a ‘discretionary place’ to any *one*
28 school, and selection is based on a Points System and some other criteria (See Primary One Admission,
29 2019 for details). Those who fail their school choice will receive a computer-programmed central
30 allocation. Since parents are only able to select *one* ideal school for their children and there is no guarantee
31 that every parent will succeed in their first and only choice, how to balance various school selection criteria

1 and get into a ‘good’ school becomes all the more critical for Hong Kong parents. Of course, parents may
2 also apply direct to non-public-sector schools (e.g., private and international schools) usually with high
3 school fees.

4 Primary school choice has received considerable attention from parents because in traditional
5 Asian culture, parents believe ‘the earlier the better’ for their children to acquire different skills and
6 knowledge in school to prepare them for the future. Academic achievement is a major conventional
7 determinant of a person’s life and career success (Carless & Lam, 2014). Specifically in Hong Kong,
8 schooling is highly competitive, and the competition is not only severe at university and secondary level,
9 but also at primary education allocation, that parents have to plan ‘as early as admission to kindergarten’
10 (p.5) to get their children into good primary schools (Leung, 2013). Carless and Lam (2014) also discussed
11 how the first taste of schooling competition for a student in Hong Kong starts at the age of three, ‘when
12 parents seek a well-established kindergarten which facilitates entry to a good primary school’ (p.316).
13 Early-stage education is, thus, viewed to possibly determine the life chances of children. Kwan and Wong
14 (2016) pointed out that the ultimate purpose of schooling to parents in Hong Kong is getting their children
15 into well-performing schools which then bridge them into a good university ‘in the hope that it will
16 eventually give them a competitive edge in the future labour market’ (p.100). When children grow up in
17 such an environment that pressures them to excel in academics, it is not surprising that an OECD report
18 (Organisation for Economic Cooperation and Development, 2017) found 15-year-old students in Hong
19 Kong had a lower level of life satisfaction and higher work-related anxiety compared to most of their
20 counterparts in 72 OECD countries.

21 In light of the potential negative outcomes, another line of researchers (Juan et al., 2013; Way et
22 al., 2013), considered this tiger parenting for academic performance ‘outdated’ and ‘problematic’,
23 expecting shifts to more ‘child-centred’ approaches in contemporary Chinese societies. Li and Xie’s
24 (2017) longitudinal study on 297 mainland Chinese families supported this contention and revealed how
25 parenting styles change over time to more respect for children’s preferences, with a combination of
26 traditional education goals. Unfortunately, extant studies on Hong Kong parent choice of primary school
27 were conducted around a decade ago (e.g., Fung & Lam, 2011; Ngan & Chung, 2004) and failed to cover
28 a representative sample of the Hong Kong population (e.g., Ngan & Chung, 2004). More updated large-
29 scale research is needed to understand parental school choice in the Hong Kong context.

30

31 **The role of socioeconomic factors**

1 Apart from culture, studies have found that socioeconomic factors such as family income may also affect
2 parental school choices (e.g., Dixon & Humble, 2017; Wong & Kwan, 2019). Hastings, Kane and Staiger
3 (2005) analyzed the implementation data of a public school choice plan in the United States and noted
4 that parents' preferences for high academic scores increased with family income. In terms of educational
5 level, parents with higher educational attainment tend to emphasise the importance of education more
6 (Goldring & Phillips, 2008). There is, however, some inconsistency in research findings: Woods et al.
7 (1998q) found no consistent differences in priority of 'child-centred' and 'academic-centred' factors in
8 parental school choice across middle-class and working-class parents in the United Kingdom. In view of
9 the mixed results, another purpose of this study was to find out whether the priority of 'child-centred' and
10 'academic-centred' criteria, as found in studies conducted in the western context, may vary with income
11 and parental educational level in Hong Kong.

12

13 **The present study**

14 The aim of this study is to investigate the criteria that parents in Hong Kong used to decide on selecting
15 primary schools for their children, taking into account parents' income and educational levels. The
16 following research questions were investigated:

17 RQ 1: What general criteria do parents in Hong Kong rely on in selecting primary schools for their
18 children, and how do they prioritize different criteria?

19 RQ2: To what extent does the school-selection criteria aggregate around the 'child-centred' and
20 'academic-centred' theme (Woods et al., 1998b) respectively?

21 RQ 3: What is the influence of parental educational and income level on the relative importance
22 of child-centred and academic-centred school-selection criteria?

23 This study is exploratory; therefore, no hypotheses were formulated for each research question.

24

25 **Method**

26 *Participants*

27 The initial sample consisted of 3,429 parents who completed the collected questionnaires (details later).
28 The data of 51 respondents (1.5%) were excluded from the present analysis as they did not provide the
29 importance ratings for four or more (i.e., 25% or more) of the provided 16 school selection criteria. The
30 remaining 3,378 respondents were parents of 1,676 (49.6%) female students and 1,546 (45.8%) male
31 students (gender data were missing for 156 or 4.6% of the cases). Three thousand of the respondents

1 (88.8% of the 3,378 participants) reported their monthly family income level, including 7.6% participants
 2 being below HK\$10,000, 36.6% at HK\$10,000 – 30,000, 23.3% participants at HK\$30,000 – 50,000,
 3 10.2% participants at HK\$50,000 – 70,000, and 11% participants above HK\$70,000. **Error! Reference**
 4 **source not found.** shows the distributions of the parent respondents by educational level and nationality.

5 **Father**

Educational level	Nationality					Total
	HK Chinese	Mainland Chinese	Western	Others	(Not provided)	
Primary	87	24		6	2	119 (3.5%)
Secondary	1,478	209	5	43	14	1,749 (51.8%)
Diploma	345	89	2	10	4	450 (13.3%)
Bachelors	536	59	17	18	2	632 (18.7%)
Masters	270	24	6	6	2	308 (9.1%)
PhD	16	7	2	2		27 (0.8%)
(Not provided)	26	10		4	53	93 (2.8%)
Total	2,758 (81.6%)	422 (12.5%)	32 (0.9%)	89 (2.6%)	77 (2.3%)	3,378

6

Mother

Educational level	Nationality					Total
	HK Chinese	Mainland Chinese	Western	Others	(Not provided)	
Primary	39	75	2	11	1	128 (3.8%)
Secondary	1,206	525	2	43	12	1,788 (52.9%)
Diploma	361	144		16	2	523 (15.5%)
Bachelors	533	75	4	28	3	643 (19.0%)
Masters	180	15		3	3	201 (6.0%)
PhD	4	3				7 (0.2%)
(Not provided)	14	17	1	5	51	88 (2.6%)
Total	2,337 (69.2%)	854 (25.3%)	9 (0.3%)	106 (3.1%)	72 (2.1%)	3378

7

Table 1. Distribution of the parents in the sample by educational level and nationality.

8

1 **Instrument**

2 The data to address the research objectives were collected from a questionnaire. The parents rated 16
3 criteria for selecting the ideal primary schools for their children (see Table 2) on a 5-point Likert scale,
4 ‘1’ (*very important*), ‘2’ (*important*), ‘3’ (*neutral*), ‘4’ (*unimportant*), and ‘5’ (*very unimportant*). The
5 respondents then (a) indicated their ‘most important’, ‘second most important’, and ‘third most important’
6 criteria respectively among the 16 items and (b) answered a number of multiple-choice questions on
7 demographics including gender of their kindergarten children (for whom the questionnaires were
8 completed), family income, and the educational level and nationality of parents.

9 The 16 school-selection criteria went through four phases before it was finalized. First, Bussell’s
10 (1998) study with the 31 criteria was used as the baseline; second, 20 pre-school age children’s parents
11 openly discussed how they chose a primary school for their child based on the Bussell (1998) study; third,
12 in order to match these criteria with the context of Hong Kong, the researchers then invited three
13 experienced Hong Kong educators to reword, remove, and combine the discussed criteria. For example,
14 ‘links with pre-school organizations’ became ‘Through-train school’. Also, a criterion – ‘medium of
15 instruction’ was added as primary schools in Hong Kong may teach in different languages. This process
16 resulted in 16 school-selection criteria considered relevant for the Hong Kong context. Finally, after
17 modification, the questionnaire was piloted with five parents to check the understandability of the
18 questionnaire. These five parents were randomly selected, all their children were in the final year of
19 kindergarten. We approached them during a number of kindergarten open day exhibitions. The feedback
20 from the five parents suggested that the 16 criteria were meaningful to the respondents.

-
1. Through train ^a
 2. Small class teaching
 3. School fee and related costs
 4. Location/ distance from home
 5. Religion
 6. Secondary school allocation history
 7. School reputation/conduct
 8. School facilities

1 applying for primary school for their children in September but before the school allocation was
2 completed. Ethical approval was obtained prior to data collection.

3 To pursue a representative sample of parents of kindergarten students, the research team
4 approached around 500 kindergartens randomly selected from all of the 18 districts of Hong Kong. There
5 were no specific inclusion criteria for schools, but only parents who had children in the final year of
6 kindergarten were chosen. The researchers had requested the schools to distribute the study questionnaire
7 to parents and collect their responses. The questionnaire was paper-based, formatted into one page, and
8 printed on the back side of an informed consent form. The form explained the purposes and rationales of
9 the study, provided a data confidentiality statement, and stated that participation was entirely voluntary.
10 The respondents were given the list of the primary-school selection criteria (described in the ‘Instrument’
11 section) and were requested to rate the importance of each as well as to indicate their top three criteria by
12 order of importance. Ninety-nine kindergartens accepted the invitation for participation, and the schools
13 delivered the questionnaires and consent forms to totally around 6,070 parents. The participating
14 kindergartens subsequently received 3,429 completed questionnaires.

15

16 **Data analyses**

17 Statistical testing procedures on the data were conducted using SPSS and AMOS version 23. Mplus
18 version 8 was only used to generate the Standardized Root Mean Squared Residual (SRMR), because
19 AMOS does not produce this fit index with missing data. To address RQ 1, the importance and relative
20 priorities of the 16 school-selection criteria were examined and comparisons were made across the ratings
21 and responses on the importance of the criteria. The relative contributions of individuals and schools as
22 sources of rating variability were also studied to ascertain the statistical independence of the responses of
23 individual participants (versus the possibility that responses of parents from the same kindergarten might
24 be more similar than expected for a random sample).

25 With respect to RQ 2, the clustering patterns of the importance ratings on the school-selection
26 criteria were investigated through exploratory and confirmatory factor analyses (EFA and CFA), to find
27 out whether the school-selection criteria factor structure could be interpreted in terms of a child-centred
28 and an academic-centred theme respectively. To the extent such a factor structure could be derived, the
29 criteria loaded on the child-centred and academic-centred factors would be statistically compared across
30 parental education and income (Harding et al., 2017) levels, to address RQ 3.

31 A number of fit indicators were derived using the maximum likelihood estimation to assess model

1 fit for the CFA of this study. The fit indices included the Chi-squared statistic (χ^2), the Comparative Fit
 2 Index (CFI), the SRMR, and the Root Mean Squared Error of Approximation (RMSEA). With reference
 3 to the commonly used thresholds (Kenny, 2015), a CFI above .90, an SRMR below .08, and an RMSEA
 4 below .08 were taken as indicative of acceptable model fit. Where relevant, partial eta-squared (η_p^2) is
 5 reported as a measure of effect size. Values of 0.01, 0.06 and 0.14 indicate small, medium and large
 6 effects, respectively (Cohen, 1988).

7

8 **Results**

9 ***RQ 1: School-selection criteria preferred by parents***

10 The key descriptive statistics of the importance ratings on the 16 school-selection criteria are summarized
 11 in Table 3. Apart from religion and school type (boys, girls, co-ed), the total number of ‘very important’
 12 and ‘important’ responses for the rest of the criteria ranged between 56.0% and 99.2%, indicating that
 13 most of the criteria were key considerations of the parents for their primary school choices. The top
 14 important three criteria as rated by the parents (1 for ‘very important’, 2 for ‘important’, and so on) were:
 15 child’s happiness ($M = 1.23$; highest importance), school reputation/conduct ($M = 1.31$; second highest
 16 importance), and teacher qualification and reputation ($M = 1.46$; third highest importance).

