



Research article

The criteria of Chinese and South Koreans' mate selection: A comparative study of long-term and short-term mate selection preferences in the cross-cultural perspective

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ABSTRACT

Sexual selection has become an important research topic in behavioral ecology, human behavior, and evolution. The study of mate selection preferences across cultures and countries has gradually received increasing attention. The present study was aimed to reveal the differences of long-term and short-term mate selection preferences between young people in Chinese and South Korean. An questionnaire survey method was followed to obtain the aim of the study, and a total of 273 Chinese ($M = 22.07$, $SD = 1.75$) and 181 Koreans ($M = 21.75$, $SD = 2.05$) unmarried university students were chosen to participate the study. We summarized the important core factors of individual mate preferences and revealed the long-term and short-term mate preferences of young men and women in both countries through quantitative analysis. The results indicated that education played a crucial role in the long-term mate selection for both Chinese males and females. Contrastingly, Koreans valued friendliness and easygoingness in long-term mate value and liveliness in short-term mate value. There were differences found in mate preference by gender between Chinese and Koreans, influenced by cross-cultural factors. These findings strongly supported cultural differences in mate selection and provided practical suggestions for future cross-cultural mate selection research.

1. Introduction

Mate selection has emerged as an important topic and research direction in behavioral ecology [1] and human behavior and evolution [2], which also makes mate selection one of the most important determinants of human reproduction. The idea that human evolution and mate selection are inseparable was first proposed in “*The Descent of Man and Selection in Relation to Sex*” [3]. In modern life, mate selection is pertinent to our lives, which suggests that being with the right mate is dedicated to the promotion of jollity [4]. The complexity of the process and preferences for mate selection has long been the focus of research [5]. Most mate selection studies are based on cultural contexts and gender factors and have yielded many valuable results [6]. The study of mate selection preferences in cross-cultural contexts also reflects the discrepancy caused by culture and gender [7,8].

China and South Korea are geographically close. Hence, Chinese Confucian culture has had a profound and far-reaching influence on South Korean culture. In the course of Korean history, it has absorbed and transformed other cultures in the areas of religion and politics [9]. With the advancement of economic development, trade between South Korea and the United States increased, and the introduction of Western culture turned South Korea into a country with a multicultural system [10,11]. The introduction of

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multiculturalism and the rapid development of Korean entertainment culture have made Korean youth more energetic [12]. China is also expanding its entertainment industry, but its education system is still of paramount importance for young people in China [13,14]. This has also led to the formation of different Chinese and Korean cultures. Hofstede's theory model is widely applied in cross-cultural studies and includes several differences for six cultural dimensions in many comparisons [15]. According to Hofstede's theory model, China and South Korea are remarkably close in individualism and indulgence on the power distance index and masculinity, with some limited differences. However, there are significant differences in the dimensions of uncertainty avoidance and long-term orientation. This shows that there are overlaps and similarities between Chinese and Korean cultures, but there are also obvious differences (see Table 1). As the two fastest-growing countries in Southeast Asia [16], they are geographically close to each other, and both promote Confucianism but have cultural differences. This study observed, that there are similarities and differences between these two cultures from Hofstede's cultural dimension.

Confucianism has existed for centuries in Southeast Asia and is a very old philosophy [17]. Its ethical-moral system comprises wisdom, duty, kindness, obedience, loyalty, and respect [18]. From a family structure perspective, the dominant males are firmly entrenched in the Confucian culture. Social theory influences and guides individual development [19]. The reinforcement of Confucianism would enhance the individual's reinforcement of etiquette, morality, and restrictions on sexuality, and has stated that the key factors affecting human behavior may be social culture and economic environment [18]. Li (2016) argued that the fertility rate showed an upward trend in the initial stages of economic development and a downward trend with continuous economic development [20]. Pan and Xu (2012) reported that life stress and financial income affect the desire to marry; in particular, house prices are negatively correlated with fertility rates [21]. These factors may influence young people's preferences when choosing a mate.

1.1. Gender differences in mate selection

Gender differences involve different mate selection preferences, which have been confirmed by many scholars [22]. On average, males prefer young and beautiful females for mate selection to a greater degree than females [8]. Additionally, female fertility and physical conditions play crucial roles in mate selection for males [23]. Females are more inclined to choose males with higher social status and financial prospects who are older [8] and can provide a better material base for them [24–26]. Hence, females, to a greater degree than males, are selective in their choice of mates [27]. Based on the tenets of parental investment theory, females lose more initial investment than males do in pre-mating parental investment and have greater responsibility and abilities in reproduction and childrearing [28,29]. Therefore, females, to a greater degree than males, tend to choose those who can provide economic security and emotional stability. Universally, there has been found sex differences in mate selection preferences [8]. However, in cross-cultural contexts, males and females share the same mate selection preferences, such as intelligence, kindness, and liveliness [22]. As mate selection preferences continue to be explored, different mate selection preferences among males and females in cross-cultural contexts can be found.

