



Research article

What potential traits do adolescents and early adults look for in mate preferences?



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ARTICLE INFO

Keywords:

Mate preferences
Adolescents
Early adults
Exploratory Factor Analysis (EFA)
Muslim-majority country

ABSTRACT

There are universal sex differences in mate preferences. Mostly, women will prioritize greater financial prospects, but men will emphasize physical attractiveness. However, we know little about whether these preferences remain stable in adolescence and early adulthood. The study examines whether these universal differences between men and women in mate preferences can be found in Bangladesh and whether these differences are constant among adolescents and early adults. An online survey was conducted by using a structured close-ended questionnaire to collect data from males and females who were aged no more than 30, yet to be married, had at least a secondary education, and belonged to any religious faith. A total of 2017 people, 1059 males and 958 females, participated in the survey. Independent Samples t-tests were estimated to compare the mean scores of the traits of interest, while Principal Component Analysis (PCA) was used to reduce the dimensions to outline the possible factors that affect mate preferences. The results show that women of Bangladesh prioritize greater financial prospects, whereas men emphasize traits related to fertility and reproduction. However, unlike the universal trend, having a similar religious background is among the top-two priorities of both males and females. Factor-wise differentiation indicates that, compared with males, females emphasize attachment and sociability. In addition, adolescent females put greater emphasis on refinement and neatness, mutual attraction-love, and desire for home and children than early adult females. Compared with adolescent males, early adult males were found emphasizing more on having kind and understanding mates. Therefore, results support universal sex differences, but religion, culturally-defined gender roles, and social environment also affect mate preferences; sometimes people require making some trade-offs between preferences depending on the sociocultural context.

1. Introduction

A satisfying social relationship is a necessary condition for living a happy life (Buijs et al., 2021). Extroverts are found to be happier than introverts, particularly because social engagement plays a positive role in making a person satisfied with life-condition regardless of the personality (Vella-Brodrick et al., 2009). While it is argued that monogamy has no monopoly on health, happiness, sexual or marital satisfaction (Cox et al., 2021), choosing a long-term romantic partner is a major decision because it affects a person's life in many ways (Atari et al., 2020). Proper mate choices are found to be associated with mental health (Waynforth, 2007), social attitude (Alford et al., 2011), and subjective well-being (Kim and Hatfield, 2004). Studying mate selection has become not only an intrinsically fascinating topic but also an important theme to address the dramatic cultural evolution of human mating strategy (Buss and Schmitt, 2019). Many studies (Atari et al., 2020; Buss, 1989; Buss and Barnes,

1986; Shackelford et al., 2005) report mate preferences by sex differences, and some studies relate their findings to personality differences (Botwin et al., 1997; Keldal, 2020). Indeed, universal sex differences have been found in mate preferences; women prioritize greater financial prospects and men emphasize physical attractiveness (Buss, 1989; Walter et al., 2020). In addition, women prefer partners who are a few years older than them, while men prefer younger partners (Schwarz and Hassebrauck, 2012; Walter et al., 2020); comparative with males, females have slightly higher preferences for kindness and intelligence (Fletcher et al., 2004).

There is a substantial body of arguments and explanations behind the similarities and differences between males and females concerning mate selection. (1) People seek mates who resemble their opposite-sex parents (e.g., Freud, 1994); (2) who possess qualities they lack (e.g., Winch et al., 2017); (3) who are similar to themselves (Cattell and Nesselroade, 1967; Liu and Ilmarinen, 2020); (4) with who they can exchange valuable

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resources in an approximate equilibrium (Clark et al., 2019); (5) despite explicit preferences for a higher quality partner, compromise or acceptance of a mate of lesser quality than other potential mates may occur during mate selection (Li et al., 2002). Over the years, Sexual Strategies Theory (SST) is found to be the most cogent theory of human mating (Buss and Schmitt, 2019). The chief argument of SST is predominantly based on the Darwinian notion of the evolution of sexual reproduction and adaptations that focuses on intrasexual competition and intersexual selection (Darwin, 2020). The selection strategy evolves to address two main evolutionary challenges of adaptation: (1) maximizing fitness by preferential mate choice, and (2) out-competing rivals for suitable mates (Buss and Schmitt, 2016). The domains of intrasexual competition in one sex are determined by the mate preferences of the other. For instance, if women prioritize bravery against danger, then selection pressures are placed on men to compete against competitors by providing honest indicators of courage (Buss, 2017). On the other hand, intrasexual rivalry may have an impact on the evolution of mate preferences. When men engage in forms of same-sex combat, the informative variance generated by winning and losing contests may amplify women's mate preferences for specific traits (Puts, 2016). Although the two mechanisms of sexual selection are distinct, they can exert reciprocal causation on one another. Men and women will share similar mating psychology in all domains where they have faced similar adaptive challenges during mating (Buss, 1995). While some studies argue that choosing a mate involves making explicit or implicit trade-offs between different preferences (Williams and Sulikowski, 2020), other studies claim that reproductive success is always the most important thing, no matter what the environment is like (Thomas et al., 2020).

There is merit, in this vein, in examining the differential impact of society on human mate selection. In a monogamous Muslim society like Bangladesh, which is witnessing a transformation in rigid socio-cultural dimensions, some (if not the majority) people must settle for a single partner who possesses the qualities that are universally desired as well as culturally appropriate. Though recent research suggests the priority of educational qualification while selecting the mates (Islam, 2021), it is yet to be known whether the universally desired traits are reliable for the Bangladesh sample. In addition, consensual preferences generate both cross-character and character-specific assortment in mating systems by multiple attribute criteria; a given overall "market value" is achieved by elevation on various combinations of attributes. What are those valuable traits for mate selection in Bangladesh? The present research addresses two issues; (1) identify the most and least desired characteristics of the unwedded males and females in Bangladesh; (2) determine the degree of non-consensus on the desirability of traits in adolescents and early adults. The findings determine the reliability of the Sexual Strategies Theory (SST) in relatively conservative Muslim societies like Bangladesh, and the applicability of the Social structural perspective in explaining the differences in preferences by two distinct age groups. In this vein, the study explores and explains the possible factors associated with the traits and differentiates them by gender and age groups.