17

Criterion	Rating		Variance of ratings			The top three most important criteria	
	Mean rating ^a	% of ‘very important’ / ‘important’ ratings ^b	Within schools	Between schools	% of variance between schools	Most important criterion ^c	Within the top three criteria ^d
Through train	2.14	70.8%	0.750	0.041	5.2%	12.3%	7.2%
Small class teaching	1.81	86.8%	0.498	0.014	2.8%	7.2%	7.8%
School fee and related costs	2.09	75.3%	0.590	0.016	2.6%	1.3%	2.3%
Location/ distance from home	1.66	92.6%	0.431	0.007	1.6%	5.8%	7.7%
Religion	2.78	32.7%	0.765	0.068	8.2%	2.5%	1.9%
Secondary school allocation history	1.71	90.7%	0.438	0.014	3.0%	7.3%	7.6%

School reputation/ conduct	1.31	98.5%	0.248	0.004	1.8%	25.7%	19.8%
School facilities	1.76	93.6%	0.326	0.015	4.5%	0.6%	2.3%
Extracurricular activities	1.97	84.2%	0.438	0.013	2.8%	0.1%	0.9%
Teacher qualification and reputation	1.46	96.0%	0.342	0.003	0.9%	5.0%	9.3%
Child's happiness	1.23	99.2%	0.198	0.001	0.4%	26.8%	20.3%
Teaching style	1.73	91.0%	0.449	0.006	1.4%	3.0%	7.8%
Same school as sibling(s)	2.36	56.0%	0.938	0.015	1.6%	0.9%	1.2%
Curriculum	2.01	80.8%	0.473	0.003	0.7%	0.3%	1.5%
Gender of school	2.79	35.2%	0.777	0.008	1.0%	0.1%	0.2%
Medium of instruction	1.94	83.6%	0.477	0.005	1.1%	1.1%	2.2%

1 Table 3. The means and variances of the importance ratings of school-selection criteria (1 = very
2 important; 5 = very unimportant) and their frequency of being within the top three most important
3 criteria of individual respondents.

4
5 ^a Lower mean important rating value corresponds to higher importance.

6 ^b The denominators of the percentages are the total numbers of responses (i.e., missing data discounted) to the corresponding importance
7 rating questions.

8 ^c The denominator of the percentages is the total number of responses (i.e., missing data discounted) to the most-important-criterion
9 question.

10 ^d The denominator of the percentages is the total number of responses (i.e., missing data discounted) to the most-important, second-most-
11 important and third-most-important criterion questions together. Forty-nine participants chose the same criterion for more than one of these
12 three questions. For those 49 cases, the criterion concerned was only counted towards the higher importance question, to avoid double
13 counting. For example, if a respondent chose religion as both the “most important” and “second most important” criteria, religion would
14 only be counted as the “most important” for the respondent. If religion was chosen as both “second most important” and “third most
15 important”, religion would only be counted as “second most important” for the participant.

16
17 To ensure the statistical independence of participants' responses (versus the possibility that
18 responses of parents from the same school might be more similar than expected for a random sample),
19 multilevel analysis procedure (SPSS MIXED) was conducted to investigate the relative contributions of
20 individuals and schools to the variability of ratings. The analysis started with one-way random-effects
21 ANOVA as the measurement model, and the respondent-level and school-level variances in the

1 importance ratings for the criteria are tabulated in Table 3. The individual-level variances were statistically
2 significant ($p < .001$) for all criterion items, whereas the school-level variances were statistically
3 significant for all items ($p < .05$) except teacher qualification and reputation ($Wald Z = 1.680$; $p = .093$),
4 child's happiness ($Wald Z = .941$; $p = .347$), curriculum ($Wald Z = 1.444$; $p = .149$), and medium of
5 instruction ($Wald Z = 1.935$; $p = .053$). However, as shown in Table 3, the ratios of the school-level
6 variances to the corresponding total variances were generally small, being less than 5% for all criterion
7 except 'through train' (5.2%) and religion (8.2%). This indicated that the present sample was reasonably
8 homogeneous across schools with respect to ratings on the criteria. Multilevel analysis was thus not further
9 proceeded for the subsequent data analyses, i.e., parents were taken as the unit of analysis in further
10 analyses.

11 Apart from providing importance ratings for individual criteria, the participants also identified the
12 three most important criteria for themselves. To test the consistency of respondents' ratings of different
13 school-selection criteria with their selection of the three most important criteria, the importance ratings of
14 each participant's top three criteria were first extracted and put into a separate dataset. Planned
15 comparisons using repeated measures t-tests were then conducted: The most-important criteria were found
16 to be rated ($M = 1.14$) more important than the second most important ones ($M = 1.22$), $t(3246) = 10.317$,
17 $p < .001$. In turn the second most important criteria were rated more important than the third most
18 important ones ($M = 1.32$), $t(3226) = 10.257$, $p < .001$. (On this study's scale, lower rating value
19 corresponds to higher importance.) These results revealed that the top-three-importance choices were
20 generally consistent with the importance ratings within individual respondents.

21 Across the 16 criteria, participants' relative priorities based on the mean importance ratings and
22 the top three important choices were also reasonably consistent. The Spearman correlation coefficient
23 between the rank order of the 16 criteria by mean importance ratings and the corresponding order by
24 occurrence frequency within the three most important choices (i.e., the numbers in the rightmost column
25 of Table 3) was .86 ($p < .001$). In particular, based on either the mean importance ratings or the occurrence
26 frequency within the top-three most important choices, the school-selection criteria child's happiness,
27 school reputation/conduct, and teacher qualification (and reputation) ranked the first, second, and third
28 respectively. A paired sample t-test ascertained that these three school-selection criteria together were
29 rated ($M = 1.33$) significantly more important than the 13 remaining criteria ($M = 2.05$), $t = 109.62$, $df =$
30 3376 , $p < .001$.

1 Post-hoc specific comparison between the top two criteria revealed that child's happiness was
 2 rated significantly more important than school reputation/conduct (paired t-test: $t = 8.73$, $df = 3340$, $p <$
 3 $.001$), though there was no significant difference in the relative proportion of respondents considering the
 4 two criteria as the most important to them (26.8% for child's happiness versus 25.7% for school
 5 reputation/conduct; $\chi^2 = 0.67$, $df = 1$, $p = .415$). That is, although the two school-selection criteria seemed
 6 to be equally ranked by parents as the most important criterion, the child's happiness criterion appeared
 7 to receive significantly more importance rating compared to the school reputation/conduct criterion. The
 8 overall results suggested that child's happiness is the single most important criterion school-selection for
 9 parents.

10

11 ***RQ 2: Clustering patterns of parental school-selection criteria***

12 To explore the thematic aggregation of the importance ratings, EFA was conducted to generate a
 13 suggestive latent structure to be further tested by CFA. For the EFA, the ratings were adequately factorable
 14 based on the determinant of their correlation matrix, the Barlett's test of sphericity and the Kaiser-Meyer-
 15 Olkin test of sampling adequacy. For CFA, the data were screened with respect to missing data and
 16 normality of the distribution: with the aforementioned exclusion of the 51 participants with more than
 17 three missing ratings, the total number of missing data across the 16 school-selection criteria items was
 18 small (around 1.2%). However, applying Little's (1988) Missing Completely at Random (MCAR) test
 19 suggested that the data were not missing at random. In view of these circumstances, the full information
 20 maximum likelihood (FIML) estimation procedure provided by AMOS was used for handling the missing
 21 data for CFA. As AMOS (version 23) does not provide an SRMR value when there are missing data, the
 22 SRMR values for the present analysis were obtained using Mplus (whereas the other fit indices were
 23 generated by AMOS). Based on the guidelines of Lei and Lamex (2005), as the absolute values of the
 24 univariate skewness and kurtosis of the importance ratings were mostly (75%) below 1.0 (mild non-
 25 normality) and the rest below 2.0 (moderate non-normality), except the kurtosis (3.47) of ratings on child's
 26 happiness, potential biases arising from non-normality for applying FIML were not of practical concerns.

Criterion	Factor 1	Factor 2	Factor 3
3. School fee and related costs			.36

5. Religion		.38
6. Secondary school allocation history	.51	
7. School reputation/ conduct	.76	
8. School facilities	.70	
9. Extracurricular activities	.76	
10. Teacher qualification and reputation	.34	.43
11. Child's happiness	.30	
13. Same school as sibling(s)		.50
14. Curriculum	.38	.30
15. Gender of school		.57
16. Medium of instruction		.40

1 Table 4. Rotated factor loadings for the 12 criterion rating items with loading magnitude at or above 0.3
2 (only factor loadings with magnitude greater than 0.3 are displayed).

3
4 *Note:* The loadings of the remaining four criteria, through train, small class teaching, location/ distance
5 from home and teaching style, on the three factors above were all less than 0.3 in absolute values.

6 Principal axis factoring was applied for the EFA of the importance ratings of the school-selection
7 criteria, and the scree test (Cattell, 1966) suggested three factors to be extracted. Subjecting the three
8 factors to direct oblimin rotation and taking 0.3 as the inclusion cut-off for values yielded an interpretable
9 structure for 12 of the 16 criteria. Table 4 shows the three-factor solution and the rotated factor loadings
10 of the component items. The loadings of the remaining four criteria on the three factors were all below
11 0.3. (If four instead of three factors were retained, there would only be 12 items with loading values above
12 0.3 on the retained factors, and the factorial structure would become less interpretable.). Factor 1 and
13 Factor 2 were labeled as representing general personal development and academic attainments
14 respectively based on the common themes of their component items, and Factor 3 was considered as
15 capturing practical and costs related aspects. Factor 1 and 2 thus corresponded to the distinction between
16 'child-centred' (concerning general personal growth of students) and 'academic-centred' perspectives as
17 proposed by Woods et al. (1998b).

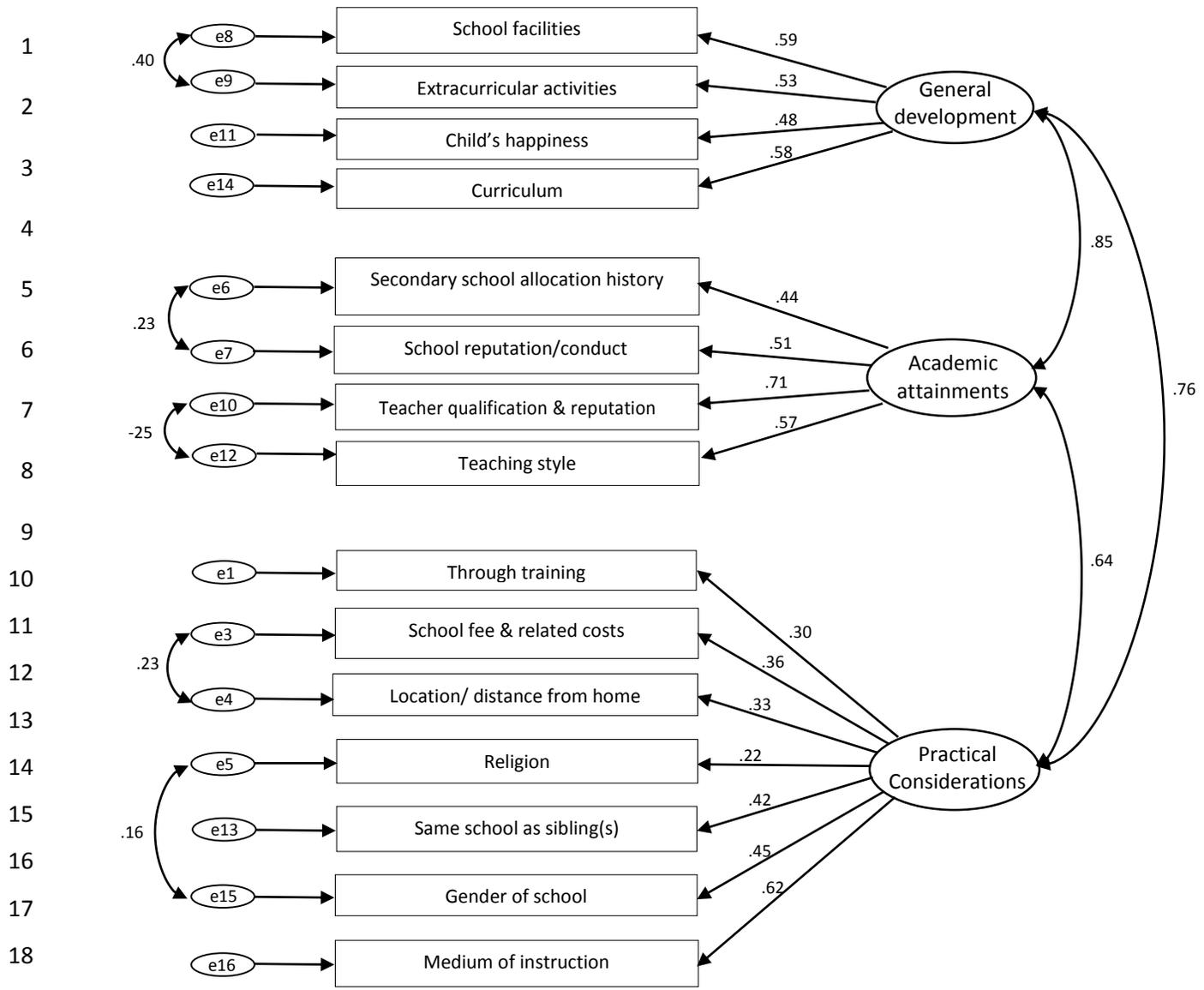


Figure 1. Standardized path coefficients and correlation coefficients of the measurement model for importance ratings of school-selection criteria. All path and correlation coefficients are statistically significant, $p < .001$.