1.2. Cultural differences in mate selection

Many studies have shown that culture and country are also the main factors that have a considerable impact on mate selection preferences, apart from the gender difference mentioned above. In cross-cultural studies of mate selection preferences, it is argued that there are significant differences under the influence of culture, and it is suggested that there are significant differences in mate selection preferences between individualistic cultures (e.g., The United States) and collectivistic cultures (e.g., China). Individual cultures emphasize romance, emotional relationships, and emotional closeness, whereas collective cultures focus on the continuity of family mediation and marriage perceptions in the process of mate selection [30,31]. In a cross-cultural study of the differences between Chinese and American mate selection preferences, it was found that wealth factors are predominant in Chinese mate selection preferences, while in the United States, honesty and trustworthiness are attached more importance to gradually [32]. Based on similar cultural backgrounds, differences in mate selection preferences have also been found among other countries; kindness, dependence, religion, and chastity are only positively related in Iran, according to a study on mate preferences in three Muslim-majority countries: Iran, Pakistan and Turkey [33]. A recent study on mate preferences in gender-equitable countries indicated that men and women have almost identical preferences for earning capacity [34].

Furthermore, cross-cultural research across many countries has revealed that women's facial masculinity and men's facial femininity preferences are strongest under conditions of higher health [35,36]. Research among small-scale remote societies also found that preferences for facial appearance can be deemed a remarkably crucial factor that influences mate selection preferences in terms of gender differences [37,38]. Similarly, a large-scale cross-cultural study found that beards were more commonly acceptable in larger urban cities in countries with lower average incomes, higher life expectancies, where women judge beards as the most attractive [39],

Table 1

The Hofstede's cultural dimensions of China and Korea.

country	PDI	IDV	MAS	UAI	LTO	IRV
South Korea	60	18	39	85	75	29
China	80	20	66	30	118	24

Note. PDI = Power distance index; IDV = Individualism vs. collectivism; MAS = Masculinity vs. femininity; UAI = Uncertainty avoidance; LTO = Long-term orientation vs. short-term orientation; IRV = Indulgence vs. Restraint. Source: www.geerthofstede.com.

whereas body hair is preferred in countries with more male-biased sex ratios [40]. There are also some interesting findings; cross-cultural studies found that men from remote resource scarce communities in the highlands of Papua New Guinea had stronger preferences for larger breasts than men from Samoa and New Zealand [41]. Comparable results were found in a subsequent cross-cultural study in Brazil, Cameroon, the Czech Republic, and Namibia [42].

Schmitt (2005) found that culture has an obvious influence on biparental care and that, under diverse cultural backgrounds, men and women also have obvious differences in parental investment strategies [43]. Walter et al. (2021) reported that in diverse cultures, the sex ratio leads to sex differences in mate preferences, which affirmed that the ratio of men to women in different countries and cities leads to the result that the scarce sides place a greater emphasis on appearance and resources [44]. Watkins et al. (2019) conducted an interesting study on the frequency of mouth-to-mouth kissing, which indicated that couples kiss more often in countries with resource competition and suggested that this may be a way to maintain stable long-term relationships [45]. Walter et al. (2020) found that the degree of gender equality is positively related to choosing a mate whose age is more approximately equal to theirs, and the factors of physical appearance and health were more important to the preference for mate selection in countries with a higher rate of increasing pathogen prevalence [8]. Nevertheless, gender equality and pathogen prevalence have a minor impact on predicting cross-cultural mate preferences. Although mate preference is influenced by varied factors, substantial evidence and support comprehensively demonstrate that regardless of environmental effects, human beings will preferentially choose factors conducive to evolution and reproduction, which is also the expression of the positive evolution of human beings from the perspective of evolutionary psychology.

1.3. Long-term and short-term mate preferences

Mating preferences are classified as long-term or short-term based on the distinction between long-term and short-term matings. Some distinctions between long-term and short-term mate selection preferences have been found in related studies; for example, women prioritize social status of their ideal long-term mates. However, ideal short-term mates prioritize physical attractiveness [46]. The proportion of reproductive preference for long-term mates is stronger than that for short-term mates [47], because long-term mate selection means that we may need to cooperate in breeding offspring, which also involves long-term mating relationships. After this relationship is established, neither party will mate with other people (lifetime monogamy), so people pay more attention to long-term mate selection preferences based on fertility [48]. In a study of short-term mate selection preferences, females were found to prioritize social status and wealth when choosing males compared to long-term mate selection preferences; however, physical attractiveness is more important for choosing short-term mates [49]. Similarly, some studies have confirmed that physical attractiveness is relatively less consequential in long-term relationships than short-term mate selection [25]. In terms of social status, resources, and wealth, some studies have shown that these factors are not thought to be as significant in short-term relationships as they ought to be in long-term mate selection preferences because of short-term delayed benefits [50]. However, men prioritize appearance in both long-term and short-term mate choices.

1.4. Objectives of the study

The main subjects of the current study were young people from China and South Korea who live in Asian countries. To reveal the mate selection preferences of young Chinese and Koreans, we summarized the important core factors of individual mate selection preferences and revealed the long-term and short-term mate selection preferences of young men and women in both countries through quantitative analysis. We expect to reveal differences in mate selection preferences in a cross-cultural context by observing differences in mate selection preferences between China and South Korea in diverse cultures and countries, as well as a comparative analysis of long-term and short-term mate selection preferences.

2. Method

2.1. Participants

Heterosexual participants ($n = 454$) included 273 (men = 122, women = 151; M age = 22.07, $SD = 1.75$) undergraduates recruited

Table 2
Demographic characteristics of valid samples ($n = 454$).