2. Literature and hypotheses

While there are some character-specific assortments by sex, some cross-character assortments of mate preferences are also evident. Cross-character assortment indicates the congruent elevation of distinct, but equally valued traits, while character-specific assortment denotes the resemblances of specific attributes (Buss and Barnes, 1986). Most people prefer kind, healthy, and empathetic mates and despise those who are cruel or who are suffering from a terminal illness (Boysen, 2017). Kind and empathetic partners are thought to be more cooperative in sustaining long-term relationships (Buss and Barnes, 1986), have higher partnership satisfaction (Valentine et al., 2020), and are more likely to be loving parents in the future (Hofer et al., 2018). Likewise, high intellect is desirable in a prospective mate by both males and females because intelligence encompasses a diverse set of potentially heritable traits that

may provide evolutionary advantages (Miller, 2001). A similar religious background has also been found to be a cross-character preference, particularly in Muslim countries such as Malaysia (Abdullah, 2011) and Nigeria (Maliki, 2010). Unlike the findings from the western samples (Walter et al., 2020), a similar religious background is among the top priorities for mate selections by males and females of Muslim majority countries. It is because, (1) parental approvals of getting married frequently depend on the similar religious background of the couples (Badahdah and Tiemann, 2009), (2) religiosity is commonly attributed as a positive feature of potential mates for the well-being of the family life (Abdel-Khalek, 2014). Therefore, the following hypotheses can be formulated:

H1. There would be no difference between males and females preferring kind and understanding, religious, and intelligent mates.

H2. Similar religious background would be a high preferential trait by both males and females in Muslim societies.

In domains where men and women have faced different adaptive challenges repeatedly throughout human evolutionary history, the sexes' mating strategies differ (Buss, 1995). Women's mating is thought to get certain adaptive advantages, such as gaining immediate access to economic resources, screening potential long-term partners, and possessing genes that are superior to those of their regular mates (Buss et al., 2017). In this vein, women must seek men who have the ability and desire to get and invest resources, as well as provide physical security for themselves and their children in the face of all-out hostilities (Birnbaum and Reis, 2019). Men, on the other hand, face distinct sex-specific adaptive difficulties when committing a long-term mating strategy, such as recognizing women with high reproductive value (Birnbaum, 2018). Since fertilization occurs internally within women, men must resolve paternity ambiguity for investments to be directed toward their biological offspring (Birnbaum, 2018). Consequently, like all known sexually reproducing species, human sex selection is shaped by the experiences of relationship involvement (Buunk et al., 2002). Hence, the following predictions can be proposed;

H3. Compared with males, females would prefer traits associated with the acquisition of resources, such as good financial prospects, and education and intelligence.

H4. Compared with females, males would prefer traits associated with fertility and reproduction, such as good looks, good health, good cook, and housekeeper

While men and women are concerned about the absolute values of scarce resources required to achieve an evolutionary advantage of survival, they also underlie the traits that are perceived to have high social values (Hill and Buss, 2006). They evaluate performance in domains that impact fitness by their position with their comparison group, and they resent rivals' fitness-related advantages, which motivates them to get the same advantages to have a positive effect on life and reproduction (Hill et al., 2011). Prevalent values of the community where they belong and the society that constraints their preferences, shape the expected social roles. These expectations varied from one community to another, and affect the traits preferred for mate selections (Valentine and Li, 2012). Given that the level of parent-child dyads and the effect of personal relationships among the family members change over the course of adolescence to early adulthood (Robinson, 2000), it is expected that social expectations will also change during this period. People choose mates in an adaptable manner, modifying their ideal partner preferences based on their own mate value and the current environmental conditions; those who are unable to find or attract a partner who matches their aspirations may have to settle for a mate who falls short of their expectations (Williams and Sulikowski, 2020). We would like to argue that the degree of acceptance of particular traits will vary from one age group to another. For instance, the adolescents or the teenagers who fantasized about their mates and the preferences of early adults, aged from 20 to 29, who get close to marriage may significantly differ in certain traits while

others may not (Buunk et al., 2002). The relative differences in the preferential traits by the mentioned age groups are likely to reflect the fantasies and the degree of reconciliation made (Jamalnik et al., 2020). Interest in romantic relations is the manifestation of fantasies constructed by people's sexual agendas (Jonason et al., 2020). Romance is also a neurological process that motivates adults to spend their courtship energy on particular partners, preserving critical time and metabolic energy and facilitating mate selection (Fisher et al., 2006). However, the focus of mate choices shifts from romance toward secure attachment once they begin to become mature (Burke and Schneider, 2007). Therefore, the following can be predicted;

H5. Compared with early adults, adolescents emphasize mutual attraction-love.

3. Methods

3.1. Research design and sampling

It is a cross-sectional study; the data were collected by a structured questionnaire and analyzed by standard statistical techniques. An online survey was conducted to gather the data from the target population. The criteria for selecting the respondents include; (a) aged no more than 30, (b) yet to be married, (c) at least have secondary education, and (d) can be of any religious faith. The teenage participants are categorized as adolescents, and those aged 20 to 30 are considered early adults.

The data were collected in two phases; the researcher randomly selected one-fifth of the estimated sample of at least 1536 (samples 95 percent confidence, 1 percent confidence interval, adequate for about 400 million people) from a particular university; the University-provided identification number for the students were used to randomly select the respondents by lottery. The selected respondents were invited to take part in the online survey using google form. In the second phase, the researcher requested the participants to invite their friends to participate in the same survey. Participation in the survey was open until it reached at least 384 (representational sample size at a 95 percent confidence level with a 5 percent confidence interval) participants in each category of male and female, and adolescents and early adults. It took about four weeks to complete the survey. Over all, it is a convenience sample as the respondents are drawn from a source that is conveniently accessible to the researcher.

3.2. Instrument and procedure

The study used "Mate Preferences Questionnaire" from Buss (1995) as the data collection instrument. it is the most widely used measurement tool that has cross-cultural validity. Apart from some basic demographic information, such as age, sex, religion, marital status, number of siblings, preferable age to marry, expected age differences between the spouse, and who would be older, the scale seeks the preferential traits by rating and ranking. The rating is used to identify which of the eighteen proposed traits are (I) indispensable (3 points), (II) important, but not indispensable (2 points), (III) desirable, but not very important (1 point), and (IV) irrelevant or unimportant (0 point). Over the years, these eighteen traits were found to be the robust characteristics of mate preferences (Buss et al., 2001; Feingold, 1992). The ranking is used to rank from the most (1) to the least (13) preferences of the thirteen proposed characteristics desired in a mate. The ethical approval committee of the Institute for Advanced Research (IAR) of United International University (UIU), Dhaka, Bangladesh, approved using the questionnaire to collect data by stating, "The questionnaire can do no harm to the participants; it is prepared in an unbiased manner, and no derogatory words are used." The participants gave their consent to be part of the survey, assuring that there would be no violation of privacy of any sort, in present or future, and the information would be used for academic purpose only.

