A Quantitative Survey of Online Impression Formation and Mate Preferences among Saudi Users of Matrimonial Websites

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Abstract

Matrimonial websites are an important element in the online interaction equation. Saudis can create a certain impression of themselves while indicating their potential preferences in a future spouse. Current research contributes to the Walther (1996) model by considering the message and the communication components: sender, channel, receiver, and feedback. Using a quantitative questionnaire survey (N = 302), the results provided an in-depth description of the script Saudi users follow when trying to find a potential spouse through matrimonial websites. Results found Saudi users differ by demographic variables in the self-presentation of their positive and negative attributes on matrimonial websites. The influence of the receivers' factors differs according to demographic variables and has been partially confirmed; Saudi matrimonial website users have partially different mate preferences from those described by Buss and Schmitt (1993). In addition, male Saudis who use of matrimonial websites differ in their mate preferences according to their demographic variables, as results showed the role of six variables—age, tribe of origin, relationship status, educational level, income level, and religiosity level. Female Saudis who use matrimonial websites differ highly in their mate preferences according to their demographic variables because the results showed the role of all the aforementioned variables except relationship status.

Keywords: quantitative survey, online impression formation, mate preferences, matrimonial websites, Saudi users

1. Introduction

Studies of online dating website mate preferences have used the lens of the sexual strategies theory proposed by Buss & Schmitt (1993), which is considered one of the major relationship theories, to illustrate men and women's preferred characteristics in potential mates. Some of these studies have revealed that men favoured young, good-looking women with potential parenting skills and those women sought men of high socioeconomic status (e.g., Dawson & McIntosh, 2006; Al Azmi et al., 2012; Shannak, &Obeidat, 2012; Al-Duhaish et al., 2014; Darawsheh et al., 2016; Bajnaid & Al-Saggaf, 2017; Bajnaid & Elyas, 2017; Bajnaid & Elareshi, 2018). Nevertheless, these studies have neglected the role that both conservative culture and religion play in influencing the preferences men and women seek in a potential spouse (Also, see Alnajrani et al., 2018). Religion may also affect individuals' strategy when constructing their own online matrimonial profiles. Therefore, the current research contributes to the literature by examining online mating preferences among Saudis, who belong to an Islamic religion and an Arabic conservative culture. Online matrimonial websites open a new space that gives users more opportunities to find matches. Almost all the participants believe that matrimonial websites enable them to overcome cultural and social restrictions. Saudis join matrimonial websites to search for a spouse on their own and possibly interact directly with their potential partner, providing and gaining more information about the potential spouse to determine their compatibility in a way that would be impossible in traditional Saudi courtship. While it is difficult to justify joining these websites in Western culture, having a second wife is accepted in Islamic culture. In the

current sample, one-fifth of Saudi matrimonial website users are married.Due to the lack of an existing impression formation survey, this research built a quantitative scale to measure the relative importance of communication process components based on hyper-personal theory. Impression formation and self-presentation were also investigated using qualitative methods.

With all the advancement in the mobile and the internet sectors, many matrimonial websites and mobile applications are available for the Saudi users. Such advancement made a huge impact on the way Saudis choose their mates. Further, because the current research aims to investigate Saudis' matrimonial website usage to find potential spouses, the researchers contacted the agency that runs the website to obtain approval to conduct research on it. The agency agreed to help the researchers in conducting the research, a content analysis of profiles. The agency agreed that the researchers could investigate the time the members have been registered at the website and their reasons for registering at the website instead of using traditional approaches to find a spouse. They could also ask about other online methods they used to search for a potential spouse, their preferences, and the importance of religion and tribe of origin when looking for a spouse. The impressions these members intend to create through their profiles, the strategies they use to attract or interact with others, their perceptions regarding using matrimonial websites as a means to form an impression, and the role of the feedback received by others in altering the impression they intend to form on the website could also be examined. In addition, the researchers were allowed to investigate members' rationales for their actions within the website, their perceptions regarding the acceptable and unacceptable actions made on the website, the extent to which they are accurate in their self-description, the extent to which they expect other profiles to be accurate, the issues that attract them in others' profiles, and the number of members that users actively contact within the website. The current research aims to answer and examine the following questions and hypotheses:

1.1 Questions and Hypotheses Regarding Impression Formation

1) To what extent are Saudi users as senders selective in their self-presentation on matrimonial websites?
2) Do Saudi users differ in their selective self-presentation as senders on matrimonial websites according to their demographic variables?
3) What are the factors that influence the perception of Saudi users of matrimonial websites as receivers regarding their impression?
4) Does the influence of the receivers' factors differ according to their demographic variables?
5) What is the perception of Saudi users towards the effectiveness of using a matrimonial website as a channel to find a spouse?
6) Do Saudi users differ in their perception of the effectiveness of using a matrimonial website as a channel to find a spouse according to their gender?

    H1: Saudi users differ by their demographic variables in their selective self-presentation of their positive and negative attributes on matrimonial websites.

    H2: Due to the lack of social cues, the receiver utilizes several strategies to fill in the blanks with regard to missing information about the sender.

    H3: The influence of the receivers' factors differs according to their demographic variables.

    H4: Saudi users differ by gender in their perceptions of the effectiveness of using a matrimonial website as a channel to find a spouse.

1.2 Questions and Hypotheses Regarding Mate Preferences of Saudi Users

7) Do Saudi users of matrimonial websites utilize different strategies of mate preferences from the strategies proposed by Buss and Schmitt (1993) to find a spouse?
8) Do Saudi male users of matrimonial websites differ in their strategies of mate preferences according to their demographic variables?
9) Do Saudi female users of matrimonial websites differ in their strategies of mate preferences according to their demographic variables?

    H5: Saudi matrimonial websites users have different mate preferences from those described by Buss and Schmitt (1993).

    H6: Saudi male users of matrimonial websites differ in their mate preferences according to their demographic variables.

    H7: Saudi female users of matrimonial websites differ in their mate preferences according to their demographic variables.

Section 2 illustrates the research methodology used in this study. Validating the quantitative data through the data analysis is presented in Section 3. Section 4 concludes the paper.

2. Research Methodology

Because the Saudis who use the chosen Muslim matrimonial website, the target of the current study, are geographically distributed throughout the Kingdom of Saudi Arabia, the suitable way to locate, survey, and collect data from a large sample of them is using an online questionnaire within the matrimonial websites themselves. As confirmed by Wright (2006), online questionnaires benefit from the technological advantage of providing access to individuals who would be difficult to recruit through traditional methods.

2.1 Pilot Study of the Online Questionnaire

After constructing the first draft of the questionnaire, a pilot study was conducted. The pilot study informs the researchers about questionnaire reliability and validity. Mooney & Duval (1993) noted that the results of a pilot study are considered to have relatively high reliability when they reach the 30–50 range. The goal of a pilot study is to test a preliminary survey or develop a scale. Thus, the pilot test for the online questionnaire in the current research was administered during February 2015 to 85 volunteer Saudi users (45 men and 40 women) between ages 18 and 65 (Mean = 32.73 years, SD = 7.00) from the chosen matrimonial website. The participants were provided with information sheets and informed consent forms to read, sign, and return to the researchers. Conducting this study helps reduce the ambiguity of the questionnaire's items.

Running the pilot study also helps measure the validity of the questionnaire (Dyer, 2006; Masa'deh et al., 2008; Maqableh et al., 2015). For instance, content validity means how well the questionnaire items cover their intended purposes and is usually determined by the judgment of experts in the field (Kimberlin & Winterstein, 2008; Tarhini et al., 2017). As indicated below, the researchers' supervisory team acted as the experts in the field.