Variable	China		South-Korea	
	M (SD)	Percentage (%)	M (SD)	Percentage (%)
Total	273		181	
Male	122	44.7%	100	55.2%
Female	151	55.3%	81	44.8%
Age (years)	22.07 (1.75)		21.75 (2.05)	
Freshman	29	11%	32	18%
Sophomore	74	27%	36	20%
Junior	62	23%	57	31%
Senior	108	39%	56	31%

from China's Shenyang Normal University and Dalian Minzu University, and 181 (men = 100, women = 81; M age = 21.75, SD = 2.05) undergraduates recruited from South Korea's Keimyung University (Table 2 shows the demographic characteristics). In both China and South Korea, the participants identified their nationality as "absolute natives." All study protocols were approved by the Liaoning Normal University Research Ethics Committee (IRB: 2022030), and all subjects provided written, informed consent.

2.2. Measures and procedure

We read and studied numerous studies on mate selection criteria as well as items used in international personality inventories and well-referenced studies to develop the coding scheme for this study [23,24,51–54,55].

In the long-term survey, we used the Mate Preference Scale with 19 criteria selected from well-referenced studies on mate selection criteria for assessing mate preferences [23,32,56]. Each criterion was characteristic of an individual when choosing a long-term romantic mate. The scale was a 10-point scale, ranging from 1 (unimportant) to 10 (most important).

People tended to choose short-term partners without many thoughtful deliberations, so the survey did not use the same questionnaire as for long-term partners. To make it faster and easier for participants in the short-term survey, the "mate dollars" allocation task was applied in this study [25,57]. There are 100 dollars (100 points) that could be allocated to five mate selection criteria that have been highly rated in previous studies: physical attractiveness, social level, creativity, kindness, and liveliness [23,57]. The low budget allowed participants to select an average of 20% for each trait.

Both the long-term and short-term survey instruments were initially designed in English, and the items were then translated into Chinese and Korean by two independent English translators (native Chinese and Korean) from China and South Korea. A Chinese-Korean translator and a Korean-Chinese translator proofread the project again and resolved the minor differences that arose during the translation process. Finally, Chinese (Chinese Mate Preference Scale) and Korean (Korean Mate Preference Scale) versions of the scale were developed. We used an online questionnaire to collect data. The online questionnaires (version on email or mobile) were distributed and collected by virtue of entrusting student councils and student associations of local universities with it. A Chinese survey was conducted at the two universities (Shenyang Normal University and Dalian Minzu University). A total of 301 students participated in this survey; 28 questionnaires failed the examination, leaving 273 valid samples. A Korean survey was conducted at the one university (Keimyung University). A total of 198 students participated in this survey, of whom 17 questionnaires failed the examination, leaving 181 valid samples. The questionnaire with data deficiency, errors of personal information, all the options remaining the same, et cetera was considered to be invalid. Finally, a total of 454 valid samples were obtained.

The effective recovery rate was 90.98%. Questionnaires were distributed and collected over 20 days. We offered each participant a coupon valued at five dollars.

Table 3
Means and standard deviations of countries for mate selection criteria.

Long-term mates	China	South Korea	Difference
Honest and trustworthy	8.69 (1.57)	8.48 (1.62)	0.21
Kind and understanding	8.70 (1.48)	8.76 (1.36)	-0.06
Friendly	8.19 (1.67)	8.69 (1.40)	-0.5**
Healthy	8.61 (1.68)	8.80 (1.75)	-0.19
Emotionally stable	8.36 (1.73)	8.83 (1.27)	-0.47**
Easygoing	7.76 (1.91)	8.45 (1.51)	-0.69***
Has a sense of humor	7.36 (1.87)	7.15 (2.18)	0.21
Intelligent	7.25 (1.84)	7.56 (1.78)	-0.31
Good housekeeper	7.67 (1.79)	7.21 (1.96)	0.46*
Physically attractive	7.38 (1.68)	6.88 (1.97)	0.5**
Wanting children	5.31 (2.83)	7.30 (2.17)	-1.99***
Family background	5.86 (2.12)	5.83 (2.26)	0.03
Creative	6.44 (1.92)	5.85 (1.88)	0.59**
Education	7.45 (1.83)	5.52 (2.05)	1.93***
Earning capacity/potential	7.30 (1.87)	6.94 (1.89)	0.36
Popular	6.76 (1.83)	6.70 (1.96)	0.06
Wealthy	5.85 (2.20)	6.52 (1.91)	2.5
Religious	3.14 (2.55)	3.07 (2.68)	0.07
High social status	5.35 (2.44)	5.01 (2.52)	0.34
Short-term mates			
Physical attractiveness	31.42 (17.90)	25.29 (18.08)	6.13***
Kindness	24.80 (11.73)	27.28 (12.56)	-2.48*
Liveliness	16.28 (7.55)	30.80 (7.77)	-14.52***
Creativity	13.64 (7.08)	7.23 (6.78)	6.41***
Social level	13.92 (8.15)	9.44 (9.15)	4.48***

Notes : China sample, $N = 273$; Korea sample, $N = 181$. The survey had a reliability alpha coefficient of 0.851 and a validity KMO coefficient of 0.0862. * $p < .05$; ** $p < .01$; *** $p < .001$.

2.3. Data analysis

In both studies of the long-term and short-term mate selection preferences, we first analyzed quantitative data on participants' mate selection criteria to understand intercultural and intergender differences within each culture. Then, using a two-way analysis of variance (ANOVA) of 2 (group: Chinese vs. Korean) × 2 (gender: male vs. female), differences in country scores as a function of group and gender were analyzed. To examine differences across countries within heterosexual groups, t-tests were performed on the mean priority score of each item. All statistical analyses were performed using SPSS for Windows (version 26.0) at the 0.05 significance level.