Like the original study, the present research estimated the mean of the ranked preferences and outlined the hierarchy of preferences to compare the desired characteristics by males and females, and by adolescents and early adults. The estimated mean score of rating of the eighteen proposed traits was solicited to compare the relative importance of each distinct trait, and identify the character-specific assortment and cross-character assortment (Buss et al., 2001). The Independent Samples t-tests were conducted using IBM SPSS Statistics (Version 23) and the findings were used to determine whether there is statistical evidence to support claims that the mean score of solicited responses to the proposed traits is significantly different by gender and age-group. Like a previous study (Shackelford et al., 2005), the current study also identified the relative association of these distinctive traits by dimension reduction following principal component analysis and Varimax with Kaiser Normalization rotation.

4. Results

4.1. Respondents

A total of 2017 people, 1059 (52.5%) males and 958 (47.5%) females, participated in the survey. About 40.2 (19% male; 21.1% female) percent of them were adolescents, and about 59.8 percent (33.5% male; 26.4% female) were early adults; the mean age was 21.685 (± 2.54). About 93.6 percent were Muslims, about 5 percent were following *Sanatana Dharma*, some 1.1 percent were following Christianity, and the rest of the 0.3 percent were Buddhists. The religious identity of the sample reflects the overall religious landscape of the population of Bangladesh. The respondents were unmarried; about three-fourths of the respondents were single, and about 25 percent were in some kind of romantic relationship. Their preferable age differences between the spouses varied from 1 to 10, and the preferable age of getting married ranged from 20 to 40. Please consider Table 1 for more results.

4.2. Rank of the preferential traits

The estimated mean of the thirteen proposed traits' ranked preferences shows the priorities by gender. Males' most preferential trait is a similar religious background ($M = 3.24$; $SD = 3.27$), and females indicate kindness and understanding ($M = 3.06$; $SD = 2.53$) at the top of their order of preferences (ranging from 1 to 14). At the bottom of the preferences, females place good housekeeping ($M = 9.53$; $SD = 3.35$), and males place a well-earning capacity ($M = 9.75$; $SD = 3.40$). Conversely, good housekeeping ($M = 5.93$; $SD = 3.50$) is one of the top five preferential traits by males, and good earning capacity ($M = 9.53$; $SD = 3.35$) is among the top five preferential traits by females. Both males and females placed intelligence as the third preferential trait and good heredity as the second last down the order. Likewise, there is no difference in the ranking of creativity and artistic skills; an exciting personality is among the top five preferential traits by both males and females. Males' preference ($M = 7.15$; $SD = 3.67$) for physical beauty is ranked significantly higher than that of females ($M = 8.30$; $SD = 3.16$). In addition, females indicate that wanting children ($M = 8.86$; $SD = 3.04$) by their mates are among their least three preferential traits, whereas males indicate that college

Table 1. Gender-wise age group of the respondents.

Age Category	Gender		Total
	Male	Female	
Adolescent	384	426	810
	19.0%	21.1%	40.2%
Early Adults	675	532	1207
	33.5%	26.4%	59.8%
Total	1059	958	2017
	52.5%	47.5%	100.0%

graduate ($M = 7.79$; $SD = 3.44$) is among their least five preferential traits. Though there are hardly any significant differences in priorities by age groups, only a couple of low-order preferences significantly differ. For instance, early adult males prioritize college graduation over health, whereas adolescent males prioritize the opposite. While adolescent females prioritize physical attraction, the early adult females prioritize easy-going. For more results, consider Figure 1 and Table 2.

4.3. Rating of the preferential traits

Data collected by the rating scale shows the comparative importance of the distinct eighteen traits, such as (0) irrelevant or unimportant; (1) desirable, but not very important; (2) important, but not indispensable; and (3) indispensable. Males ($M = 2.41$; $SD = 0.82$) give high importance to *good cooking and housekeeping* to be in their mates than that of females ($M = 1.51$; $SD = 0.94$); the difference is statistically significant ($t = 23.12$; $df = 2015$; $p = .001$) and it is a stable pattern which does not differ from adolescents to early adults ($p > .05$). Females ($M = 2.45$; $SD = 0.72$), on the other hand, give high importance to *sociability* to be in their mates than that of males ($M = 2.33$; $SD = 0.79$); the difference is significant ($t = -3.75$; $df = 2015$; $p = .001$) and the preference is stable and not varying from adolescents to early adults ($p > .05$). Though there is no significant difference in preferring *refinement and neatness* by gender; compared with early adult females ($M = 2.42$; $SD = 0.72$), adolescent females ($M = 2.53$; $SD = 0.70$) prefer *refinement and neatness* ($t = 2.43$; $df = 956$; $p = .015$). Females' ($M = 2.39$; $SD = 0.73$) preference for the *good financial prospect* is much higher than males ($M = 1.60$; $SD = 0.99$); the difference is significant ($t = -20.36$; $df = 2015$; $p = .001$), and it does not vary across the age groups ($p > .05$).

There is almost no difference between males ($M = 1.98$; $SD = 1.22$) and females ($M = 1.97$; $SD = 1.28$) regarding the preference for *chastity*; it is something "important, but not indispensable." ($1.90 < M < 2.08$). A male's ($M = 1.94$; $SD = 1.03$) preference for the *dependable character* is higher than that of a female ($M = 1.75$; $SD = 1.16$); the difference is significant ($t = 3.92$; $df = 2015$; $p = .001$), and the preference does not significantly differ from one age group to another ($p > .05$). Females ($M = 2.46$; $SD = 0.73$) are more likely than males ($M = 2.32$; $SD = 0.80$) to prefer *emotional stability and maturity* ($t = -4.08$; $df = 2015$; $p = .001$). The preference remains similar concerning age groups ($p > .05$). Though both males ($M = 2.46$; $SD = 0.78$) and females ($M = 2.41$; $SD = 0.78$), across the age groups, considered that the *desire for home and children* by their mate is something important to indispensable ($2.34 < M < 2.49$), the adolescent females ($M = 2.48$; $SD = 0.72$) prioritize it more than the early adult females ($M = 2.35$; $SD = 0.82$).