A measurement model building on the factorial solution suggested by the EFA, as shown in Figure 1 was tested using CFA. Guided by the EFA results, the model had the three aforementioned factors freely co-varying with one another and the 12 criteria loading on the corresponding factors (the curriculum criterion and the teacher qualification and reputation criterion were allocated to the respective factors on which the criteria had a higher loading). Additionally, on content basis, teaching style (quality of homework, tests and exams) was added as an indicator variable of the Academic Attainments factor, and

1 through train and location/distance from home were slotted into the Practical Considerations cluster. The
2 remaining criterion, small class teaching, was omitted from the model as there was no a priori basis (with
3 respect to meanings to the respondents) to assign it between the General Development and the Academic
4 Attainments factor resulting in a measurement model with 15 indicator variables (i.e., 15 items). When
5 this 15-item measurement model was tested with all indicator residuals constrained as uncorrelated, the
6 data fit was poor as reflected by the CFI being well below 0.90 ($\chi^2 = 1517.83$, $df = 87$, $p < .001$; CFI =
7 .829; RMSEA = .070, 90% CI [0.067 – 0.073]; SRMR = .052). Considering the modification indices and
8 substantive associations of the school-selection criteria suggested that the no-correlation assumptions of
9 the following five pairs of criteria were potential sources of the poor data fit:

- 10 • the criterion of school fee and related cost and the criterion of location/distance from home (these two
11 items may associate as they share expenses as a common theme);
- 12 • religion and gender of school (single-sex schools usually have religious affiliation in Hong Kong);
- 13 • school reputation/conduct and secondary school allocation history (both are conventional indicators
14 of primary schools' academic standing in Hong Kong's context);
- 15 • teaching style and teacher qualification and reputation (both are related to teachers); school facilities
16 and extracurricular activities (the availability of facilities may facilitate or constrain the
17 implementation of extracurricular activities).

18 By allowing the error terms within the aforementioned five pairs of criteria to co-vary in the model,
19 as displayed in Figure 1, a reasonable model fit was attained ($\chi^2 = 825.81$, $df = 82$, $p < .001$; CFI = .911;
20 RMSEA = .052, 90% CI [0.049 – 0.055]; SRMR = .038), and all factor loadings were statistically
21 significant ($p < .001$; see Figure 1 for the respective loading values). The overall EFA and CFA results
22 were consistent with a factorial structure of the school-selection criteria clustering around three latent
23 variables (with the criterion small class teaching omitted). The latent variables represented general
24 development (child-centred perspective), school academic performance (academic-centred perspective)
25 and other practical considerations respectively, and they correlated with one another (r_s between .64 and
26 .85, $p < .001$).

27

28 ***RQ 3: Influences of family income and parental educational level on the importance of child-centred***
29 ***and academic-centred school-selection criteria***

1 To test the influence of family income and parental educational level, the unweighted mean importance
 2 ratings on the four items of the General Development and Academic Attainments factor respectively were
 3 taken as proxy factor-based scores for child-centred and academic-centred criteria. Table 5 summarizes
 4 the variations of these two factor-based scores as a function of family income and parental educational
 5 level. The statistical significance of the differences on these scores across income and educational levels
 6 were tested by ANOVA procedures. Levene’s (1960) test was applied for each ANOVA to assess
 7 heteroscedasticity, and when it reached a statistically significant level in an ANOVA, Welch’s (1951)
 8 corrections were applied.

	<i>n</i>	General Development / Child-centred		Academic Attainments / Academic-centred	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<u>Income level</u>					
Below \$10,000	258	1.67	0.45	1.55	0.45
\$10,000 – 30,000	1,238	1.71	0.42	1.59	0.44
\$30,000 – 50,000	788	1.74	0.40	1.52	0.41
\$50,000 – 70,000	346	1.82	0.45	1.56	0.38
Above \$70,000	370	1.85	0.45	1.53	0.36
<u>Highest educational qualification of father</u>					
Primary	119	1.82	0.46	1.76	0.55
Secondary	1,749	1.70	0.42	1.56	0.43
Diploma	450	1.71	0.41	1.52	0.42
Bachelor	632	1.80	0.44	1.53	0.38
Master	308	1.87	0.45	1.55	0.37
Doctor	27	1.79	0.38	1.52	0.48
<u>Highest educational</u>					

qualification of mother

Primary	128	1.79	0.50	1.71	0.53
Secondary	1,788	1.71	0.42	1.56	0.44
Diploma	523	1.70	0.42	1.50	0.39
Bachelor	643	1.84	0.45	1.55	0.38
Master	201	1.88	0.43	1.53	0.35
Doctor	7	1.50	0.35	1.29	0.27

1 Table 5. Factor-based scores (1 = very important; 5 = very unimportant) of General Development (child-
2 centred) and Academic Attainments (achievement-centred) in relation to family income (in HK\$) and
3 parental educational level.
4

5 *Note:* lower mean factor-based score value corresponds to higher importance.
6

7 *Family income*

8 One-way ANOVA indicated that across the five income conditions there were statistically significant
9 variations of both the child-centred scores, Welch's adjusted $F(4, 918.03) = 11.88, p < .001, \eta_p^2 = .016$,
10 and academic-centred scores, Welch's adjusted $F(4, 949.25) = 4.13, p = .003, \eta_p^2 = .005$. The mean child-
11 centred score increased monotonically from the lowest ($M = 1.67, SD = 0.45$) to the highest income group
12 ($M = 1.85, SD = 0.45$) while the trend of the mean academic-centred score was less apparent.

13 To ascertain the overall direction of the relationships, the mean score for each factor of the lowest
14 two income groups combined (i.e., income below HK\$30,000) was statistically compared with the
15 corresponding mean score of the two highest income groups combined (i.e., income above HK\$50,000):
16 For the child-centred cluster, in line with the aforementioned monotonic trend, the factor was rated
17 significantly less important by the higher income parents relative to the lower-income parents, mean
18 ratings difference = 0.128, $F(1, 2210) = 42.55, p < .001, \eta_p^2 = .019$. The analogous comparison revealed
19 that the academic-centred factor was rated significantly more important by the higher income participants
20 relative to their lower income counterparts, mean ratings difference = 0.045, Welch's adjusted $F(1,$
21 $1651.58) = 5.59, p = .012, \eta_p^2 = .003$.

22 *Parental educational level*

1 Across parental educational levels, there were statistically significant variations in the child-
2 centred factor scores across fathers' qualifications, $F(5, 3279) = 12.87, p < .001, \eta_p^2 = .019$, and across
3 mothers' qualifications, Welch's adjusted $F(5, 64.82) = 14.85, p < .001, \eta_p^2 = .022$. The corresponding
4 variations in academic-centred scores were also statistically significant across fathers' qualifications,
5 Welch's adjusted $F(5, 226.99) = 7.20, p < .001, \eta_p^2 = .011$, and across mothers' qualifications, Welch's
6 adjusted $F(5, 65.15) = 6.18, p < .001, \eta_p^2 = .009$.

7 To ascertain the overall direction of the relationships, the mean score for each factor was
8 statistically compared between the combined group of university degree holders (i.e., bachelor, master,
9 doctor) and their non-degree-holding counterparts (i.e., primary, secondary and diploma). While these
10 statistical comparisons were conducted with respect to the qualifications of fathers and mothers separately,
11 the results for the fathers' and mothers' qualifications converged: The degree holding parents rated the
12 child-centred factor as significantly less important relative to their non-degree holders, mean ratings
13 difference = 0.116, $F(1, 3283) = 49.60, p < .001, \eta_p^2 = .015$ for fathers' qualifications; mean ratings
14 difference = 0.136; $F(1, 3288) = 63.66, p < .001, \eta_p^2 = .019$ for mothers' qualifications. In contrast, based
15 on the comparisons between the degree and non-degree holders, parental educational qualifications
16 showed no statistically significant influence on the academic-centred factor score, mean ratings difference
17 = 0.029; Welch's adjusted $F(1, 2080.02) = 3.142, p = .060, \eta_p^2 = .001$ for fathers' qualifications; mean
18 ratings difference = 0.014; Welch's adjusted $F(1, 1713.864) = 0.711, p = .364$ for mothers' qualifications.
19 Nonetheless, as observable from Table 5, the academic-centred factor was rated by the two sub-groups at
20 primary education level ($M = 1.76$ and 1.71 , based on fathers' and mothers' qualifications respectively)
21 visibly less important relative to the other sub-groups with higher academic qualifications (all M s < 1.60).
22 Post-hoc pairwise comparisons indicated that these differences reached statistical significance (all p s $<$
23 $.003$) except for the doctoral qualification sub-groups - the doctoral sub-groups actually gave the highest
24 ratings on the academic factor ($M = 1.52$ and 1.29 , based on fathers' and mothers' qualifications
25 respectively) and statistical significance was not reached apparently because the two doctoral sub-groups
26 were small in sizes.

27 Taken together, the academic-centred criteria were perceived as less important by parents with
28 lower income (relative to the higher income families) and parents with primary education qualifications
29 (relative to parents with higher educational qualifications). Parents with lower income rated the child-
30 centred factor as more important relative to their higher income counterparts, and parents with lower

1 educational qualification levels rated this factor as more important relative to the parents with higher
 2 educational levels.

Income level	School fee and related costs			Location		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Below \$10,000	252	1.91	0.76	252	1.59	0.70
\$10,000 – 30,000	1,222	2.00	0.75	1,229	1.64	0.66
\$30,000 – 50,000	782	2.11	0.75	782	1.62	0.64
\$50,000 – 70,000	343	2.19	0.79	345	1.66	0.65
Above \$70,000	368	2.38	0.86	370	1.80	0.67

3 Table 6. Mean importance ratings (1 = very important; 5 = very unimportant) on costs and locations of
 4 school in relation to family income (in HK\$).

5 *Note:* lower mean important rating value corresponds to higher importance.

6
 7 *Influence of financial and practical constraints on parental school choice*

8 As a post hoc investigation, this study additionally tested a related proposition that parents’ school choices
 9 are influenced by financial and practical constraints (e.g., Burgess et al., 2009; Fiske & Ladd, 2001;
 10 Hastings et al., 2005). Consistent with this proposition, across the five income groups, there were
 11 significant differences in importance ratings for school fee and related costs, Welch’s adjusted $F(4,$
 12 $909.10) = 22.66, p < .001, \eta_p^2 = .030,$ and location/distance from home, Welch’s adjusted $F(4, 917.10) =$
 13 $5.79, p < .001, \eta_p^2 = .008.$ As shown in Table 6, the mean ratings on these two items were in the expected
 14 trend.