3. Results

The current study revealed the differences between Chinese and South Korean young people in mate selection preferences by virtue of the respective analysis and comparison from the perspectives of long-term and short-term mate selection. The result showed that it is interesting that the differences in mate selection preference are salient due to the discrepancies of cultural integration and development even between two adjoining countries sharing the same origin of culture.

Table 3 presented the cultural differences in minimum standard preferences in mate selection between the Chinese and South Korean participants. In the survey of long-term mates, the Chinese had higher minimum criteria than the Koreans did for good housekeepers: $F(1, 452) = 6.558, p < .05, \eta^2 = 0.014$; physical attractiveness, $F(1, 452) = 6.873, p < .01, \eta^2 = 0.015$; creativity: $F(1, 452) = 9.455, p < .01, \eta^2 = 0.02$; and education: $F(1, 452) = 109.586, p < .001, \eta^2 = 0.0195$; Korean had higher minimum criteria than Chinese did on friendly, $F(1, 452) = 10.87, p < .01, \eta^2 = 0.023$; emotionally stable, $F(1, 452) = 10.189, p < .01, \eta^2 = 0.022$; easygoing, $F(1, 452) = 16.421, p < .001, \eta^2 = 0.035$; and wanting children, $F(1, 452) = 64.655, p < .001, \eta^2 = 0.125$. For short-term mate preference, Chinese rated physical attractiveness higher than Koreans, $F(1, 452) = 12.669, p < .001, \eta^2 = 0.027$; creativity, $F(1, 452) = 86.228, p < .001, \eta^2 = 0.16$, and social level, $F(1, 452) = 29.924, p < .001, \eta^2 = 0.062$. Korean did higher criteria on kindness, $F(1, 452) = 4.589, p < .05, \eta^2 = 0.01$; and liveliness, $F(1, 452) = 220.949, p < .001, \eta^2 = 0.328$. Our content analysis revealed that Chinese people valued education, appearance and creativity, while Koreans valued character (gentle character) and vitality. This may be caused by differences in the sociocultural environment. Traditional Chinese culture (emphasis on education, lack of romance and a desire to save face) and Korean Confucian etiquette (group harmony, propriety) result in discrepancies in mate selection [58–61]. Additionally, minimum criteria in wanting children may be attributed to the stable economic environment in South Korea, which reduced people's living pressures. The fierce competition for social resources (exorbitant house prices) in China had a bearing on reducing the birth rate of children [62]. South Koreans' preference for short-term mates was significantly higher on the vitality factor than China's, while there was a collective decline in the scores assigned to the other factors, which indicated that South Koreans preferred the vitality of the speed dating factor.

We also researched the minimum mate selection criteria in terms of gender differences between participants in each countries

Table 4
Means and standard deviations of genders in each countries for mate selection criteria.

Long-term mates	China			South Korea		
	Male	Female	Difference	Male	Female	Difference
Honest and trustworthy	8.27 (1.69)	9.03 (1.38)	-0.76***	8.36 (1.82)	8.62 (1.32)	-0.26
Kind and understanding	8.44 (1.53)	8.91 (1.41)	-0.47**	8.67 (1.41)	8.88 (1.30)	-0.21
Friendly	8.11 (1.57)	8.26 (1.73)	-0.15	8.64 (1.54)	8.74 (1.21)	-0.10
Healthy	8.42 (1.58)	8.76 (1.75)	-0.34	8.80 (1.47)	8.79 (1.39)	0.01
Emotionally stable	8.19 (1.79)	8.49 (1.67)	-0.30	8.83 (1.20)	8.84 (1.36)	-0.01
Easygoing	7.60 (1.84)	7.89 (1.97)	-0.29	8.48 (1.60)	8.40 (1.41)	0.08
Has a sense of humor	6.98 (1.97)	7.66 (1.74)	-0.68**	6.52 (2.15)	7.93 (1.97)	-1.41***
Intelligent	6.88 (2.02)	7.55 (1.62)	-0.67**	7.45 (1.68)	7.70 (1.89)	-0.25
Good housekeeper	7.57 (1.71)	7.75 (1.86)	-0.18	6.83 (2.00)	6.81 (1.82)	-0.85**
Physically attractive	7.56 (1.68)	7.25 (1.97)	0.31	7.45 (2.11)	6.17 (2.21)	1.28***
Wanting children	6.18 (2.59)	4.60 (2.83)	1.58***	7.36 (1.98)	7.23 (2.39)	0.13
Family background	5.98 (2.10)	5.76 (2.14)	0.22	5.61 (2.40)	6.10 (2.05)	-0.49
Creative	6.33 (1.96)	6.52 (1.88)	-0.19	5.94 (1.99)	5.73 (2.29)	0.21
Education	7.25 (1.73)	7.61 (1.89)	-0.36	5.44 (2.08)	5.63 (2.02)	-0.19
Earning capacity/potential	6.90 (1.93)	7.62 (1.76)	-0.72***	6.72 (1.99)	7.21 (1.73)	-0.49
Popular	6.80 (1.80)	6.73 (1.86)	0.07	6.61 (1.90)	6.81 (2.04)	-0.20
Wealthy	5.76 (1.58)	5.92 (2.23)	-0.16	6.24 (2.03)	6.88 (1.70)	-0.64*
Religious	3.19 (2.54)	3.09 (2.57)	0.10	2.95 (2.76)	3.22 (2.59)	-0.27
High social status	5.16 (2.48)	5.50 (2.40)	-0.34	4.42 (2.53)	5.73 (2.31)	-1.31***
Short-term mates						
Physical attractiveness	35.82 (19.28)	27.87 (15.90)	7.95**	30.19 (19.70)	19.25 (13.71)	10.94***
Kindness	22.71 (10.66)	26.48 (12.30)	-3.77**	26.69 (12.66)	28.00 (12.47)	-1.31
Liveliness	16.25 (7.30)	16.30 (7.77)	-0.05	28.56 (13.44)	33.56 (12.46)	-5*
Creativity	12.33 (7.08)	14.70 (7.63)	-2.37**	6.77 (6.22)	7.80 (7.40)	-1.03
Social level	12.88 (8.20)	14.77 (8.03)	-1.89	7.85 (8.76)	11.40 (9.29)	-3.55**

Notes : China sample, N = 273; Korea sample, N = 181.