Females' ($M = 2.05$; $SD = 0.83$) preference for the *favorable social status* of their mate is considerably higher than males ($M = 1.90$; $SD = 0.90$), whereas males' ($M = 2.37$; $SD = 0.82$) preference for the *good look* of their mate is considerably higher than females ($M = 1.93$; $SD = 0.88$). Compared with males ($M = 1.74$; $SD = 0.96$), females ($M = 2.29$; $SD = 0.83$) prefer their mates should be *ambitious and industrious* ($t = -13.90$; $df = 2015$; $p = .001$). Females ($M = 2.75$; $SD = 0.59$), particularly adolescents ($M = 2.80$; $SD = 0.52$), have a higher priority for *mutual attraction - love* than males ($M = 2.64$; $SD = 0.75$). Compared with early adult males ($M = 2.24$; $SD = 0.77$), adolescent males ($M = 2.34$; $SD = 0.79$) have priority for the *good health* of their mate ($t = 2.02$; $df = 1057$; $p = .044$). Females' ($M = 2.70$; $SD = 0.62$) preference for *education and intelligence* of their mate is significantly higher than that of males' ($M = 2.46$; $SD = 0.75$) preference ($t = -8.00$; $df = 2015$; $p = .001$). *Pleasing*

Trait-wise ranking of the preferences concerning potential mate

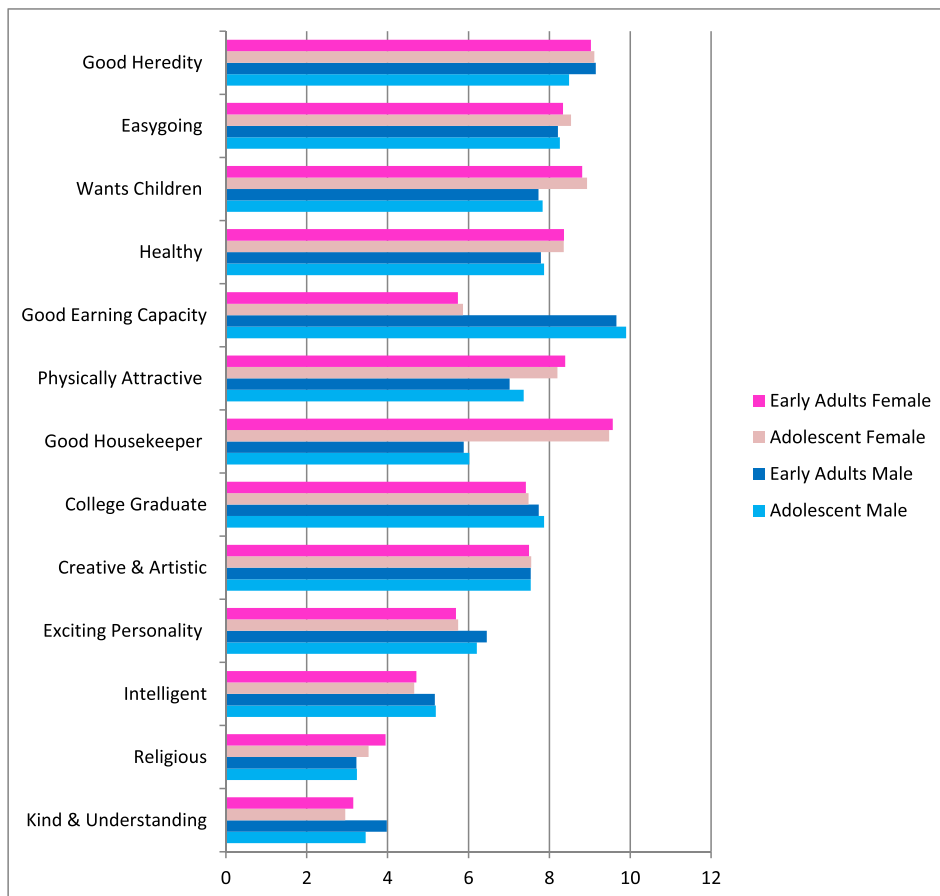


Figure 1. Trait-wise ranking of the preferences concerning potential mate.

Table 2. Trait-wise Mean (standard Deviation) of ranking comparison by Gender and Age-group.

Sex	Gender				Age Group by Gender							
	Male	Female	t (df)	p (2 tailed)	Adolescent Male	Early Adults Male	t (df)	p (2 tailed)	Adolescent Female	Early Adults Female	t (df)	p (2 tailed)
Kind & Understanding	3.79 (2.95)	3.06 (2.53)	5.92 (2015)	0.001	3.458 (2.75)	3.98 (3.04)	-2.77 (1057)	0.006	2.955 (2.40)	3.15 (2.63)	-1.16 (956)	0.245
Religious	3.24 (3.27)	3.76 (3.22)	-3.61 (2015)	0.001	3.242 (3.21)	3.23 (3.30)	0.04 (1057)	0.969	3.526 (3.11)	3.95 (3.30)	-2.01 (956)	0.045
Intelligent	5.18 (3.05)	4.69 (2.81)	3.77 (2015)	0.001	5.190 (3.10)	5.17 (3.03)	0.09 (1057)	0.932	4.655 (2.72)	4.71 (2.88)	-0.30 (956)	0.761
Exciting Personality	6.36 (3.39)	5.71 (3.11)	4.49 (2015)	0.001	6.206 (3.23)	6.45 (3.48)	-1.14 (1057)	0.253	5.744 (3.16)	5.69 (3.06)	0.29 (956)	0.774
Creative & Artistic	7.54 (3.40)	7.52 (3.29)	0.11 (2015)	0.913	7.539 (3.32)	7.54 (3.45)	0.00 (1057)	0.999	7.554 (3.34)	7.50 (3.25)	0.26 (956)	0.794
College Graduate	7.79 (3.44)	7.45 (3.71)	2.13 (2015)	0.033	7.872 (3.35)	7.74 (3.49)	0.60 (1057)	0.550	7.488 (3.64)	7.42 (3.78)	0.29 (956)	0.769
Good Housekeeper	5.93 (3.50)	9.53 (3.35)	-23.53 (2015)	0.001	6.021 (3.58)	5.88 (3.46)	0.61 (1057)	0.543	9.479 (3.39)	9.57 (3.31)	-0.43 (956)	0.665
Physically Attractive	7.15 (3.67)	8.30 (3.16)	-7.56 (2015)	0.001	7.367 (3.73)	7.02 (3.63)	1.48 (1057)	0.140	8.200 (3.15)	8.39 (3.17)	-0.92 (956)	0.357
Good Earning Capacity	9.75 (3.40)	5.80 (3.24)	26.63 (2015)	0.001	9.901 (3.31)	9.66 (3.45)	1.11 (1057)	0.266	5.866 (3.10)	5.74 (3.35)	0.59 (956)	0.557
Healthy	7.82 (3.45)	8.36 (3.10)	-3.68 (2015)	0.001	7.867 (3.39)	7.79 (3.48)	0.37 (1057)	0.715	8.354 (3.17)	8.36 (3.05)	-0.01 (956)	0.989
Wants Children	7.77 (3.18)	8.86 (3.04)	-7.88 (2015)	0.001	7.833 (3.33)	7.73 (3.10)	0.50 (1057)	0.618	8.930 (2.94)	8.81 (3.11)	0.61 (956)	0.539
Easygoing	8.23 (3.31)	8.43 (3.15)	-1.36 (2015)	0.173	8.263 (3.33)	8.21 (3.29)	0.24 (1057)	0.809	8.535 (3.11)	8.34 (3.17)	0.95 (956)	0.341
Good Heredity	8.91 (3.22)	9.07 (3.11)	-1.14 (2015)	0.256	8.490 (3.35)	9.15 (3.12)	-3.20 (1057)	0.001	9.115 (3.11)	9.03 (3.11)	0.42 (956)	0.675