2.1.1 Administration of the Questionnaire

To administer the questionnaire and recruit participants, the revised questionnaire was sent to the matrimonial website's agent. The agent uploaded an ad on the website for a month to attract users in April 2015. The aim of this ad was to inform the website's members about the research and how they could participate. The agent also sent an invitation email to the members to recruit more participants. They set up automatic system reminder emails. The number of responses in the first day was 76. The responses started to increase gradually, and the reminding strategy worked well. The number of participants exceeded 200 after 5 days. By the end of this phase, the number of respondents was 327. The researchers excluded 25 responses because there was missing information. Thus, the total number of participants in this phase was 302 (134 females and 168 males) between ages 18 and 65 (Mean = 33.13 years, SD = 7.01).

All respondents were current Saudi-based subscribers who were active on the website (i.e., had logged in within the prior month). The sample was 55.6% male, 53.3% Hadari, and their ages ranged from 18 to 65; most participants were between31 and 40 (62.9%). Singles comprised 64.9% percent of the study, and 75.4% were moderately religious. About half of the sample (50.3%) had a bachelor's degree, and the majority (41%) reported incomes between SAR4000 and SAR9999. These demographic characteristics are in line with the population characteristics of the website's subscriber base and representative of the target population.

Gibbs, Ellison, & Heino's (2006) method ensures the representation of the sample when the true population values were unknown, identifying possible sources of bias among responders. The demographic background variables of the sample were compared to those for which the researchers had information in the sampling frame (N = 2,500), which was randomly selected from the website's subscriber database. The sampling frame sample consisted of the characteristics for which response was most likely to vary: age, gender, tribe of origin, relationship status, level of education, income level, and religiosity. Compared to the sampling frame, there was almost no difference in terms of these variables, confirming the nonbias among responders that generalize the findings to the wider population of the online matrimonial website's users.

In addition, the inferential statistical analysis was taken into consideration when determining the research sample size. According to Van Voorhis & Morgan (2007), if the sample size is too low, inferential statistical analysis is underpowered. This means that the test statistics extracted from the sample data could be declared not significant at the .05 level when, in fact, it is significant in the population from which the sample was drawn (Cohen, 1992). Thus, a power analysis was conducted using G*Power software to determine the minimum statistical test sample size to be used in this research as stated in the following section. The power analysis indicated that the number of questionnaire respondents must approach 200 to obtain accurate statistical inferences. Because the number of participants in this phase was 302—exceeding the required sample size—the representation of the sample is ensured.

The types of statistical analysis that can be conducted on the collected response data using the questionnaire depend

on the measurement levels of the variables, as outlined in Table 1. All but three of the variables are measured using close-ended questions with variables measured at either the nominal level (i.e., two or more qualitative categories) or the ordinal level (i.e., rated on a scale that can be ranked in a logical order; Agresti, 2007, 2010).

Table 1. Measurement Levels of Variables in the Questionnaire

Variable	Measurement Levels	Values
1.1 Age	Interval	Years
1.2 Gender	Nominal (2 categories)	1 = Male 2 = Female
1.3 Tribe of origin	Nominal (2 categories)	1 = Qabily 2 = Hadari
1.4 Relationship status	Nominal (4 categories)	1 = Single, 2 = Married, 3 = Divorced; 4 = Widow/Widower
1.5 Highest level of education	Ordinal (6 categories)	From 1 = Uneducated to 6 = Postgraduate degree
1.6 Monthly Income	Ordinal (8 categories)	From 0 = None to 7 > SA 20,000
1.7 Religious level	Ordinal (4 categories)	From 1 = Highly religious to 4 = Not religious
3. Mate preferences	Ordinal (7 categories)	27 items rated from 1 = Extremely unimportant to 7 = Extremely important
4.1 Impression formation (Sender)	Ordinal (4 categories)	2 items rated from 1 = None to 4 = Much
4.2 Impression formation (Receiver)	Ordinal (7 categories)	15 items rated from 1 = Extremely unimportant to 7 = Extremely important
4.3 Impression formation (Channel)	Ordinal (7 categories)	9 items rated from 1 = Strongly Disagree to 7 = Strongly Agree
5.1 Initiation of contact with potential spouse	Ordinal (3 categories)	From 1 = Always to 3 = Never
5.2. Respond to contact with potential spouse	Ordinal (3 categories)	From 1 = Always to 3 = Never
5.3 Termination of correspondence	Ordinal (3 categories)	From 1 = after one or two messages to 3 after more than 10 messages
5.4 Number of members currently keeping in contact with	Interval	Number of members
5.5 Number of times made unsuccessful contacts	Interval	Number of times
5.6. Successfully moved relationship from offline to online	Nominal (2 categories)	1 = Yes 2 = No