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

(Table 4). In the survey of long-term mates, Chinese men had higher minimum criteria for wanting children than Chinese women, $F(1, 271) = 22.479, p < .001, \eta^2 = 0.077$. In the survey of short-term mates, they had higher minimum criteria for physical attractiveness, $F(1, 271) = 13.924, p < .001, \eta^2 = 0.049$. Contrastingly, for long-term mate preference, women had higher minimum criteria than men for honesty and trustworthiness, $F(1, 271) = 16.591, p < .001, \eta^2 = 0.058$; kind and understanding, $F(1, 271) = 6.775, p < .05, \eta^2 = 0.024$; has a sense of humor, $F(1, 271) = 9.157, p < .01, \eta^2 = 0.033$; intelligence, $F(1, 271) = 9.332, p < .01, \eta^2 = 0.033$; and earning capacity/potential, $F(1, 271) = 10.349, p < .01, \eta^2 = 0.037$. For short-term mate preference, women had higher kindness, $F(1, 271) = 7.129, p < .01, \eta^2 = 0.026$; and creativity, $F(1, 271) = 6.941, p < .01, \eta^2 = 0.025$. In the survey of long-term mates, Korean men had higher minimum criteria than women on physical attractiveness, $F(1, 179) = 15.736, p < .001, \eta^2 = 0.081$. For short-term mate preference, physical attractiveness was the same, $F(1, 179) = 17.937, p < .001, \eta^2 = 0.091$. In the survey of long-term mates, Korean women had higher minimum criteria than men did on having a sense of humor, $F(1, 179) = 20.603, p < .001, \eta^2 = 0.103$; good housekeeper, $F(1, 179) = 8.778, p < .01, \eta^2 = 0.047$; wealthy, $F(1, 179) = 5.095, p < .05, \eta^2 = 0.028$; and high social status, $F(1, 179) = 12.908, p < .001, \eta^2 = 0.067$. For short-term mate preference, there was a higher criterion for liveliness, $F(1, 179) = 6.596, p < .05, \eta^2 = 0.036$; and social level, $F(1, 179) = 6.938, p < .01, \eta^2 = 0.037$. The results showed that men in both countries paid more attention to appearance, whether in long-term or short-term mate selection. Chinese women rated “earning capacity/potential” as more important in a potential mate than men, and Korean women rated “wealthy” and “social level” as more important. This finding is consistent with research by Buss (1989), which found that men put “good looks” at the top of their list when choosing a mate, and women put “good financial prospects” at the top [22]. Women were more interested in men with a sense of humor, which is consistent with a previous study [63]. Chinese women valued intelligence more than men. Women often want to obtain resources from men based on parental investment. Intelligent men may have more potential to create wealth [22]. In their long-term mate preference, Chinese women valued honesty and trustworthiness more than men, which may be because the increasing annual divorce rate in China made women more willing to have long-term and stable marriages [64]. Korean women paid more attention to good housekeepers. Because gender equality has been improved in South Korea. Women’s housework time has also decreased with the development of culture. They hoped to increase their incomes and reduce their housework [65].

Data analysis revealed cultural differences between the Chinese and Korean participants (Table 5) concerning male mate selection criteria. In the survey of long-term mates, Chinese males focused more on education, $F(1, 220) = 50.252, p < .001, \eta^2 = 0.186$, and social status, $F(1, 18) = 4.852, p < .05, \eta^2 = 0.022$. Korean males focused more on friendly, $F(1, 220) = 6.411, p < .05, \eta^2 = 0.028$; emotionally stable, $F(1, 220) = 9.303, p < .01, \eta^2 = 0.041$; easygoing, $F(1, 220) = 14.19, p < .001, \eta^2 = 0.061$; intelligent, $F(1, 220) = 5.128, p < .05, \eta^2 = 0.023$; good housekeeper, $F(1, 220) = 8.721, p < .01, \eta^2 = 0.038$; and wanting children, $F(1, 220) = 14.032, p < .001, \eta^2 = 0.06$. Compared to the short-term matings, Chinese participants had higher criteria than Korean in physically attractive, $F(1, 220) = 4.593, p < .05, \eta^2 = 0.02$; social level, $F(1, 220) = 19.439, p < .001, \eta^2 = 0.081$; and creativity, $F(1, 220) = 37.731, p < .001, \eta^2 = 0.146$. Korean participants had higher criteria than Chinese in kindness, $F(1, 220) = 6.457, p < .05, \eta^2 = 0.029$; and liveliness, $F(1, 220) = 75.354, p < .001, \eta^2 = 0.255$.

Table 5
Means and standard deviations of cultural contexts of each genders for mate selection criteria.