disposition, similar educational background, and similar political background do not vary by gender and age-groups. Pleasing disposition ($2.10 < M < 2.24$) seems important for all but not indispensable, similar educational background ($1.53 < M < 1.66$) is desirable, and similar political background ($0.60 < M < 0.67$) is something irrelevant or unimportant. For more results, consider Figure 2 and Table 3.

4.4. Dimensions of mate preferences

Dimension reduction by principal component analysis and Varimax with Kaiser Normalization rotation yielded six factors that have Initial eigenvalues greater than 1. While 48.117 percent of total variance can be explained by 6 factor-solution, and 5 factor-solution can explain 42.142 percent, we decided to go with 5 factor-solution.

Component 1 (eigenvalue = 2.542) accounts for 14.122% of the inter-item variance in preference ratings, and includes Mutual attraction—love (.612), Desire for home and children (.547), Emotional stability & maturity (.478), Sociability (.453), and Similar religious background (.431). We termed the component ‘Attachment & sociability’ because the traits reflect the traditional socio-cultural values, oriented by the social attachment. Social attachment does not merely mean the social bonds among the members of a society but the underlying mechanism that constructs this bond (Bowlby and Ainsworth, 2013); hence, the term properly indicates the traits loaded in the component.

Component 2 (eigenvalue = 1.520) accounts for 8.445% of the inter-item variance in preference ratings, and includes Ambition & industriousness (.646), Good financial prospect (.645), and Education & intelligence (.513). Since these traits are closely related to financial and economic success (De Raad and Doddema-Winsemius, 1992), we termed the component acquisition of resources.

Component 3 (eigenvalue = 1.429) accounts for 7.936% of the inter-item variance in preference ratings and includes Good looks (.719), Good cook and housekeeper (.599), Good health (.486), and Chastity (.384).

These are the essential traits as part of fertility and reproduction (Buss, 2017); hence, the component is termed ‘fertility & reproduction’.

Component 4 (eigenvalue = 1.097) accounts for 6.094% of the inter-item variance in preference ratings, and includes Pleasing disposition (.678), Dependable character (.594), and Refinement, neatness (.343). The traits mentioned above reflect one’s social skills to deal with people around (Jay, 1970), and is termed ‘Social competence.’

Component 5 (eigenvalue = 1.060) accounts for 5.886% of the inter-item variance in preference ratings and includes Similar political background (.346), Similar educational background (.633), and Favorable social status or rating (.416). Since politics, education and social status are the components of social institutions that regulate the social cognition of the person (Danziger, 1985), we termed the component ‘Institutional similarity’.

Please consider Table 4 for detail.

The results indicate that, compared with males ($M = 2.46$; $SD = 0.44$), females ($M = 2.55$; $SD = 0.43$) emphasize attachment and sociability ($t = -4.360$; $df = 2015$; $p = .001$). Particularly, adolescent females ($M = 2.60$; $SD = 0.38$) prioritize attachment more than other factors. Likewise, compared with males ($M = 1.93$; $SD = 0.56$), females ($M = 2.46$; $SD = 0.51$) indicate traits associated with the acquisition of resources are highly preferred ($t = 3.216$; $df = 2015$; $p = .001$). Conversely, compared with females ($M = 1.91$; $SD = 0.56$), males ($M = 2.26$; $SD = 0.53$) emphasize traits associated with fertility and reproductive health ($t = 14.429$; $df = 2015$; $p = .001$). Particularly adolescent males ($M = 2.32$; $SD = 0.49$) prioritize traits associated with fertility and reproduction than the early adult ($M = 2.23$; $SD = 0.55$) males do ($t = 2.826$; $df = 1057$; $p = .005$). For more results, see Table 5.

5. Discussion

Preferential traits by males and females for their mate selections significantly vary, as suggested by SST. Both males and females rank kind and understanding as the top two qualities they seek in a mate (H1). Females place good housekeeping at the bottom, whereas males place

Trait-wise rating of the preferences concerning potential mate



Notes. 0=Unimportant; 1=Desirable; 2=Important; 3=Indispensable. For analysis, we considered, less than 1=Unimportant; 1 to 1.5=Desirable; 1.6 to 2.5=Important; 2.6 to 3=Indispensable

Figure 2. Trait-wise rating of the preferences concerning potential mate.

good earning capacity as the least priority trait (H4). Good housekeeping, on the other hand, is one of the top five preferred attributes among males, while good earning capacity is one of the top five preferred traits among females (H3). Both males and females ranked intellect as the third most desirable characteristic, with good heredity coming in second last. Males’ preference for physical beauty is substantially higher than the females’ inclination for this trait. Furthermore, females rank having children by their partners as one of their least three preferred attributes, and males rank being a college graduate as one of their least five preferences. However, there are some distinct features of the preferences of unwedded adolescents and early adults. First, unlike the universal trend, similar religious background is among the top-two priorities of both males and females (H2). Second, adolescent females tend to have greater emphasis than early adult females on some traits, such as refinement and neatness, mutual attraction-love, and desire for home and children (H5). Third, compared with males, females emphasize attachment and sociability. Therefore, the findings of the present study suggest that people, indeed, often require to make some trade-offs between their preferences, whether

explicit or implicit (cf. Williams and Sulikowski, 2020), particularly in accordance with their age and yet seeking reproductive success plays the dominant role in expressing their preferences (cf. Thomas et al., 2020). While results support the claims advanced by SST, the Social structural perspective is particularly helpful to explain how the value of particular traits of mates in the marriage market of the monogamous Muslim societies is determined by factors such as religion, culturally-defined gender role, and social environment.