15 Post-hoc comparisons with Bonferroni adjustments (for an overall alpha level of .05) indicated
 16 that the highest income respondents (above HK\$70,000) rated school fee and related costs significantly
 17 less important relative to all four lower income sub-groups (all Bonferroni-corrected $ps < .008$). Among
 18 the latter four sub-groups, the two sub-groups with relatively higher income (HK\$30,000 – 50,000;

1 HK\$50,000 – 70,000) rated the criterion as less important compared with the lowest two (below
2 HK\$10,000 and HK\$10,000 – 30,000), all Bonferroni-corrected $ps < .02$. As regards location and distance
3 from home, the highest income respondents (above HK\$70,000) rated the criterion significantly less
4 important than the three sub-groups with income below HK\$50,000 (all Bonferroni-corrected $ps < .001$),
5 and there were no other statistically significant inter-sub-group differences. The overall results supported
6 that financial factors affect parental school selection and study costs were expectedly more of a concern
7 for lower income families relative to the higher income ones.

8

9 **Discussion**

10 This study sought to identify the general criteria and priorities of parents in Hong Kong for selecting
11 primary schools for their children. The thematic clustering patterns of the school-selection criteria (child-
12 centred vs. academic-centred) was investigated, as well as, how these criteria are related to parental
13 income and educational levels.

14 ***RQ 1: 'Child happiness' as a preferred school-selection criteria by parents***

15 In this study, the relative priority of the selection criteria was assessed by both importance ratings and
16 participants' three-most-important choices. Although indications from these two response methods are
17 not necessarily equivalent (e.g., Goldstein & Einhorn, 1987), the priority order of the 16 criteria based on
18 mean importance ratings and occurrence frequency within the top-three choices were highly correlated.
19 In particular, based on either ranking approaches, child's happiness, school reputation/conduct, and
20 teacher qualification and reputation represented the single most, second most, and third most important
21 criteria for parental school-selection respectively. Although prior studies suggested that academic
22 achievement is a serious concern for parents when selecting schools in Hong Kong (e.g., Fung & Lam,
23 2011; Ngan & Chung, 2004), our study showed that child's happiness is at least equally important for
24 parents in Hong Kong.

25 With reference to the traditional impression of Asian parents as tiger moms and dads caring solely
26 about children's academic performance, our findings show a more balanced parenting approach of Hong
27 Kong parents, which is consistent with some recent Chinese studies (Li & Xie, 2017). On the one hand,
28 they regard child's happiness as the single most significant criterion (by importance ratings); on the other
29 hand, the criteria related to academic performance are also of high priority to parents (Bauch & Goldring,
30 1995; Burgess et al., 2009; Ngan & Chung, 2004). When forced to identify a single most important

1 criterion, there were comparable number of parents (no statistically significant difference) indicating
2 child's happiness and school academic reputation/discipline as of highest importance. This indicates in a
3 context of rapid social and economic changes in Hong Kong society, parental school choices also change
4 over time. The findings challenge the long-standing stereotype of Asian parenting and reflect the need for
5 more research to understand contemporary Asian parental school choice.

6 Despite the finding that child's happiness is one of the most important parental school-selection
7 criteria in Hong Kong, the OECD (2017) report still suggests that Hong Kong students have the lowest
8 life satisfaction. One explanation for such contradicting findings could be a gap between 'expectation'
9 and 'reality'. Parents may understand and believe that child's happiness is the most important criteria for
10 them in school choice, whereas in reality, as discussed in plentiful studies (e.g., Carless & Lam, 2014; Liu
11 & Bray, 2018), the competitive school atmosphere and the crucial role of academic performance in the
12 society may still pressure students and parents. Furthermore, the notion of 'happiness' is highly nebulous,
13 subjective to how individuals understand and assign meanings to it (West et al., 1998). There are potential
14 gaps between what makes a child happy between households and also between parents and child's own
15 perception. As this study investigates parents' belief on child's happiness, what contributes to child's
16 happiness in reality might differ as well.

17

18 ***RQ 2: Clustering patterns of 'child-centred' and 'academic-centred' school choice criteria***

19 In line with the framework of Wood et al. (1998b) asserting that parental school-selection criteria involve
20 'child-centred' and 'academic-centred' factors, the applications of EFA and CFA in this study suggested
21 that students' happiness (the single most important criterion) is one component of the more general 'child-
22 centred' factor, while school reputation and teachers' quality (the second and third most important criteria)
23 exemplify a broader 'academic-centred' cluster. In addition to Wood et al.'s (1998b) two main factors,
24 our findings also revealed a third (statistically configured) school-selection factor – a host of practical
25 considerations like through train, costs and distance. However, while small class teaching criteria was
26 rated by 87% of parents as important or very important, it did not load highly on either of the three latent
27 dimensions.

28 Meanwhile, it should be noted that the 'academic-/child-centred' categories do not constitute an
29 exhaustive list of reasons for parents' selection (e.g., some factors in our study also cannot be loaded onto
30 these two categories). Nor are the two categories necessarily mutually exclusive. As Woods et al. (1998b,

p.127) reminded, in some cases, parents require a strong academic environment because the child enjoys pursuing academic knowledge, resulting in an overlap of ‘child-centred’ and ‘academic-centred’ concerns. That said, in this particular study, the ‘child-/academic-centred’ clustering patterns are useful in revealing broad patterns of parental choice among a range of factors, and help contribute insights into the long-standing focus on academics-happiness tradeoff in Asian parenting (Dundes, Cho, & Kwak, 2009).

RQ 3: Influence of family income and parental educational level on the importance of ‘child-centred’ and ‘academic-centred’ school-selection criteria

The findings revealed that the general development (‘child-centred’) and the ‘academic-centred’ criteria were less important to parents with higher income relative to their lower income counterparts. Furthermore, parents with university degree qualifications assigned lower priority to ‘child-centred’ school-selection criteria relative to parents in the sub-degree groups. Higher family income was associated with greater priority of the ‘academic-centred’ criteria, and consistently parents with secondary education and above consider the academic performance criteria as more important compared with the primary-education sub-group. Findings are not surprising and support previous research on family socioeconomic status and school choice in western countries (e.g., Hastings et al., 2005; Goldring & Phillips, 2008).

Additionally, this study found that parents with lower family income were more concerned with costs and location constraints compared with their counterparts of higher income, even though no school fees are charged by public sector primary schools which represent over 80% of primary school students in Hong Kong (Census and Statistics Department, 2016). The finding is also consistent with previous research that parents from low income countries give substantial weight to logistic issues while making school decisions for their children (Rhodes et al., 2019)

Limitations and future studies

Several limitations of this study are important to be acknowledged. The first issue concerns the general limitations of self-report data, in which parents may be subject to social desirability bias (van de Mortel, 2008). Future studies may attempt to triangulate the results by including teachers, admission officers and students’ viewpoints to alleviate the self-report bias or investigate parents’ *actual* school choice. In addition, as the parents participated in our research on a voluntary basis, the sample might not reflect

1 accurately the general kindergarten's parent population in Hong Kong particularly in terms of income and
2 education levels (e.g., parents with a 'secondary school level' education are more represented in this
3 study). Future studies could also include a larger sample size and triangulate their findings with ours.

4 Second, given this study's exploratory nature to examine possible trends and criteria in parental
5 primary school choice in Hong Kong, items used in the questionnaires were rather generic. For example,
6 as discussed above, individual's understanding of 'child happiness' may vary and there are possible
7 overlaps between 'child-/academic-centred' patterns. Aiming for a generalizable result and a highlight of
8 factors considered important, our quantitative approach is not in itself sufficient to enable detailed
9 explanations of parental choices.

10 That said, our exploratory findings can be used as a good departure point for future investigations
11 of finer grained school-selection criteria (e.g., the constituents contributing to child's happiness at school)
12 by incorporating qualitative research methods. Future follow-up studies may examine how the school-
13 selection criteria identified in this study are dynamically applied by parents during actual decisions (e.g.,
14 how they integrate multiple criteria with practical constraints and reach a decision in reality). It would
15 also be informative to investigate reasons behind the more balanced perspective (child- AND academic-
16 centred) in parental school choice, and reasons behind the differences of school choice potentially caused
17 by the family's education and income level.

18 Furthermore, it would also be interesting to consider cross-cultural and inter-cultural (e.g., Chinese
19 Americans) comparisons to investigate parental school-selection criteria in future studies. A comparative
20 study on the father and mother's school decision for their child may be beneficial as well. A behavioral
21 genetic perspective on parenting may also shed new light on parents' school choice (Klahr & Burt, 2014).
22 More policy-related research is also needed to reflect the current needs of parents as evidenced in this
23 study and to inform future school planning strategies.

24

25 **Conclusions and implications**

26 To conclude, this study demonstrates a general pattern that Hong Kong parents value both child happiness
27 and factors relating to academic quality (e.g., teacher qualification; school reputation) while making
28 primary school choice for their children. The parental school choice is also found relative to parents'
29 education and income level.

1 The study makes contribution both at a knowledge and a practical level. On a knowledge level, the
2 study indicates a potential shift from a sole focus on academic performance in Hong Kong parents' school
3 choice to a more balanced consideration. This understanding also challenges the long-standing impression
4 that Asian parents are only 'academic-centred', and supports that parenting styles are fluid and changing
5 over time. The mixed-pattern of child- and academic-focus not only reflects contemporary Hong Kong
6 parents' concerns for children's well-being, but also reflects how parental education decisions are
7 nonetheless subject to the general social and school culture. Therefore, the bi-focus in parental school
8 choice is illustrative of Hong Kong parents' negotiation between various factors, and offers a launching
9 pad for more nuanced studies to investigate the complexities and compromises within.

10 At a practical level, our findings are informative for schools to fine-tune their operations and
11 management decisions. Our results suggest that school-based curriculum, facilities, and extracurricular
12 activities are perceived by parents as key contributors to the general personal development of students,
13 while academic track records, teacher quality, and school discipline form a solid base of parents'
14 evaluation of the school's academic ability. As parents are increasingly viewed as consumers in the
15 education market whose expectations need to be sufficiently satisfied (Meier & Lemmer, 2019), schools
16 may find our results useful by allocating more resources on the above factors for improvement. Especially
17 regarding parents' growing attention to children's well-being (child-centred concerns), it is worth ongoing
18 efforts for schools to be responsive by incorporating holistic development in their current curriculum
19 rather than focusing on academics only. More parent-school meetings can be arranged to facilitate mutual
20 understandings.

21 More strategically, with regard to the differences associated with socioeconomic status (e.g., low
22 income families are more concerned about logistic issues and costs), policy makers and government
23 officers should strive to provide reasonable funding schemes to enhance education equality. Considering
24 the wide arrange of factors contributing to parental school choice, relevant governmental personnel could
25 also provide more guidance to facilitate this process and help parents form a more balanced viewpoint in
26 making decisions.

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Rethinking the ‘Tiger Parent’ stereotypes: Parents’ choice of primary school for their kindergarten children in Hong Kong

Abstract

Mass media and previous research tends to label Asian parents as ‘academic-obsessive’ in their parenting, which can be reflected in the primary school choice for their children. While some extant Hong Kong studies conducted a decade ago corroborated the above contention, we aim to provide an updated account of the general criteria considered by parents in Hong Kong while selecting primary schools, and how parental income and educational level influence the selection criteria. Using a survey design, a total of ninety-nine kindergartens ($N = 3429$ parents) participated in this study. Findings show parents emphasised both child-centred factors (e.g., child happiness) and academic-centred factors in their decision making. In general, parents with higher income attached higher importance to academic-centred factors and were also less concerned about practical and cost-related aspects. Child-centred criteria were found to be less important for parents with higher income and educational level.