Long-term mates	Male			Female		
	China (SD)	South Korea (SD)	Difference (CHN-SK)	China (SD)	South Korea (SD)	Difference (CHN-SK)
Honest and trustworthy	8.27 (1.69)	8.36 (1.82)	-0.09	9.03 (1.38)	8.62 (1.32)	0.41*
Kind and understanding	8.44 (1.53)	8.67 (1.41)	-0.23	8.91 (1.41)	8.88 (1.30)	0.03
Friendly	8.11 (1.57)	8.64 (1.54)	-0.53*	8.26 (1.73)	8.74 (1.21)	-0.48*
Healthy	8.42 (1.58)	8.80 (1.47)	-0.38	8.76 (1.75)	8.79 (1.39)	-0.03
Emotionally stable	8.19 (1.79)	8.83 (1.20)	-0.64**	8.49 (1.67)	8.84 (1.36)	-0.35
Easygoing	7.60 (1.84)	8.48 (1.60)	-0.88***	7.89 (1.97)	8.40 (1.41)	-0.51*
Has a sense of humor	6.98 (1.97)	6.52 (2.15)	0.46	7.66 (1.74)	7.93 (1.97)	-0.27
Intelligent	6.88 (2.02)	7.45 (1.68)	-0.57*	7.55 (1.62)	7.70 (1.89)	-0.15
Good housekeeper	7.57 (1.71)	6.83 (2.00)	0.74**	7.75 (1.86)	7.68 (1.82)	0.07
Physically attractive	7.56 (1.68)	7.45 (2.11)	0.11	7.25 (1.97)	6.17 (2.21)	1.08***
Wanting children	6.18 (2.59)	7.36 (1.98)	-1.18***	4.60 (2.83)	7.23 (2.39)	-2.63***
Family background	5.98 (2.10)	5.61 (2.40)	0.37	5.76 (2.14)	6.10 (2.05)	-0.34
Creative	6.33 (1.96)	5.94 (1.99)	0.39	6.52 (1.88)	5.73 (2.29)	0.79**
Education	7.25 (1.73)	5.44 (2.08)	1.81***	7.61 (1.89)	5.63 (2.02)	1.98***
Earning capacity/potential	6.90 (1.93)	6.72 (1.99)	0.18	7.62 (1.76)	7.21 (1.73)	0.41
Popular	6.80 (1.80)	6.61 (1.90)	0.19	6.73 (1.86)	6.81 (2.04)	-0.08
Wealthy	5.76 (1.58)	6.24 (2.03)	-0.48	5.92 (2.23)	6.88 (1.70)	-0.96**
Religious	3.19 (2.54)	2.95 (2.76)	0.24	3.09 (2.57)	3.22 (2.59)	-0.13
High social status	5.16 (2.48)	4.42 (2.53)	0.74*	5.50 (2.40)	5.73 (2.31)	-0.23
Short-term mates						
Physical attractiveness	35.82 (19.28)	30.19 (19.70)	5.63*	27.87 (15.90)	19.25 (13.71)	8.62***
Kindness	22.71 (10.66)	26.69 (12.66)	-3.98*	26.48 (12.30)	28.00 (12.47)	-1.52
Liveliness	16.25 (7.30)	28.56 (13.44)	-12.31***	16.30 (7.77)	33.56 (12.46)	-17.26***
Creativity	12.33 (7.08)	6.77 (6.22)	5.56***	14.70 (7.63)	7.80 (7.40)	6.90***
Social level	12.88 (8.20)	7.85 (8.76)	5.03***	14.77 (8.03)	11.40 (9.29)	3.37**

Notes : Chinese sample, N = 273; Korean sample, N = 181. * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed), indicating statistically significant gender differences within countries by independent samples *t*-test.

Female mate selection criteria showed a different pattern (Table 5). In the survey of long-term mates, Chinese women scored higher than Korean on honesty and trustworthiness, $F(1, 230) = 4.777, p < .05, \eta^2 = 0.020$; physically attractive, $F(1, 230) = 14.289, p < .001, \eta^2 = 0.058$; creative, $F(1, 230) = 8.048, p < .01, \eta^2 = 0.034$; and education, $F(1, 230) = 55.074, p < .001, \eta^2 = 0.193$. Korean women had higher criteria than Chinese for friendly, $F(1, 230) = 4.965, p < .05, \eta^2 = 0.021$; easygoing, $F(1, 230) = 4.319, p < .05, \eta^2 = 0.018$; wanting children, $F(1, 230) = 50.512, p < .001, \eta^2 = 0.18$; and wealthy, $F(1, 230) = 11.38, p < .01, \eta^2 = 0.047$. Chinese participants had higher criteria than Korean participants in the survey of short-term mates on physical attractiveness, $F(1, 230) = 17.037, p < .001, \eta^2 = 0.069$; creativity, $F(1, 230) = 44.034, p < .001, \eta^2 = 0.161$; and social, $F(1, 230) = 8.324, p < .01, \eta^2 = 0.035$. Koreans had higher standards than the Chinese in terms of liveliness, $F(1, 230) = 168.01, p < .001, \eta^2 = 0.422$. These results revealed the influence of cultural differences on mate selection by gender.