First, religion is a critical socio-political institution in South Asia, particularly in India, Pakistan, and Bangladesh; the political movements to create a homogenous religious community and the political use of religious images in new communication technologies manifest its significance (Veer, 2002). Religion is a pivotal social identity for Muslims, and both sexes prefer not only a mate with a similar religious background but a religious mate (Badahdah and Tiemann, 2009). For Muslims, religious involvement and informal social contact with other Muslims can expose young people to religiously influenced norms that restrict their desire to have sex before marriage (Adamczyk and Hayes, 2012). Because

Table 3. Trait-wise Mean (standard Deviation) of rating comparison by Gender and Age-group.

Factors	Gender				Age Group by Gender							
	Male	Female	t (df)	p (2 tailed)	Adolescent Male	Early Adults Male	t (df)	p (2 tailed)	Adolescent Female	Early Adults Female	t (df)	p (2 tailed)
Good Cook & Housekeeper	2.41 (0.82)	1.51 (0.94)	23.13 (2015)	.001	2.45 (0.80)	2.40 (0.83)	1.00 (1057)	.316	1.57 (0.94)	1.47 (0.94)	1.63 (956)	.103
Pleasing Disposition	2.14 (0.83)	2.21 (0.83)	-1.76 (2015)	.078	2.20 (0.82)	2.11 (0.83)	1.57 (1057)	.118	2.19 (0.86)	2.23 (0.81)	-0.74 (956)	.458
Sociability	2.33 (0.79)	2.45 (0.72)	-3.75 (2015)	.001	2.32 (0.81)	2.33 (0.78)	-0.25 (1057)	.802	2.50 (0.66)	2.42 (0.75)	1.68 (956)	.093
Similar Educational Background	1.55 (1.07)	1.60 (1.20)	-1.09 (2015)	.274	1.55 (1.08)	1.54 (1.07)	0.14 (1057)	.886	1.54 (1.21)	1.65 (1.19)	-1.31 (956)	.192
Refinement & Neatness	2.41 (0.81)	2.47 (0.71)	-1.49 (2015)	.136	2.45 (0.81)	2.40 (0.81)	0.93 (1057)	.353	2.53 (0.70)	2.42 (0.72)	2.43 (956)	.015
Good Financial Prospect	1.60 (0.99)	2.39 (0.73)	-20.36 (2015)	.001	1.57 (0.98)	1.62 (0.99)	-0.73 (1057)	.466	2.40 (0.72)	2.39 (0.74)	0.30 (956)	.766
Chastity	1.98 (1.22)	1.97 (1.28)	0.22 (2015)	.827	2.07 (1.21)	1.93 (1.23)	1.76 (1057)	.079	2.05 (1.27)	1.91 (1.29)	1.69 (956)	.090
Dependable Character	1.94 (1.03)	1.75 (1.16)	3.92 (2015)	.001	1.91 (1.09)	1.95 (0.99)	-0.65 (1057)	.517	1.80 (1.17)	1.71 (1.15)	1.15 (956)	.248
Emotional Stability & Maturity	2.32 (0.80)	2.46 (0.73)	-4.08 (2015)	.001	2.32 (0.82)	2.32 (0.78)	-0.13 (1057)	.900	2.50 (0.70)	2.42 (0.74)	1.68 (956)	.093
Desire For Home & Children	2.46 (0.78)	2.41 (0.78)	1.63 (2015)	.103	2.48 (0.75)	2.46 (0.79)	0.41 (1057)	.684	2.48 (0.72)	2.35 (0.82)	2.49 (956)	.013
Favorable Social Status Or Rating	1.90 (0.90)	2.05 (0.83)	-3.88 (2015)	.001	1.94 (0.91)	1.88 (0.89)	1.00 (1057)	.317	2.04 (0.82)	2.06 (0.84)	-0.45 (956)	.651
Good Looks	2.37 (0.82)	1.93 (0.88)	11.56 (2015)	.001	2.43 (0.74)	2.34 (0.86)	1.76 (1057)	.079	1.97 (0.87)	1.90 (0.88)	1.26 (956)	.208
Similar Religious Background	2.55 (0.92)	2.66 (0.77)	-3.05 (2015)	.002	2.54 (0.86)	2.55 (0.95)	-0.18 (1057)	.857	2.70 (0.73)	2.63 (0.80)	1.44 (956)	.151
Ambition & Industriousness	1.74 (0.96)	2.29 (0.83)	-13.90 (2015)	.001	1.73 (0.96)	1.74 (0.95)	-0.03 (1057)	.975	2.35 (0.80)	2.25 (0.86)	1.72 (956)	.085
Similar Political Background	0.63 (0.97)	0.65 (0.96)	-0.50 (2015)	.620	0.61 (0.98)	0.64 (0.97)	-0.43 (1057)	.669	0.63 (0.96)	0.67 (0.97)	-0.61 (956)	.542
Mutual Attraction—Love	2.64 (0.75)	2.75 (0.59)	-3.39 (2015)	.001	2.66 (0.76)	2.63 (0.74)	0.66 (1057)	.510	2.80 (0.52)	2.70 (0.64)	2.54 (956)	.011
Good Health	2.27 (0.78)	2.22 (0.78)	1.39 (2015)	.163	2.34 (0.79)	2.24 (0.77)	2.02 (1057)	.044	2.17 (0.79)	2.27 (0.78)	-1.92 (956)	.055
Education & Intelligence	2.46 (0.75)	2.70 (0.62)	-8.00 (2015)	.001	2.48 (0.70)	2.44 (0.78)	0.87 (1057)	.384	2.73 (0.67)	2.68 (0.58)	1.12 (956)	.263

Table 4. Rotated Component Matrix of dimension reduction.

Traits & Factors	Attachment & Sociability	Acquisition of resources	Fertility & Reproduction	Social Competence	Institutional Similarity
Mutual attraction—love	.612				
Desire for home and children	.547				
Emotional stability & maturity	.478				
Sociability	.453				
Similar religious background	.431				
Ambition & industriousness		.646			
Good financial prospect		.645			
Education & intelligence		.513			
Good looks			.719		
Good cook and housekeeper			.599		
Good health			.486		
Chastity			.384		
Pleasing disposition				.678	
Dependable character				.594	
Refinement, neatness				.343	
Similar political background					.346
Similar educational background					.633
Favorable social status or rating					.416

Notes. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 5. Factor-wise Mean (standard Deviation) comparison by Gender and Age-group.