3. Research Results

3.1 Saudi Users' Impression Formation

Early theories about communication through sites like the matrimonial websites (Computer Mediated Communication) assumed that online settings facilitate impersonal impressions, given the lack of social cues (e.g., Short, Williams, Christie, 1976; Sproull & Kiesler, 1986). However, Walther (1996) focused on the positive side of the lack of social cues, proposing that selective impression formation allows users to control the impressions they create online, which he termed "hyper personal theory". The current research assumes that in conservative

societies that segregate men and women and discourage direct communication between them, online settings provide richer information than offline settings. Therefore, this section examines this assumption and the role of social norms in affecting communication components. One of the main strengths of hyper personal theory is that it provides an explanation of the role of the four main communication components in forming an impression online: the *sender*, a matrimonial website user in the current research; the *receiver*, the potential spouse; the *channel*, the matrimonial website itself, and the *feedback*, users' reactions about what they view in other profiles or what they receive in the form of private messages from other users (Walther, 1996). While Walther (1996) model of online communication only considered the *message* features (i.e., a synchronicity& lacking of social cues), the current research considers the *message* itself, by investigating users' profiles, and its features over the three phases. Hence, this means that the current research contributes to the Walther model (1996) by considering the *message* besides the communication components; *sender, channel, receiver and feedback*. Due to the lack of a pre-existing impression formation survey, the researchers built a scale to measure the role of these components in the impression formation of matrimonial website members, focusing on the first three components.

3.1.1 Sender

According to Walther (1996), senders can effectively utilize text-based features to facilitate selective self-presentation. Through text, they can present what they want other users to know about them. Thus, senders have the choice to generate content that emphasizes desired attributes and interact with others in a way that leaves a positive impression. This section answers the main research question: To what extent are Saudi users as senders selective in their self-presentation on matrimonial websites? Do Saudi users differ in their selective self-presentation as senders on matrimonial websites according to their demographic variables?. Thus, the current Saudi sample was asked to indicate to what extent they tend to present their positive attributes and deemphasize their negative attributes. It also aims to test the hypothesis that the sample's demographic variables affect this selective self-presentation. Figure 1summarises the frequency distributions of the responses of participants about their strategies as senders.
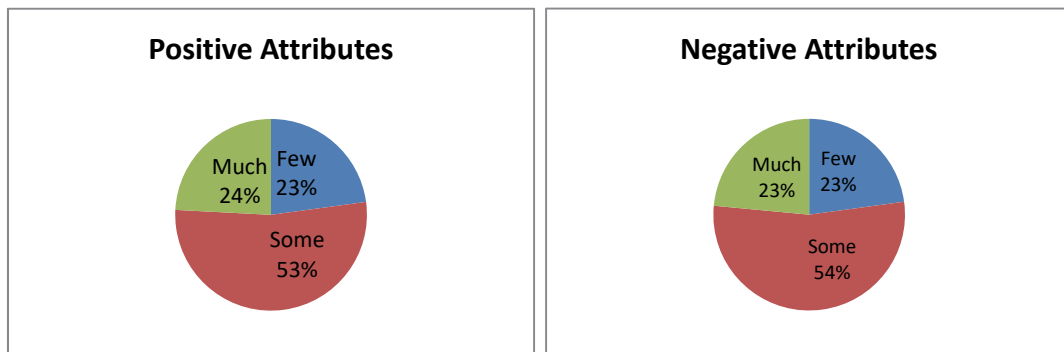