4. Discussion

The purpose of this study was to reveal the potential differences of long-term and short-term mate selection preferences between young people in Chinese and South Korean. Findings from the current study replicated some well-documented gender differences in mate selection preferences (e.g., males placed more emphasis on physical attractiveness, females were inclined to choose the males with sense of humor, and females tendenciously evinced their predilection for the males with relatively better financial capacities) and revealed cross-cultural differences. Psychological adaptations (environment of evolutionary adaptedness) cause organisms to provide mate selection with adaptations related to mating [66]. Against the background of diverse cultures, people tend to possess mate selection preferences that are more conducive to evolution. Human psychological traits have also changed under the influence of different environments and cultures, and have been infused with predictability in mate selection. It has been found that both Chinese men and women valued education more than Koreans do. This may be because education has been a big part of how China has grown and changed over time. Historically, education has represented a person's overall quality in China, and the elites in society usually possess a higher educational background [20]. Therefore, education was valued more in Chinese mate selection. This result is consistent with an online survey related to mate selection preference that indicated that education is an important criterion for choosing a spouse [67].

There was a greater emphasis on being friendly, easygoing, and wanting children in both Korean men and women. The result showed that Koreans valued friendliness more under cross-cultural influences. The criteria of friendliness and easygoingness reflect the significant importance people attach to etiquette, friendship, and kindness in their lives under the influence of Confucianism. Politeness and friendliness are considered necessary cultivations in South Korea that have an impact on mate selection. This result is consistent with the fact that Confucianism in shaping Korean culture also play a crucial role in the political and social spheres [68], and South Korea is possibly the first country in which Confucianism exert a sweeping influence, which is not only presented in the past but also still evident and ubiquitous today [61]. Although Confucian culture derived from China, it seemed to be predominance in South Korean society. From the cultural perspective, it demonstrated that the LTO (Hofstede's cultural dimensions theory) index of South Korea was lower than that of China, which showed great congruence with the finding of this research (a lower index indicates that traditions were valued and maintained to a greater degree). In terms of wanting children, it was possible that the Chinese who wanted children did not want to raise a child due to economic constraints and pressure. In Chinese marriages, housing is an indispensable tradition. Newlyweds are required to purchase new houses at the time of marriage. Following China's economic reform and opening-up, the real estate industry grew rapidly. Hence, house prices have increased rapidly [69]. Most Chinese couples must take out a mortgage to buy a house, and the amount of repayment increases the pressure on their lives, causing them not to want to give birth to babies. Contrastingly, the housing industry in South Korea has been stable for a long time. One study found that high housing prices may delay fertility [70]. The same issue was found in an investigation of housing prices and birth rates in China, namely, that high housing prices led to a decline in birth rates [62]. These studies supported our findings.

The high degree of socialization in Confucian culture and the tradition of attaching importance to education have respectively affected the preferences of Korean and Chinese people when choosing spouses in terms of social factors, which may be related to evolutionary psychology. Psychology has evolved to adapt to the influence of these two factors. In diverse cultural backgrounds, high etiquette behavior and high education level have been prioritized in the choice of spouse. From the results, it could be confirmed that cognitive behavior (mate preference) of the brain is related to current environmental characteristics (i.e., evolutionary adaptation to the environment). Regions with high housing prices and fierce resource competition once again confirmed that they play negative roles in fertility problems. Both the economic environment and culture have an impact on people's psychology, but it is interesting that in China, men prefer to have children, which may be attributed to men's desire to stabilize their marriage by having children when resources are scarce. The proportion of the male population in China is significantly higher than that of women, which is also the cultural tradition left behind by the ancient feudal system culture of China, resulting in a higher number of men than women [71]. With the passing of time, gender equality between men and women has gradually manifested women's advantages in mate selection. However, because of the imbalance in China's gender ratio, men are more active in childbearing and marital stability.

These findings provided further support for the mate selection preference model across cultures. Evolutionary psychologists suggest that both genders prioritize factors of reproductive value when choosing a mate [57] and that cultural development and environmental changes alter these underlying values. These potential factors would change according to cultural development, and at the same time, people hope to get better mating partners and better "investment" in the "parental investment theory." Men pay attention to appearance and women pay attention to finance, which is consistent with gender differences in mate selection preferences, but there are still significant differences between men and women in mate selection preferences in the two countries. Most of these differences were derived from cultural differences, and some were caused by social development.

The results also showed some gender differences across cultures. Chinese males had higher minimum standards for good housekeepers than Korean males. Considering that Chinese males need to share more chores at home, they are inclined to choose those with good housekeeping skills to reduce their household stress. Some studies have found that Chinese males undertook more housework than Korean males [72], which supported these results. Chinese males also had higher minimum standards for high social status. In traditional Chinese culture, marriage requires finding someone who matches one's situation. Social status is one of the most crucial factors in social situations. In China, marriages with comparable social status are highly valued. Regan (1998) found that both males and females needed long-term mates with social status at least comparable to their own [73]. In Chinese culture, men usually pay more attention to social status when choosing a mate. Among Chinese women, the minimum standards for honesty and trustworthiness, being physically attractive, and being creative were higher than those of Koreans. The result of women's valuing honesty and trustworthiness may be because patriarchy is the natural pattern of the social landscape and the cornerstone of Chinese history and cultural development [74,75]. A husband's attitude plays a crucial role in marriage. From the perspective of the Chinese, honesty and trustworthy are important criteria for "the quality of marriage" [76], which lead to the finding that Chinese women attach more importance to being honest and trustworthy when choosing long-term mates. In terms of physical attractiveness, the Chinese beauty industry has grown rapidly in a few years in comparison to the stable market of the Korean beauty industry [77]. Therefore, Chinese females' physical appearances have improved and changed dramatically, which has eventually led to their expectation of finding a spouse with the same physical attractiveness when choosing a mate. This result was supported by research evidence that attractive women have higher standards of physical attractiveness for potential partners [78]. Regarding the criteria for creativity, many Chinese people, influenced by the development of education in China, have monumental learning tasks and a general lack of creativity. However, creativity and art serve the purpose of infusing marriages with romance. Therefore, because of their dissatisfaction with the romantic experiences of marriage, Chinese women have enhanced their requirements for creativity in choosing a spouse. This result pertains to the fact that Chinese people are not romantic, and Chinese women often complain that their husbands are not romantic [79].