Factor	Gender				Age-group by Gender							
	Male	Female	t (df)	p (2 tailed)	Adolescent Male	Early Adults Male	t (df)	p (2 tailed)	Adolescent Female	Early Adults Female	t (df)	p (2 tailed)
Attachment & Sociability	2.46 (0.44)	2.55 (0.43)	-4.360 (2015)	.001	2.46 (0.41)	2.46 (0.46)	.156 (1057)	.876	2.6 (0.38)	2.5 (0.47)	3.216 (956)	.001
Acquisition of Resources	1.93 (0.56)	2.46 (0.51)	-22.109 (2015)	.001	1.93 (0.55)	1.93 (0.57)	-.057 (1057)	.955	2.49 (0.50)	2.44 (0.52)	1.529 (956)	.127
Fertility & Reproduction	2.26 (0.53)	1.91 (0.56)	14.429 (2015)	.001	2.32 (0.49)	2.23 (0.55)	2.826 (1057)	.005	1.94 (0.54)	1.89 (0.57)	1.475 (956)	.140
Social Competence	2.17 (0.58)	2.14 (0.58)	.962 (2015)	.336	2.18 (0.60)	2.15 (0.57)	.789 (1057)	.430	2.17 (0.59)	2.12 (0.58)	1.407 (956)	.160
Institutional Similarity	1.36 (0.63)	1.43 (0.64)	-2.681 (2015)	.007	1.37 (0.63)	1.35 (0.63)	.338 (1057)	.735	1.4 (0.64)	1.46 (0.64)	-1.325 (956)	.186

of social control mechanisms, young people who are strongly bonded to their Muslim parents, friends, and fellow religious adherents, are less likely to violate the tenets of their faith as doing so could jeopardize their bonds (Finke and Adamczyk, 2008). Since micro religious values restrict sexual activities by mechanisms of social learning, social regulation, and restricted opportunities (Adamczyk and Hayes, 2012), it enhances the value of a similar religious background. Another reason could be the rising rate of divorce in recent times, making people anxious (Afroz, 2019; Ashrafujjaman Tutul et al., 2021), and an anxious person commonly seeks a religious mate who could reduce uncertainty in relationships (Afhami and Rafiee, 2020). Besides, it is not that non-Muslim samples frequently disregard their religious background when expressing their mate preferences; Catholics and conservative protestants, particularly women, frequently expressed a stronger preference for religious homogamy (Logan et al., 2008).

Second, adolescents express what they really like and early adults express what they are really looking for (Buunk et al., 2002). Both men and women are required to lower their threshold for selection from their expectation; because they feel that there might be costs involved in chasing their fantasies (Kenrick et al., 1990). The proposition from the Social structural perspective is more equipped to explain this differentiation (Howard et al., 1987). The basic proposition of the social structural perspective is that “a society’s division of labor between the sexes is the engine of sex-differentiated behavior because it summarizes the social constraints under which men and women carry out their lives” (Eagly and Wood, 1999, p. 409). The importance of a woman as a mate has been associated with age and physical attraction, whereas wealth and status define the value of a man. On most occasions, a man's ability to accumulate wealth increases as he ages, whereas a woman's ability to maintain youth and beauty decreases. Generally, the number of potential partners decreases as a person ages past the stage of early adulthood (Sprecher et al., 2019). Therefore, women appear to be more susceptible to lowering their threshold because they have less control over their biological properties than men do over their status (Ben Hamida et al., 1998). In addition, it is also being found that sex ratio plays a critical role; people appear to have lower absolute preferences where mates are rare compared to where they are plentiful (Walter et al., 2021). In Bangladesh, there are about 105 adolescent males for every hundred adolescent females, whereas the sex ratio decreases continuously since the early adult age-groups (Asadullah et al., 2021). This could be another reason woman appear more susceptible to having their threshold lowered in the later stages of her life.

Third, early adults, particularly females, indicate that a secure relationship is a social bond that is stable and loving (Feeney et al., 1993). Adolescents build ties with other individuals, and these relationships are extremely emotional; these attachments drive them to seek the person they believe they need, to make prolonged eye contact, hold them, and become sad when they are separated (Allen, 2008). Early adults, in contrast to adolescents, endure several difficult developmental

challenges. Many of them are worried about starting a profession. They may pursue key credentials or undergo training at an organization's entry level. Youth unemployment rates have been extremely high in many countries over the last century, and this trend appears to be continuing; hence, early adults face a range of socio-economic challenges that shape their way of thinking (Singh and Choudhri, 2014). Studying, working, and being unemployed all come with their own set of challenges; simultaneously, early adults navigate the world of romance, which can be stressful and anguish-inducing (Zarrett and Eccles, 2006). Most of them experience a range of emotions when confronted with these challenges (Robinson, 2000). They also face a new level of cognitive difficulties, such as discovering dialectical (opposing) forces in which many components of their social environment might exhibit contradictory characteristics (Riegel, 1975; Rymanova et al., 2021). Being emotionally attached to or having physical proximity to caregivers ensures sufficient protection from environmental incidents (Afhami and Rafiee, 2020). Particularly, women prefer males interested in long-term partnerships in secure situations; conversely, women are more likely to be romantically involved when living in conditions marked by a lack of jobs, a lack of medical care, or inadequate educational opportunities (Burtäverde and Ene, 2021). Since adolescent girls are the most at-risk cohort in Bangladesh, it is quite likely that they would prefer a man who has a desire for mutual attraction-love and prefers home (Kennedy et al., 2020; Trommlerová, 2020). These changes and challenges explain why the desire for home and mutual attraction-love were higher among adolescents but not among mature early adults.