Keywords: Parental preferences, Parental values, Asia, School choices, Child well-being, Primary school

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Rethinking the ‘Tiger Parent’ stereotypes: Parents’ choice of primary school for their kindergarten children in Hong Kong

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Introduction

Amy Chua’s memoir ‘Battle Hymn of The Tiger Mother’ (2011), with its huge and controversial influence on the media and the general public, has thrust Asian parenting into the limelight. Tiger parenting, as inferred by Chua, is highly demanding and controlling, which has an excessive focus on children’s academic performance while overriding all of their children’s preferences or desires. Abboud and Kim (2005), authors of another earlier book about Asian parenting, also made a clear message denying children’s happiness compared to academic success. Although these books are based on immigrated Asian parents in the U.S., plentiful critics and scholars believe they have reinforced the impression of *all* contemporary Asian parenting (Li & Xie, 2017; Juang, Qin, & Park, 2013).

To be specific, the tradeoff between academic success and happiness pursuit in parenting has been sharply reflected in the parental choice of primary school for their children in Asia, such as in Hong Kong. While western parents have been traditionally known to consider happiness of their children as an overarching criterion when selecting schools (e.g., Bussel, 1998; Coldron & Boulton, 1991; Petch, 1986; Woods, Bagley, & Glatter, 1998a), Hong Kong parents are reported to rely heavily on academic performance metrics (Fung & Lam, 2011; Ngan & Chung, 2004). While some scholars were concerned that this strong and even partial focus on academic pursuit could do harm to children’s psychological and social wellbeing (Supple & Cavanaugh, 2013); others argued that the academic-oriented Asian parenting largely owes to unreasonable stereotyping (Way et al., 2013), and contended that parental choice for their children is not static but also changes with time (Li & Xie, 2017). Juan et al. (2013) called it a ‘clear limitation’ that parenting research fails to address the temporal parental changes considering the drastic social and economic changes taken place in Asia in recent years.

Considering a lack of recent and comprehensive research on Hong Kong parents’ school choice, our study aims to provide an updated account of the decision criteria of Hong Kong parents when selecting primary schools for their children in kindergartens. In reference to previous studies highlighting Hong Kong parents’ focus on academic-oriented factors while selecting schools, we also attempt to ascertain to what extent this research corresponds with or deviates from those results. In addition, parents’ education and income levels will also be investigated to understand their influence on parental choice. Researching parents’ reasons of school choice will not only reflect trends in Hong Kong parenting style, but also will

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5 help inform schools and government policy makers to fine-tune their strategies under the current market
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7 mechanism – schools are financed by taxes and school fees, which turns parents into consumers of
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9 education (Beal & Beal, 2013; Damaso & Lima, 2019; Dronkers, Felouzis, & van Zanten, 2010).

10 11 12 **‘Child-centred’ and ‘academic-centred’ parental school choice**

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14 Parents’ choice of primary school is important for the development of their children, as school factors
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16 (e.g., school work, teacher support) significantly affect the well-being of young children (Suldo, Riley, &
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18 Shaffer, 2006; Ng & Yuen, 2015) that in turn has long term effects on their essential adult life outcomes
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20 (Carneiro, Crawford, & Goodman, 2007; Feinstein, 2000). The importance of primary school choice
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22 accordingly leads to deliberation on the parents’ side while making decisions. Rhodes et al. (2019)’s
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24 review paper reveals a number of reasons influencing this decision process, including teacher quality,
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26 students’ needs, and school reputation.

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28 Most of these factors, according to Wood, Bagley and Glatter’s (1998b) well-cited book on
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30 parental school choice in the UK, can be grouped under two thematic concerns – ‘child-centred’ and
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32 ‘academic-centred’ – based on 6000 parental questionnaires, 124 interviews with parents, and 109
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34 interviews with key personnel in schools. While ‘academic-centred’ factors are predominantly related to
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36 academics (e.g., examination results; academic standards), ‘child-centred’ factors are based on ‘children’s
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38 perspectives and social relationships’ (e.g., child’s preference and happiness) (p. 126). Although the
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40 categorisation risks imposing a dichotomous perspective which cannot represent the exhaustive lists of
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42 factors, the categorisation is found effective by Woods et al. in identifying broad patterns in parental
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44 choice. The categorisation also aligns with one of our research goals to ascertain the controversial
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46 ‘academics vs. happiness’ tradeoff in Hong Kong parenting.

47 48 **Parental choices of primary schools in Hong Kong**

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50 There are different types of primary schools available for children in Hong Kong. Around 80% of primary
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52 students are in public schools where no school fees are charged (Census and Statistics Department, 2016).
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54 Parents with a particular public school choice in mind may apply for a ‘discretionary place’ to any *one*
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56 school, and selection is based on a Points System and some other criteria (See Primary One Admission,
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58 2019 for details). Those who fail their school choice will receive a computer-programmed central
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60 allocation. Since parents are only able to select *one* ideal school for their children and there is no guarantee
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62 that every parent will succeed in their first and only choice, how to balance various school selection criteria
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4 and get into a ‘good’ school becomes all the more critical for Hong Kong parents. Of course, parents may
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6 also apply direct to non-public-sector schools (e.g., private and international schools) usually with high
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8 school fees.

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10 Primary school choice has received considerable attention from parents because in traditional
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12 Asian culture, parents believe ‘the earlier the better’ for their children to acquire different skills and
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14 knowledge in school to prepare them for the future. Academic achievement is a major conventional
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16 determinant of a person’s life and career success (Carless & Lam, 2014). Specifically in Hong Kong,
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18 schooling is highly competitive, and the competition is not only severe at university and secondary level,
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20 but also at primary education allocation, that parents have to plan ‘as early as admission to kindergarten’
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22 (p.5) to get their children into good primary schools (Leung, 2013). Carless and Lam (2014) also discussed
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24 how the first taste of schooling competition for a student in Hong Kong starts at the age of three, ‘when
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26 parents seek a well-established kindergarten which facilitates entry to a good primary school’ (p.316).
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28 Early-stage education is, thus, viewed to possibly determine the life chances of children. Kwan and Wong
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30 (2016) pointed out that the ultimate purpose of schooling to parents in Hong Kong is getting their children
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32 into well-performing schools which then bridge them into a good university ‘in the hope that it will
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34 eventually give them a competitive edge in the future labour market’ (p.100). When children grow up in
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36 such an environment that pressures them to excel in academics, it is not surprising that an OECD report
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38 (Organisation for Economic Cooperation and Development, 2017) found 15-year-old students in Hong
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40 Kong had a lower level of life satisfaction and higher work-related anxiety compared to most of their
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42 counterparts in 72 OECD countries.

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44 In light of the potential negative outcomes, another line of researchers (Juan et al., 2013; Way et
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46 al., 2013), considered this tiger parenting for academic performance ‘outdated’ and ‘problematic’,
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48 expecting shifts to more ‘child-centred’ approaches in contemporary Chinese societies. Li and Xie’s
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50 (2017) longitudinal study on 297 mainland Chinese families supported this contention and revealed how
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52 parenting styles change over time to more respect for children’s preferences, with a combination of
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54 traditional education goals. Unfortunately, extant studies on Hong Kong parent choice of primary school
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56 were conducted around a decade ago (e.g., Fung & Lam, 2011; Ngan & Chung, 2004) and failed to cover
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58 a representative sample of the Hong Kong population (e.g., Ngan & Chung, 2004). More updated large-
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60 scale research is needed to understand parental school choice in the Hong Kong context.

61 **The role of socioeconomic factors**

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Apart from culture, studies have found that socioeconomic factors such as family income may also affect parental school choices (e.g., Dixon & Humble, 2017; Wong & Kwan, 2019). Hastings, Kane and Staiger (2005) analyzed the implementation data of a public school choice plan in the United States and noted that parents' preferences for high academic scores increased with family income. In terms of educational level, parents with higher educational attainment tend to emphasise the importance of education more (Goldring & Phillips, 2008). There is, however, some inconsistency in research findings: Woods et al. (1998q) found no consistent differences in priority of 'child-centred' and 'academic-centred' factors in parental school choice across middle-class and working-class parents in the United Kingdom. In view of the mixed results, another purpose of this study was to find out whether the priority of 'child-centred' and 'academic-centred' criteria, as found in studies conducted in the western context, may vary with income and parental educational level in Hong Kong.

The present study

The aim of this study is to investigate the criteria that parents in Hong Kong used to decide on selecting primary schools for their children, taking into account parents' income and educational levels. The following research questions were investigated:

RQ 1: What general criteria do parents in Hong Kong rely on in selecting primary schools for their children, and how do they prioritize different criteria?

RQ2: To what extent does the school-selection criteria aggregate around the 'child-centred' and 'academic-centred' theme (Woods et al., 1998b) respectively?

RQ 3: What is the influence of parental educational and income level on the relative importance of child-centred and academic-centred school-selection criteria?

This study is exploratory; therefore, no hypotheses were formulated for each research question.

Method

Participants

The initial sample consisted of 3,429 parents who completed the collected questionnaires (details later). The data of 51 respondents (1.5%) were excluded from the present analysis as they did not provide the importance ratings for four or more (i.e., 25% or more) of the provided 16 school selection criteria. The remaining 3,378 respondents were parents of 1,676 (49.6%) female students and 1,546 (45.8%) male students (gender data were missing for 156 or 4.6% of the cases). Three thousand of the respondents

(88.8% of the 3,378 participants) reported their monthly family income level, including 7.6% participants being below HK\$10,000, 36.6% at HK\$10,000 – 30,000, 23.3% participants at HK\$30,000 – 50,000, 10.2% participants at HK\$50,000 – 70,000, and 11% participants above HK\$70,000. **Error! Reference source not found.** shows the distributions of the parent respondents by educational level and nationality.

Father

Educational level	Nationality					Total
	HK Chinese	Mainland Chinese	Western	Others	(Not provided)	
Primary	87	24		6	2	119 (3.5%)
Secondary	1,478	209	5	43	14	1,749 (51.8%)
Diploma	345	89	2	10	4	450 (13.3%)
Bachelors	536	59	17	18	2	632 (18.7%)
Masters	270	24	6	6	2	308 (9.1%)
PhD	16	7	2	2		27 (0.8%)
(Not provided)	26	10		4	53	93 (2.8%)
Total	2,758 (81.6%)	422 (12.5%)	32 (0.9%)	89 (2.6%)	77 (2.3%)	3,378

Mother

Educational level	Nationality					Total
	HK Chinese	Mainland Chinese	Western	Others	(Not provided)	
Primary	39	75	2	11	1	128 (3.8%)
Secondary	1,206	525	2	43	12	1,788 (52.9%)
Diploma	361	144		16	2	523 (15.5%)
Bachelors	533	75	4	28	3	643 (19.0%)
Masters	180	15		3	3	201 (6.0%)
PhD	4	3				7 (0.2%)
(Not provided)	14	17	1	5	51	88 (2.6%)
Total	2,337 (69.2%)	854 (25.3%)	9 (0.3%)	106 (3.1%)	72 (2.1%)	3378

Table 1. Distribution of the parents in the sample by educational level and nationality.

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Instrument

The data to address the research objectives were collected from a questionnaire. The parents rated 16 criteria for selecting the ideal primary schools for their children (see Table 2) on a 5-point Likert scale, ‘1’ (*very important*), ‘2’ (*important*), ‘3’ (*neutral*), ‘4’ (*unimportant*), and ‘5’ (*very unimportant*). The respondents then (a) indicated their ‘most important’, ‘second most important’, and ‘third most important’ criteria respectively among the 16 items and (b) answered a number of multiple-choice questions on demographics including gender of their kindergarten children (for whom the questionnaires were completed), family income, and the educational level and nationality of parents.

The 16 school-selection criteria went through four phases before it was finalized. First, Bussell’s (1998) study with the 31 criteria was used as the baseline; second, 20 pre-school age children’s parents openly discussed how they chose a primary school for their child based on the Bussell (1998) study; third, in order to match these criteria with the context of Hong Kong, the researchers then invited three experienced Hong Kong educators to reword, remove, and combine the discussed criteria. For example, ‘links with pre-school organizations’ became ‘Through-train school’. Also, a criterion – ‘medium of instruction’ was added as primary schools in Hong Kong may teach in different languages. This process resulted in 16 school-selection criteria considered relevant for the Hong Kong context. Finally, after modification, the questionnaire was piloted with five parents to check the understandability of the questionnaire. These five parents were randomly selected, all their children were in the final year of kindergarten. We approached them during a number of kindergarten open day exhibitions. The feedback from the five parents suggested that the 16 criteria were meaningful to the respondents.