Korean males placed more emphasis on emotional stability and intelligence than Chinese men. Under the influence of Confucian culture, a clear hierarchy has been formed in Korean families. Korean wives are required to manage household chores and care for the elderly and children daily. Koreans place great emphasis on managing the relationship between mothers-in-law and daughters-in-law. An emotionally stable and intelligent wife is especially important when handling family relationships and chores. In South Korea, reports of tension between mothers-in-law and daughters-in-law are common in society, and Korean society focuses not only on unity and harmony among family members [80] but also on family relationships [81], which supports these findings. The minimum standard for Korean females of wealth was higher than that for Chinese women. Because the Korean workplace is not women-friendly, many women choose to be housewives after marriage, and the main income of the family depends entirely on their husbands. Unlike in South Korea, it is common for dual-income couples to live in China. Therefore, to obtain better living conditions, Korean women will pay more attention to their husbands' financial resources when choosing a mate. This result showed considerable congruence with the fact that Korean wives' share of income in the household is only half of that of Chinese wives [82].

In the results of the budget allocation method of the short-term mate selection survey, we found that Koreans scored significantly higher on liveliness, with slightly higher scores on kindness, and fewer scores in factors other than Chinese, which is attributable to the fact that Koreans are more energetic and better at handling and resolving stress in the face of pressure. Many factors were not considered, whereas pleasant communication was used to release stress features in short-term mate selection to some extent. Matsuda et al. (2014) found that Korean college students were more energetic in life and confronting stress than Chinese students [83]. This result supported the findings of the present study. Korean males place more emphasis on kindness than Chinese males. This may be influenced by patriarchal attitudes and Confucian culture in South Korea [68]. They want to choose girls who are friendlier and kinder. Chinese men and women placed more emphasis on physical attractiveness, etiquette, and social levels. This results from Koreans allocating more scores to liveliness, resulting in insufficient allocation in other aspects and reducing the scores together. A higher score allocation would inevitably lead to the under-allocation of some of the remaining factors in this study. In speed dating, people tend to decide because of physical attractiveness, but both men and women in South Korea's sample put energy in the first place. Since appearance and energy can be perceived in a few minutes of conversation, South Korea's cultural diversity gives rise to their predilection toward more energetic members of the opposite gender, which is regarded as a very intriguing discovery. With the emergence and development of cultural integration, some preference conditions for mate selection and valued factors for individual mate selection have changed, which can be seen as the formation of a new culture. This study further elucidated the cross-cultural influence on mate selection preference and illuminated the long-term and short-term mate selection preferences between young generations in China and South Korea. The result elaborated the cross-cultural influence on education, friendliness, et cetera between these two countries and the discrepancy in mate selection preference between genders in each country, which is conducive for young people in both countries to find significant other rapidly and accurately. Chinese men were destitute of romance and South Korean women preferred men to do housework, which insinuated some issues of socialization of these two countries as well as the negative correlation between the exponential price of real estate and young people's notion of having children deserving extensive attention of the society.

4.1. Limitations and future directives of the study

Although we found differences in mate selection cultures between the two countries with similar cultural distances, there were still some limitations. For example, China is a multi-ethnic country, and there are cultural differences between the north and south. The survey was not entirely representative of the country. In future research, the number of samples collected in China and the area of sample collection should be increased for further analysis. Second, the samples selected in this study were all college students, which

also had certain limitations in terms of educational level. In future research, the sample scope should be further expanded to collect data and analyze the comparison from the perspectives of education, race, age, etc., and the research should be conducted with comprehensive research and deliberation.

5. Conclusions

This study investigated the perceived importance of cross-culturalism in potential mate selection by applying cross-culturalism as an independent variable. Therefore, it was found that both Chinese males and females valued education more in long-term mate selection. Contrastingly, Koreans valued qualities such as friendliness and easygoingness more in long-term mate selection and valued liveliness more in short-term mate selection. Additionally, some gender differences between China and South Korea were found to be due to cross-cultural influences. This thesis investigated and examined both long-term and short-term mate selection preferences, thus providing a closer examination of mate preferences. These results supported the cultural variability in mate selection to a greater degree. Through content analysis, we captured the requisite themes for mate selection in diverse cultures, as well as finer details. The current study examined the discrepancies in mate selection between two adjoining Asian countries bearing strong resemblance in culture by virtue of the first-ever adoption of Long-term and short-term investigation methods whereas the previous studies were mainly based on the comparison between the traditional oriental culture and occidental culture and was also the inaugural study on mate selection preference between two Confucian-culture-orientated countries that filled the void in this subject. These findings represented a step forward in validating cross-cultural mate selection preferences.

Declarations

Author contribution statement

Conceiving and designing the experiments, performing the experiments, analyzing and interpreting the data, contributing materials, analysis tools or data and writing the paper were all conducted by Yunhang Lu.

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Data availability statement

The data used to support the findings of this study are available from the corresponding author upon request.

Declaration of interests statement

The authors declare no conflict of interest.

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