6. Implications and limitations

Primarily, the present research addressed the desirable and undesirable characteristics of unmarried men and women expressed by the unwedded and educated individuals living in transitional societies like Bangladesh; and second, the degree to which adolescents and early adults disagree about the attractiveness of specific characteristics in their mates. While some scholars have doubted whether mate preferences affect actual mating behavior (Eastwick et al., 2014), the findings from numerous previous studies strongly suggest that they do (Buss and Schmitt, 2019). In particular, the present research addressed the limitations of previous studies. For instance, studies have had the common flaw of focusing on a single age group and failed to clarify the fundamental aspects on which comparability, complementarity, exchange, and equity may shift from one stage of life to the next. As a result, no rationale was provided for why, as people mature, their desires for mate selection criteria change in response to external factors like their own personal growth, social context, and the environment. Second, not many prior studies considered the importance of the socio-religious background; regardless to the religious background, some samples were much better than others at avoiding short-term relationships, casual sex, and infidelity with people outside of the couple; nonetheless, the primary focus

was only on Christians' marriage or long-term mate choice rather than on Muslims. Finally, and perhaps most significantly, not many studies have a causal explanation for how and why these mating desires evolved to serve human's adaptive needs for mating. With these limits in mind, the current study is focused on finding the minimum information needed to get a good idea of what people want in a partner. The findings of the study could contribute to broadening the scope by reducing the lack of sex-differentiated premises and predictions for future studies that intend to examine the social factors associated with mate preference.

While the results of the present study indicate that mate preferences possibly vary from one age group to the next depending on a range of social and psychological factors, by outlining five dimensions, which could be a valid structure applicable to analyze the mate preferences in future studies, there are some theoretical and methodological limitations. First, while above two thousand people participated in this online survey, almost all of them were educated, lived in urban areas, and had internet access; hence, they were not exactly a representative sample for Bangladesh. Second, categorizing adolescence and early adulthood by only considering the chronological age has its limitations; not all transform from one age of life course to the successive stage and become mature at the same time (Barker and Galambos, 2005). Third, it is hard to differentiate the effect of societies' expectations from evolutionary personality traits in a rigid culture in Muslim majority countries (Göz et al., 2018). While the findings of the present study would be limited, it indicates that mate preferences possibly vary from one age group to its successive age group depending on a range of social and psychological factors. In addition, the estimated five dimensions could be a valid structure applicable to analyzing the mate selection preferences in future studies.

Furthermore, there are several research design related concerns: first, while altruism has been extensively studied as a factor in mate selection, and the results show that altruism is a mating signal (Bhagal et al., 2020), the present study has given no particular focus to the issue. Second, given the prevalence of visual cues in the assessment of partner traits such as appearance, wealth, and personality, this raises questions about whether visual experience is necessary for the development of sex-specific mate preferences (Scheller et al., 2021). The present research has no answer to the questions or any other questions associated with the mate preferences of the people with physical disabilities. Finally, the results of this study are also limited because they only consider heterosexual partners, a constraint shared by the bulk of previous studies on mate preferences. While studies rarely focus on the sexual orientation of Bangladeshis, it is evident that some people aged 18 to 35 are not heterosexual (Sharif, 2019). Greater acceptance and tolerance of a more nuanced range of sexual identity and sexual orientation as well as including the people with physical disabilities or deformation as samples could help us gain a better understanding of how mate preferences evolve, and recognize the diversity of sexuality that already exists in all societies. Future studies can address these socio-biological factors associated with samples and resolve the above mentioned research gaps by methodically measuring human mate selection to generate a more comprehensive interpretation. In addition, there is a research gap concerning the distinct pattern of mate preferences in urban and rural samples, as well as hardly any studies interpreting the comparison of mate choices by educated and uneducated people.

7. Conclusions

Two concerns are being investigated in this study; first, to identify desirable and undesirable traits of unmarried males and females in Bangladesh; second, to ascertain the extent to which adolescents and early adults disagree about the desirability of certain traits in mate choice. The findings establish the dependability of the Sexual Strategies Theory (SST) in very conservative Muslim nations such as Bangladesh, as well as the relevance of the Social structural approach in explaining disparities in preferences between two separate age groups. Defined in

this way, the study distinguishes potential traits in mate preferences by between genders and age groups.

Findings partially support the Sexual Strategies Theory (SST). Indeed, males place a higher value on attributes related to fertility and reproductive health than females do. Adolescent boys, in particular, place a higher value on qualities related to fertility and reproduction than early adult males do. Males value good cooking and housekeeping more than females, a pattern that persists from adolescence to early adulthood. Females place a higher value on attachment and sociability than males do. Adolescent females value attachment over other things. Females value sociability more than males, and this desire persists from adolescence until early adulthood. Although refinement and neatness preferences are not gender-specific, adolescent females prefer refinement and neatness over early adult females. There is a significant disparity in female and male preference for good financial prospects. As predicted in the theory, females show a strong preference for features related to resource acquisition as compared to males. Females prefer their mate's social status, whereas males prefer their mate's attractive looks. Females prefer their partners to be ambitious and hardworking, as opposed to males. Females, especially teenagers, place a higher value on mutual attraction and love than males do. When compared to early adult males, adolescent males prioritize their mate's health. The desire of females for their mate's education and intellectual ability is substantially higher than that of males. Gender and age groupings have little effect on pleasant dispositions, similar educational backgrounds, or similar political backgrounds. A pleasant demeanor appears to be important but not essential for everybody, a similar educational background is ideal, and a similar political background is irrelevant or insignificant.

Some of the findings support the claims by social structural perspective. For instance, males prioritize a similar religious background, whereas females place kindness and understanding at the top of their list of preferences. Females place decent housekeeping at the bottom of their list of priorities, whereas males give the least priority to the earning capacity. Strong housekeeping is one of males' top five preferred attributes, and good earning capacity is one of females' top five preferred traits. Both males and females ranked intellect as the third most desirable characteristic, with good heredity coming in the second last. There is no gender difference in the ranking of creativity and artistic abilities; both males and females put exciting personality as one of their top five preferred attributes. Males have a substantially stronger desire for physical appearance than females. The desire for children by partners is among females' least three preferred attributes, whereas among males' least five. While there are not too many major variances in priority between age groups, there are a few minor ones. Early adult males, for example, place a higher value on college graduation than on health, but adolescent boys place a higher value on the contrary. While teenage females value physical attractiveness, early adult females value easygoingness. The preference for chastity is roughly identical amongst males and females. Males favor trustworthy character more than females, and this preference does not vary by age group. Females are more prone to value emotional stability and maturity than males. While both adolescent and early adult females value their mate's desire for home and children, adolescent females place a higher value on it.

Declarations

Author contribution statement

Muhammad Rehan Masoom: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

Data included in article/supp. material/referenced in article.

Declaration of interest's statement

The authors declare no conflict of interest.

Additional information

Supplementary content related to this article has been published online at doi:10.1016/j.heliyon.2022.e12169.

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