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1. Through train ^a
 2. Small class teaching
 3. School fee and related costs
 4. Location/ distance from home
 5. Religion
 6. Secondary school allocation history
 7. School reputation/conduct
 8. School facilities

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- 9. Extracurricular activities
 - 10. Teacher qualification and reputation
 - 11. Child's happiness
 - 12. Teaching style: quality of homework, tests and exams
 - 13. Same school as sibling(s) ^b
 - 14. Curriculum
 - 15. Gender of school (e.g., co-ed/ girls/ boys)
 - 16. Medium of instruction
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^a In Hong Kong, through train is a formal collaborative arrangement (that requires Government approval) between a primary and a secondary school, through which the Primary 6 graduates of the primary school may seek to proceed to the linked secondary school directly without going through the Government's allocation process for secondary school places.

^b The Primary One Admission scheme of Hong Kong is heavily based on a points system, and a student applicant for admission into a primary school gains a large number of points for the school if the student has sibling/siblings (i) studying in that primary school, (ii) being a graduate of the school or (iii) studying in the secondary section of a school in which the primary school is also a section sharing the same address.

Table 2. Primary school selection criteria included in this study (listed in the same order as on this study's questionnaire).

Procedure

Regarding respondent sampling, some previous studies on primary-school choices (e.g., Ngan & Chung, 2004; Tam, 2002; Ting & Lee, 2019) obtained data from parents of primary school students. However, this retrospective approach relied on recollections of respondents, which may potentially be biased by their experiences with their children's current primary school experiences. The current study therefore collected data from parents of kindergarten students, right after their personal experience in choosing and

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5 applying for primary school for their children in September but before the school allocation was
6 completed. Ethical approval was obtained prior to data collection.

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9 To pursue a representative sample of parents of kindergarten students, the research team
10 approached around 500 kindergartens randomly selected from all of the 18 districts of Hong Kong. There
11 were no specific inclusion criteria for schools, but only parents who had children in the final year of
12 kindergarten were chosen. The researchers had requested the schools to distribute the study questionnaire
13 to parents and collect their responses. The questionnaire was paper-based, formatted into one page, and
14 printed on the back side of an informed consent form. The form explained the purposes and rationales of
15 the study, provided a data confidentiality statement, and stated that participation was entirely voluntary.
16
17 The respondents were given the list of the primary-school selection criteria (described in the ‘Instrument’
18 section) and were requested to rate the importance of each as well as to indicate their top three criteria by
19 order of importance. Ninety-nine kindergartens accepted the invitation for participation, and the schools
20 delivered the questionnaires and consent forms to totally around 6,070 parents. The participating
21 kindergartens subsequently received 3,429 completed questionnaires.

22 23 24 25 26 27 28 29 30 31 **Data analyses**

32
33 Statistical testing procedures on the data were conducted using SPSS and AMOS version 23. Mplus
34 version 8 was only used to generate the Standardized Root Mean Squared Residual (SRMR), because
35 AMOS does not produce this fit index with missing data. To address RQ 1, the importance and relative
36 priorities of the 16 school-selection criteria were examined and comparisons were made across the ratings
37 and responses on the importance of the criteria. The relative contributions of individuals and schools as
38 sources of rating variability were also studied to ascertain the statistical independence of the responses of
39 individual participants (versus the possibility that responses of parents from the same kindergarten might
40 be more similar than expected for a random sample).

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A number of fit indicators were derived using the maximum likelihood estimation to assess model

fit for the CFA of this study. The fit indices included the Chi-squared statistic (χ^2), the Comparative Fit Index (CFI), the SRMR, and the Root Mean Squared Error of Approximation (RMSEA). With reference to the commonly used thresholds (Kenny, 2015), a CFI above .90, an SRMR below .08, and an RMSEA below .08 were taken as indicative of acceptable model fit. Where relevant, partial eta-squared (η_p^2) is reported as a measure of effect size. Values of 0.01, 0.06 and 0.14 indicate small, medium and large effects, respectively (Cohen, 1988).

Results

RQ 1: School-selection criteria preferred by parents

The key descriptive statistics of the importance ratings on the 16 school-selection criteria are summarized in Table 3. Apart from religion and school type (boys, girls, co-ed), the total number of ‘very important’ and ‘important’ responses for the rest of the criteria ranged between 56.0% and 99.2%, indicating that most of the criteria were key considerations of the parents for their primary school choices. The top important three criteria as rated by the parents (1 for ‘very important’, 2 for ‘important’, and so on) were: child’s happiness ($M = 1.23$; highest importance), school reputation/conduct ($M = 1.31$; second highest importance), and teacher qualification and reputation ($M = 1.46$; third highest importance).

Criterion	Rating		Variance of ratings			The top three most important criteria	
	Mean rating ^a	% of ‘very important’ / ‘important’ ratings ^b	Within schools	Between schools	% of variance between schools	Most important criterion ^c	Within the top three criteria ^d
Through train	2.14	70.8%	0.750	0.041	5.2%	12.3%	7.2%
Small class teaching	1.81	86.8%	0.498	0.014	2.8%	7.2%	7.8%
School fee and related costs	2.09	75.3%	0.590	0.016	2.6%	1.3%	2.3%
Location/ distance from home	1.66	92.6%	0.431	0.007	1.6%	5.8%	7.7%
Religion	2.78	32.7%	0.765	0.068	8.2%	2.5%	1.9%
Secondary school allocation history	1.71	90.7%	0.438	0.014	3.0%	7.3%	7.6%

School reputation/ conduct	1.31	98.5%	0.248	0.004	1.8%	25.7%	19.8%
School facilities	1.76	93.6%	0.326	0.015	4.5%	0.6%	2.3%
Extracurricular activities	1.97	84.2%	0.438	0.013	2.8%	0.1%	0.9%
Teacher qualification and reputation	1.46	96.0%	0.342	0.003	0.9%	5.0%	9.3%
Child's happiness	1.23	99.2%	0.198	0.001	0.4%	26.8%	20.3%
Teaching style	1.73	91.0%	0.449	0.006	1.4%	3.0%	7.8%
Same school as sibling(s)	2.36	56.0%	0.938	0.015	1.6%	0.9%	1.2%
Curriculum	2.01	80.8%	0.473	0.003	0.7%	0.3%	1.5%
Gender of school	2.79	35.2%	0.777	0.008	1.0%	0.1%	0.2%
Medium of instruction	1.94	83.6%	0.477	0.005	1.1%	1.1%	2.2%

Table 3. The means and variances of the importance ratings of school-selection criteria (1 = very important; 5 = very unimportant) and their frequency of being within the top three most important criteria of individual respondents.

^a Lower mean important rating value corresponds to higher importance.

^b The denominators of the percentages are the total numbers of responses (i.e., missing data discounted) to the corresponding importance rating questions.

^c The denominator of the percentages is the total number of responses (i.e., missing data discounted) to the most-important-criterion question.

^d The denominator of the percentages is the total number of responses (i.e., missing data discounted) to the most-important, second-most-important and third-most-important criterion questions together. Forty-nine participants chose the same criterion for more than one of these three questions. For those 49 cases, the criterion concerned was only counted towards the higher importance question, to avoid double counting. For example, if a respondent chose religion as both the “most important” and “second most important” criteria, religion would only be counted as the “most important” for the respondent. If religion was chosen as both “second most important” and “third most important”, religion would only be counted as “second most important” for the participant.

To ensure the statistical independence of participants' responses (versus the possibility that responses of parents from the same school might be more similar than expected for a random sample), multilevel analysis procedure (SPSS MIXED) was conducted to investigate the relative contributions of individuals and schools to the variability of ratings. The analysis started with one-way random-effects ANOVA as the measurement model, and the respondent-level and school-level variances in the

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5 importance ratings for the criteria are tabulated in Table 3. The individual-level variances were statistically
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7 significant ($p < .001$) for all criterion items, whereas the school-level variances were statistically
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9 significant for all items ($p < .05$) except teacher qualification and reputation ($Wald Z = 1.680$; $p = .093$),
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11 child's happiness ($Wald Z = .941$; $p = .347$), curriculum ($Wald Z = 1.444$; $p = .149$), and medium of
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13 instruction ($Wald Z = 1.935$; $p = .053$). However, as shown in Table 3, the ratios of the school-level
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15 variances to the corresponding total variances were generally small, being less than 5% for all criterion
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17 except 'through train'(5.2%) and religion (8.2%). This indicated that the present sample was reasonably
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19 homogeneous across schools with respect to ratings on the criteria. Multilevel analysis was thus not further
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21 proceeded for the subsequent data analyses, i.e., parents were taken as the unit of analysis in further
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23 analyses.

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Apart from providing importance ratings for individual criteria, the participants also identified the three most important criteria for themselves. To test the consistency of respondents' ratings of different school-selection criteria with their selection of the three most important criteria, the importance ratings of each participant's top three criteria were first extracted and put into a separate dataset. Planned comparisons using repeated measures t-tests were then conducted: The most-important criteria were found to be rated ($M = 1.14$) more important than the second most important ones ($M = 1.22$), $t(3246) = 10.317$, $p < .001$. In turn the second most important criteria were rated more important than the third most important ones ($M = 1.32$), $t(3226) = 10.257$, $p < .001$. (On this study's scale, lower rating value corresponds to higher importance.) These results revealed that the top-three-importance choices were generally consistent with the importance ratings within individual respondents.

Across the 16 criteria, participants' relative priorities based on the mean importance ratings and the top three important choices were also reasonably consistent. The Spearman correlation coefficient between the rank order of the 16 criteria by mean importance ratings and the corresponding order by occurrence frequency within the three most important choices (i.e., the numbers in the rightmost column of Table 3) was .86 ($p < .001$). In particular, based on either the mean importance ratings or the occurrence frequency within the top-three most important choices, the school-selection criteria child's happiness, school reputation/conduct, and teacher qualification (and reputation) ranked the first, second, and third respectively. A paired sample t-test ascertained that these three school-selection criteria together were rated ($M = 1.33$) significantly more important than the 13 remaining criteria ($M = 2.05$), $t = 109.62$, $df = 3376$, $p < .001$.

Post-hoc specific comparison between the top two criteria revealed that child's happiness was rated significantly more important than school reputation/conduct (paired t-test: $t = 8.73$, $df = 3340$, $p < .001$), though there was no significant difference in the relative proportion of respondents considering the two criteria as the most important to them (26.8% for child's happiness versus 25.7% for school reputation/conduct; $\chi^2 = 0.67$, $df = 1$, $p = .415$). That is, although the two school-selection criteria seemed to be equally ranked by parents as the most important criterion, the child's happiness criterion appeared to receive significantly more importance rating compared to the school reputation/conduct criterion. The overall results suggested that child's happiness is the single most important criterion school-selection for parents.

RQ 2: Clustering patterns of parental school-selection criteria

To explore the thematic aggregation of the importance ratings, EFA was conducted to generate a suggestive latent structure to be further tested by CFA. For the EFA, the ratings were adequately factorable based on the determinant of their correlation matrix, the Barlett's test of sphericity and the Kaiser-Meyer-Olkin test of sampling adequacy. For CFA, the data were screened with respect to missing data and normality of the distribution: with the aforementioned exclusion of the 51 participants with more than three missing ratings, the total number of missing data across the 16 school-selection criteria items was small (around 1.2%). However, applying Little's (1988) Missing Completely at Random (MCAR) test suggested that the data were not missing at random. In view of these circumstances, the full information maximum likelihood (FIML) estimation procedure provided by AMOS was used for handling the missing data for CFA. As AMOS (version 23) does not provide an SRMR value when there are missing data, the SRMR values for the present analysis were obtained using Mplus (whereas the other fit indices were generated by AMOS). Based on the guidelines of Lei and Lamex (2005), as the absolute values of the univariate skewness and kurtosis of the importance ratings were mostly (75%) below 1.0 (mild non-normality) and the rest below 2.0 (moderate non-normality), except the kurtosis (3.47) of ratings on child's happiness, potential biases arising from non-normality for applying FIML were not of practical concerns.