Figure 1. Presenting Positive Attributes and Deemphasising Negative Attributes

The results reveal that most of the sample (about 77%) cares somewhat or a great deal about presenting their positive attributes and deemphasizing their negative attributes. Beyond proving that people are selective about presenting themselves and forming positive impressions, this result proves that questionnaire respondents were aware of their behavior online. It seems that they are strategic in lessening potential partners' access to their undesirable attributes. Such findings correspond to the results of Western studies that reveal that online dating users are strategic when constructing their online dating profiles and communicating with other members (e.g., Vasalou & Joinson, 2009; Jiang, Bazarova, & Hancock, 2010; Ellison, Hancock, &Toma, 2011).

Fisher's Exact Test was used to investigate whether Saudis differ in their selective self-presentation according to their educational levels. As seen in Table 2, senders differ significantly in how strategic they are in presenting positive attributes (Fisher's exact= 22.861, p=.002) and deemphasizing negative attributes (Fisher's exact= 23.883, p=.002) depending on their education level. High levels of selective self-presentation are more associated with higher degrees. This result proves that the level of education affects users' levels of self-presentation. This result aligns with studies by Berinsky (2004) and Hall, Park, Song, & Cody (2010) that found that the educational level correlates positively with some aspects of self-presentation.

Table 2. Educational Levels and Selective Self-presentation

Variable		Elementary school	Middle school	High school	Bachelor	Post-graduate	Fisher's Exact Test
		N (%)	N (%)	N (%)	N (%)	N (%)	
positive attributes	Few	3 (100%)	14 (41.2%)	54 (60.0%)	33 (21.7%)	1 (4.3%)	EFT = 22.861, p=.002
	Some	0 (00.0%)	14 (41.2%)	25 (27.5%)	46 (30.3%)	6 (26.1%)	
	Much	0 (00.0%)	6 (17.6%)	11 (12.2%)	73 (48.0%)	16 (69.6%)	
negative attributes	Few	3 (100%)	14 (41.2%)	56 (62.2%)	33 (21.7%)	6 (26.1%)	EFT= 23.883, p=.002
	Some	0 (00.0%)	14 (41.2%)	23 (25.6%)	46 (30.3%)	16 (69.6%)	
	Much	0 (00.0%)	6 (17.6%)	11 (12.2%)	73 (48.0%)	1 (4.3%)	

Fisher's Exact Test was also used to investigate whether Saudis differ in presenting their positive attributes and deemphasizing negative attributes depending on their level of religiosity. Table 3 shows that there is a significant association between religious level and selectivity in presenting positive attributes (Fisher's Exact Test=.17.751, p=.004) and deemphasizing negative attributes (Fisher's Exact Test=17.819, p=.007). Low levels of selective self-presentation are associated with high levels of religious devotion. This result could be interpreted in light of Islamic religious values, especially when it comes to presenting one's self to potential spouses. Many *Fatwas* have been released by religious clerics emphasizing the importance of accuracy in presenting positive and negative attributes to a potential spouse and in the description of the spouse, either by the moderator or on the legitimate look day. This is especially the case when negative attributes could affect the marriage (Al-Munajjid, 2015; The General Presidency of scholarly research and ifta, 2015). In order to follow these *Fatwas*, highly religious users may feel more responsible to present both sides of their attributes than less religious groups.