Criterion	Factor 1	Factor 2	Factor 3
3. School fee and related costs			.36

5. Religion		.38
6. Secondary school allocation history	.51	
7. School reputation/ conduct	.76	
8. School facilities	.70	
9. Extracurricular activities	.76	
10. Teacher qualification and reputation	.34	.43
11. Child's happiness	.30	
13. Same school as sibling(s)		.50
14. Curriculum	.38	.30
15. Gender of school		.57
16. Medium of instruction		.40

Table 4. Rotated factor loadings for the 12 criterion rating items with loading magnitude at or above 0.3 (only factor loadings with magnitude greater than 0.3 are displayed).

Note: The loadings of the remaining four criteria, through train, small class teaching, location/ distance from home and teaching style, on the three factors above were all less than 0.3 in absolute values.

Principal axis factoring was applied for the EFA of the importance ratings of the school-selection criteria, and the scree test (Cattell, 1966) suggested three factors to be extracted. Subjecting the three factors to direct oblimin rotation and taking 0.3 as the inclusion cut-off for values yielded an interpretable structure for 12 of the 16 criteria. Table 4 shows the three-factor solution and the rotated factor loadings of the component items. The loadings of the remaining four criteria on the three factors were all below 0.3. (If four instead of three factors were retained, there would only be 12 items with loading values above 0.3 on the retained factors, and the factorial structure would become less interpretable.). Factor 1 and Factor 2 were labeled as representing general personal development and academic attainments respectively based on the common themes of their component items, and Factor 3 was considered as capturing practical and costs related aspects. Factor 1 and 2 thus corresponded to the distinction between 'child-centred' (concerning general personal growth of students) and 'academic-centred' perspectives as proposed by Woods et al. (1998b).

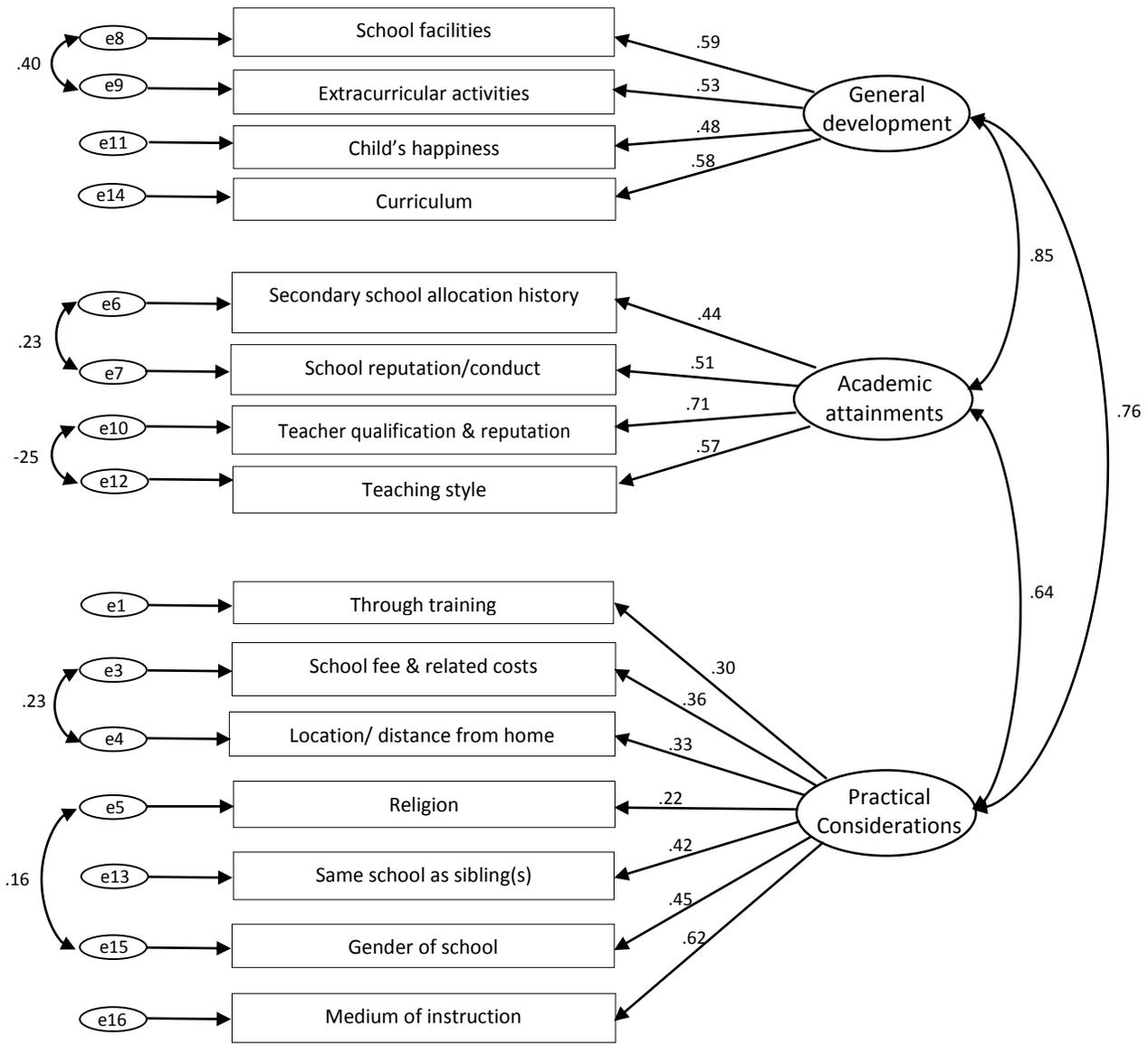


Figure 1. Standardized path coefficients and correlation coefficients of the measurement model for importance ratings of school-selection criteria. All path and correlation coefficients are statistically significant, $p < .001$.

A measurement model building on the factorial solution suggested by the EFA, as shown in Figure 1 was tested using CFA. Guided by the EFA results, the model had the three aforementioned factors freely co-varying with one another and the 12 criteria loading on the corresponding factors (the curriculum criterion and the teacher qualification and reputation criterion were allocated to the respective factors on which the criteria had a higher loading). Additionally, on content basis, teaching style (quality of homework, tests and exams) was added as an indicator variable of the Academic Attainments factor, and

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4 through train and location/distance from home were slotted into the Practical Considerations cluster. The
5 remaining criterion, small class teaching, was omitted from the model as there was no a priori basis (with
6 respect to meanings to the respondents) to assign it between the General Development and the Academic
7 Attainments factor resulting in a measurement model with 15 indicator variables (i.e., 15 items). When
8 this 15-item measurement model was tested with all indicator residuals constrained as uncorrelated, the
9 data fit was poor as reflected by the CFI being well below 0.90 ($\chi^2 = 1517.83$, $df = 87$, $p < .001$; CFI =
10 .829; RMSEA = .070, 90% CI [0.067 – 0.073]; SRMR = .052). Considering the modification indices and
11 substantive associations of the school-selection criteria suggested that the no-correlation assumptions of
12 the following five pairs of criteria were potential sources of the poor data fit:
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- 15 • the criterion of school fee and related cost and the criterion of location/distance from home (these two
16 items may associate as they share expenses as a common theme);
- 17 • religion and gender of school (single-sex schools usually have religious affiliation in Hong Kong);
- 18 • school reputation/conduct and secondary school allocation history (both are conventional indicators
19 of primary schools' academic standing in Hong Kong's context);
- 20 • teaching style and teacher qualification and reputation (both are related to teachers); school facilities
21 and extracurricular activities (the availability of facilities may facilitate or constrain the
22 implementation of extracurricular activities).

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25 By allowing the error terms within the aforementioned five pairs of criteria to co-vary in the model,
26 as displayed in Figure 1, a reasonable model fit was attained ($\chi^2 = 825.81$, $df = 82$, $p < .001$; CFI = .911;
27 RMSEA = .052, 90% CI [0.049 – 0.055]; SRMR = .038), and all factor loadings were statistically
28 significant ($p < .001$; see Figure 1 for the respective loading values). The overall EFA and CFA results
29 were consistent with a factorial structure of the school-selection criteria clustering around three latent
30 variables (with the criterion small class teaching omitted). The latent variables represented general
31 development (child-centred perspective), school academic performance (academic-centred perspective)
32 and other practical considerations respectively, and they correlated with one another (r_s between .64 and
33 .85, $p < .001$).

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48 ***RQ 3: Influences of family income and parental educational level on the importance of child-centred***
49 ***and academic-centred school-selection criteria***
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To test the influence of family income and parental educational level, the unweighted mean importance ratings on the four items of the General Development and Academic Attainments factor respectively were taken as proxy factor-based scores for child-centred and academic-centred criteria. Table 5 summarizes the variations of these two factor-based scores as a function of family income and parental educational level. The statistical significance of the differences on these scores across income and educational levels were tested by ANOVA procedures. Levene's (1960) test was applied for each ANOVA to assess heteroscedasticity, and when it reached a statistically significant level in an ANOVA, Welch's (1951) corrections were applied.

	<i>n</i>	General Development / Child-centred		Academic Attainments / Academic-centred	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<u>Income level</u>					
Below \$10,000	258	1.67	0.45	1.55	0.45
\$10,000 – 30,000	1,238	1.71	0.42	1.59	0.44
\$30,000 – 50,000	788	1.74	0.40	1.52	0.41
\$50,000 – 70,000	346	1.82	0.45	1.56	0.38
Above \$70,000	370	1.85	0.45	1.53	0.36
<u>Highest educational qualification of father</u>					
Primary	119	1.82	0.46	1.76	0.55
Secondary	1,749	1.70	0.42	1.56	0.43
Diploma	450	1.71	0.41	1.52	0.42
Bachelor	632	1.80	0.44	1.53	0.38
Master	308	1.87	0.45	1.55	0.37
Doctor	27	1.79	0.38	1.52	0.48
<u>Highest educational</u>					

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qualification of mother

Primary	128	1.79	0.50	1.71	0.53
Secondary	1,788	1.71	0.42	1.56	0.44
Diploma	523	1.70	0.42	1.50	0.39
Bachelor	643	1.84	0.45	1.55	0.38
Master	201	1.88	0.43	1.53	0.35
Doctor	7	1.50	0.35	1.29	0.27

Table 5. Factor-based scores (1 = very important; 5 = very unimportant) of General Development (child-centred) and Academic Attainments (achievement-centred) in relation to family income (in HK\$) and parental educational level.

Note: lower mean factor-based score value corresponds to higher importance.

Family income

One-way ANOVA indicated that across the five income conditions there were statistically significant variations of both the child-centred scores, Welch’s adjusted $F(4, 918.03) = 11.88, p < .001, \eta_p^2 = .016$, and academic-centred scores, Welch’s adjusted $F(4, 949.25) = 4.13, p = .003, \eta_p^2 = .005$. The mean child-centred score increased monotonically from the lowest ($M = 1.67, SD = 0.45$) to the highest income group ($M = 1.85, SD = 0.45$) while the trend of the mean academic-centred score was less apparent.

To ascertain the overall direction of the relationships, the mean score for each factor of the lowest two income groups combined (i.e., income below HK\$30,000) was statistically compared with the corresponding mean score of the two highest income groups combined (i.e., income above HK\$50,000): For the child-centred cluster, in line with the aforementioned monotonic trend, the factor was rated significantly less important by the higher income parents relative to the lower-income parents, mean ratings difference = 0.128, $F(1, 2210) = 42.55, p < .001, \eta_p^2 = .019$. The analogous comparison revealed that the academic-centred factor was rated significantly more important by the higher income participants relative to their lower income counterparts, mean ratings difference = 0.045, Welch’s adjusted $F(1, 1651.58) = 5.59, p = .012, \eta_p^2 = .003$.

Parental educational level

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5 Across parental educational levels, there were statistically significant variations in the child-
6 centred factor scores across fathers' qualifications, $F(5, 3279) = 12.87, p < .001, \eta_p^2 = .019$, and across
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8 mothers' qualifications, Welch's adjusted $F(5, 64.82) = 14.85, p < .001, \eta_p^2 = .022$. The corresponding
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10 variations in academic-centred scores were also statistically significant across fathers' qualifications,
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12 Welch's adjusted $F(5, 226.99) = 7.20, p < .001, \eta_p^2 = .011$, and across mothers' qualifications, Welch's
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14 adjusted $F(5, 65.15) = 6.18, p < .001, \eta_p^2 = .009$.

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16 To ascertain the overall direction of the relationships, the mean score for each factor was
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18 statistically compared between the combined group of university degree holders (i.e., bachelor, master,
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20 doctor) and their non-degree-holding counterparts (i.e., primary, secondary and diploma). While these
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22 statistical comparisons were conducted with respect to the qualifications of fathers and mothers separately,
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24 the results for the fathers' and mothers' qualifications converged: The degree holding parents rated the
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26 child-centred factor as significantly less important relative to their non-degree holders, mean ratings
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28 difference = 0.116, $F(1, 3283) = 49.60, p < .001, \eta_p^2 = .015$ for fathers' qualifications; mean ratings
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30 difference = 0.136; $F(1, 3288) = 63.66, p < .001, \eta_p^2 = .019$ for mothers' qualifications. In contrast, based
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32 on the comparisons between the degree and non-degree holders, parental educational qualifications
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34 showed no statistically significant influence on the academic-centred factor score, mean ratings difference
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36 = 0.029; Welch's adjusted $F(1, 2080.02) = 3.142, p = .060, \eta_p^2 = .001$ for fathers' qualifications; mean
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38 ratings difference = 0.014; Welch's adjusted $F(1, 1713.864) = 0.711, p = .364$ for mothers' qualifications.
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40 Nonetheless, as observable from Table 5, the academic-centred factor was rated by the two sub-groups at
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42 primary education level ($M = 1.76$ and 1.71 , based on fathers' and mothers' qualifications respectively)
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44 visibly less important relative to the other sub-groups with higher academic qualifications (all $M_s < 1.60$).
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46 Post-hoc pairwise comparisons indicated that these differences reached statistical significance (all $p_s <$
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48 $.003$) except for the doctoral qualification sub-groups - the doctoral sub-groups actually gave the highest
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50 ratings on the academic factor ($M = 1.52$ and 1.29 , based on fathers' and mothers' qualifications
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52 respectively) and statistical significance was not reached apparently because the two doctoral sub-groups
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54 were small in sizes.

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56 Taken together, the academic-centred criteria were perceived as less important by parents with
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58 lower income (relative to the higher income families) and parents with primary education qualifications
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60 (relative to parents with higher educational qualifications). Parents with lower income rated the child-
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62 centred factor as more important relative to their higher income counterparts, and parents with lower
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educational qualification levels rated this factor as more important relative to the parents with higher educational levels.

Income level	School fee and related costs			Location		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Below \$10,000	252	1.91	0.76	252	1.59	0.70
\$10,000 – 30,000	1,222	2.00	0.75	1,229	1.64	0.66
\$30,000 – 50,000	782	2.11	0.75	782	1.62	0.64
\$50,000 – 70,000	343	2.19	0.79	345	1.66	0.65
Above \$70,000	368	2.38	0.86	370	1.80	0.67

Table 6. Mean importance ratings (1 = very important; 5 = very unimportant) on costs and locations of school in relation to family income (in HK\$).

Note: lower mean important rating value corresponds to higher importance.

Influence of financial and practical constraints on parental school choice

As a post hoc investigation, this study additionally tested a related proposition that parents' school choices are influenced by financial and practical constraints (e.g., Burgess et al., 2009; Fiske & Ladd, 2001; Hastings et al., 2005). Consistent with this proposition, across the five income groups, there were significant differences in importance ratings for school fee and related costs, Welch's adjusted $F(4, 909.10) = 22.66, p < .001, \eta_p^2 = .030$, and location/distance from home, Welch's adjusted $F(4, 917.10) = 5.79, p < .001, \eta_p^2 = .008$. As shown in Table 6, the mean ratings on these two items were in the expected trend.

Post-hoc comparisons with Bonferroni adjustments (for an overall alpha level of .05) indicated that the highest income respondents (above HK\$70,000) rated school fee and related costs significantly less important relative to all four lower income sub-groups (all Bonferroni-corrected $ps < .008$). Among the latter four sub-groups, the two sub-groups with relatively higher income (HK\$30,000 – 50,000;

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HK\$50,000 – 70,000) rated the criterion as less important compared with the lowest two (below HK\$10,000 and HK\$10,000 – 30,000), all Bonferroni-corrected $ps < .02$. As regards location and distance from home, the highest income respondents (above HK\$70,000) rated the criterion significantly less important than the three sub-groups with income below HK\$50,000 (all Bonferroni-corrected $ps < .001$), and there were no other statistically significant inter-sub-group differences. The overall results supported that financial factors affect parental school selection and study costs were expectedly more of a concern for lower income families relative to the higher income ones.

Discussion

This study sought to identify the general criteria and priorities of parents in Hong Kong for selecting primary schools for their children. The thematic clustering patterns of the school-selection criteria (child-centred vs. academic-centred) was investigated, as well as, how these criteria are related to parental income and educational levels.

RQ 1: 'Child happiness' as a preferred school-selection criteria by parents

In this study, the relative priority of the selection criteria was assessed by both importance ratings and participants' three-most-important choices. Although indications from these two response methods are not necessarily equivalent (e.g., Goldstein & Einhorn, 1987), the priority order of the 16 criteria based on mean importance ratings and occurrence frequency within the top-three choices were highly correlated. In particular, based on either ranking approaches, child's happiness, school reputation/conduct, and teacher qualification and reputation represented the single most, second most, and third most important criteria for parental school-selection respectively. Although prior studies suggested that academic achievement is a serious concern for parents when selecting schools in Hong Kong (e.g., Fung & Lam, 2011; Ngan & Chung, 2004), our study showed that child's happiness is at least equally important for parents in Hong Kong.

With reference to the traditional impression of Asian parents as tiger moms and dads caring solely about children's academic performance, our findings show a more balanced parenting approach of Hong Kong parents, which is consistent with some recent Chinese studies (Li & Xie, 2017). On the one hand, they regard child's happiness as the single most significant criterion (by importance ratings); on the other hand, the criteria related to academic performance are also of high priority to parents (Bauch & Goldring, 1995; Burgess et al., 2009; Ngan & Chung, 2004). When forced to identify a single most important

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5 p.127) reminded, in some cases, parents require a strong academic environment because the child enjoys
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7 pursuing academic knowledge, resulting in an overlap of ‘child-centred’ and ‘academic-centred’ concerns.
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9 That said, in this particular study, the ‘child-/academic-centred’ clustering patterns are useful in revealing
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11 broad patterns of parental choice among a range of factors, and help contribute insights into the long-
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13 standing focus on academics-happiness tradeoff in Asian parenting (Dundes, Cho, & Kwak, 2009).
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17 ***RQ 3: Influence of family income and parental educational level on the importance of ‘child-centred’***
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19 ***and ‘academic-centred’ school-selection criteria***

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21 The findings revealed that the general development (‘child-centred’) and the ‘academic-centred’ criteria
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23 were less important to parents with higher income relative to their lower income counterparts.
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25 Furthermore, parents with university degree qualifications assigned lower priority to ‘child-centred’
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27 school-selection criteria relative to parents in the sub-degree groups. Higher family income was associated
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29 with greater priority of the ‘academic-centred’ criteria, and consistently parents with secondary education
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31 and above consider the academic performance criteria as more important compared with the primary-
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33 education sub-group. Finding are not surprising and support previous research on family socioeconomic
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35 status and school choice in western countries (e.g., Hastings et al., 2005; Goldring & Phillips, 2008).
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38 Additionally, this study found that parents with lower family income were more concerned with
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40 costs and location constraints compared with their counterparts of higher income, even though no school
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42 fees are charged by public sector primary schools which represent over 80% of primary school students
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44 in Hong Kong (Census and Statistics Department, 2016). The finding is also consistent with previous
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46 research that parents from low income countries give substantial weight to logistic issues while making
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48 school decisions for their children (Rhodes et al., 2019)

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50 **Limitations and future studies**

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52 Several limitations of this study are important to be acknowledged. The first issue concerns the general
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54 limitations of self-report data, in which parents may subject to social desirability bias (van de Mortel,
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56 2008). Future studies may attempt to triangulate the results by including teachers, admission officers and
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58 students’ viewpoints to alleviate the self-report bias or investigate parents’ *actual* school choice. In
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60 addition, as the parents participated in our research on a voluntary basis, the sample might not reflect
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5 accurately the general kindergarten's parent population in Hong Kong particularly in terms of income and
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7 education levels (e.g., parents with a 'secondary school level' education are more represented in this
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9 study). Future studies could also include a larger sample size and triangulate their findings with ours.

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11 Second, given this study's exploratory nature to examine possible trends and criteria in parental
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13 primary school choice in Hong Kong, items used in the questionnaires were rather generic. For example,
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15 as discussed above, individual's understanding of 'child happiness' may vary and there are possible
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17 overlaps between 'child-/academic-centred' patterns. Aiming for a generalizable result and a highlight of
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19 factors considered important, our quantitative approach is not in itself sufficient to enable detailed
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21 explanations of parental choices.

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23 That said, our exploratory findings can be used as a good departure point for future investigations
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25 of finer grained school-selection criteria (e.g., the constituents contributing to child's happiness at school)
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27 by incorporating qualitative research methods. Future follow-up studies may examine how the school-
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29 selection criteria identified in this study are dynamically applied by parents during actual decisions (e.g.,
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31 how they integrate multiple criteria with practical constraints and reach a decision in reality). It would
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33 also be informative to investigate reasons behind the more balanced perspective (child- AND academic-
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35 centred) in parental school choice, and reasons behind the differences of school choice potentially caused
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37 by the family's education and income level.

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39 Furthermore, it would also be interesting to consider cross-cultural and inter-cultural (e.g., Chinese
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41 Americans) comparisons to investigate parental school-selection criteria in future studies. A comparative
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43 study on the father and mother's school decision for their child may be beneficial as well. A behavioral
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45 genetic perspective on parenting may also shed new light on parents' school choice (Klahr & Burt, 2014).
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47 More policy-related research is also needed to reflect the current needs of parents as evidenced in this
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49 study and to inform future school planning strategies.

50 51 **Conclusions and implications**

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53 To conclude, this study demonstrates a general pattern that Hong Kong parents value both child happiness
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55 and factors relating to academic quality (e.g., teacher qualification; school reputation) while making
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57 primary school choice for their children. The parental school choice is also found relative to parents'
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59 education and income level.

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The study makes contribution both at a knowledge and a practical level. On a knowledge level, the study indicates a potential shift from a sole focus on academic performance in Hong Kong parents' school choice to a more balanced consideration. This understanding also challenges the long-standing impression that Asian parents are only 'academic-centred', and supports that parenting styles are fluid and changing over time. The mixed-pattern of child- and academic-focus not only reflects contemporary Hong Kong parents' concerns for children's well-being, but also reflects how parental education decisions are nonetheless subject to the general social and school culture. Therefore, the bi-focus in parental school choice is illustrative of Hong Kong parents' negotiation between various factors, and offers a launching pad for more nuanced studies to investigate the complexities and compromises within.

At a practical level, our findings are informative for schools to fine-tune their operations and management decisions. Our results suggest that school-based curriculum, facilities, and extracurricular activities are perceived by parents as key contributors to the general personal development of students, while academic track records, teacher quality, and school discipline form a solid base of parents' evaluation of the school's academic ability. As parents are increasingly viewed as consumers in the education market whose expectations need to be sufficiently satisfied (Meier & Lemmer, 2019), schools may find our results useful by allocating more resources on the above factors for improvement. Especially regarding parents' growing attention to children's well-being (child-centred concerns), it is worth ongoing efforts for schools to be responsive by incorporating holistic development in their current curriculum rather than focusing on academics only. More parent-school meetings can be arranged to facilitate mutual understandings.

More strategically, with regard to the differences associated with socioeconomic status (e.g., low income families are more concerned about logistic issues and costs), policy makers and government officers should strive to provide reasonable funding schemes to enhance education equality. Considering the wide arrange of factors contributing to parental school choice, relevant governmental personnel could also provide more guidance to facilitate this process and help parents form a more balanced viewpoint in making decisions.

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