Table 3. Religious Level and Selective Self-presentation

Variable		Highly religious	Moderate religious	Religious to a small extent	Not religious	Fisher's Exact Test
		N (%)	N (%)	N (%)	N (%)	
positive attributes	Few	13 (46.4%)	130 (57.0%)	5 (12.8%)	2 (28.6%)	EFT = 17.751, p=.004
	Some	8 (28.6%)	54 (23.7%)	14 (35.9%)	2 (28.6%)	
	Much	7 (25.0%)	44 (19.3%)	20 (51.3%)	3 (42.9%)	
negative attributes	Few	13 (46.4%)	131 (57.5%)	5 (12.8%)	2 (28.6%)	EFT= 17.819, p=.007
	Some	8 (28.6%)	54 (23.7%)	13 (33.3%)	2 (28.6%)	
	Much	7 (25.0%)	43 (18.9%)	21 (53.8%)	3 (42.9%)	

In order to determine whether relationship status affects how the Saudi sample presents positive attributes and deemphasizes negative attributes, Fisher's Exact Test was used (see Table 4). The results show Saudis in the sample differ in the presentation of their positive attributes (Fisher's Exact Test=16.406, p=.010) and negative attributes (Fisher's Exact Test= 15.565, p=.016) according to their relationship status. Interestingly, high levels of strategic self-presentation are more associated with being single. Divorced men and women and married men who are looking for second wives are less careful about their self-presentation. It seems that singles are more concerned about their image and how they present themselves. This result could also be linked to the users' experience in relationships. According to Long (2010), users' experiences affects the ways in which they communicate, reply,

and present themselves to other website members.

Table 4. Relationship Status and Selective Self-presentation

Variable		Single N (%)	Married N (%)	Divorced N (%)	Widow/Widower N (%)	Fisher's Exact Test
positive attributes	Few	43 (21.9%)	6 (17.1%)	13 (24.1%)	7 (41.2%)	
	Some	93 (47.4%)	24 (68.6%)	34 (63.0%)	9 (52.9%)	EFT = 16.406, p=.010
	Much	60 (30.6%)	5 (14.3%)	7 (13.0%)	1 (5.9%)	
negative attributes	Few	43 (21.9%)	6 (17.1%)	13 (24.1%)	7 (41.2%)	
	Some	95 (48.5%)	24 (68.6%)	34 (63%)	9 (52.9%)	EFT= 15.565, p=.016
	Much	58 (29.6%)	5 (14.3%)	7 (13%)	1 (5.9%)	

One-way Analyses of Variance (ANOVAs) were used to evaluate whether or not, significant relationships between age and selectivity in presenting positive attributes and deemphasizing negative attributes (see Table 5). The results reveal that there are no significant relationships between users' age and their levels of selectivity in presenting positive attributes (F=1.926, p=.148) or deemphasizing negative attributes (F = 1.511, p = .222). This result differs from the findings of Strano (2008) and Boyle & Johnson (2010) that the age variable correlates negatively with online self-presentation. However, it should be noted that these studies investigated online self-presentation in general, whereas the current study investigates online self-presentation to a potential spouse, which could alter users' ways of presenting themselves. In addition, it could be inferred that if age and relationship status are both considered indicators of the user's experience in self-presentation to a potential spouse, relationship status is more influential than age in the current sample's online self-presentation. To test the normality, Shapiro-Wilk test was used. The result shows that the p-value is 0.113 for positive attributes and 0.23 negative and thus it could be concluded that the data comes from a normal distribution. Therefore, the assumption of normality has been met for this sample.

Table 5. Age and Selective Self-presentation

Variable		Few	Some	Much	ANOVA
positive attributes	Mean	34.13	33.27	31.86	F = 1.926, p =.148
	SD	(7.82)	(6.85)	(6.55)	
negative attributes	Mean	34.13	33.16	32.07	F = 1.511, p = .222
	SD	(7.82)	(6.88)	(06.52)	

A chi-square test of associations was used to investigate whether Saudi women and men differ in presenting their positive attributes and deemphasizing negative attributes (see Table 6). The results reveal that there are no gender differences in the Saudi sample's presentation of their positive attributes (χ2=.043, p=.979) or minimization of their negative attributes (χ2= .068, p=.967). While previous studies have found that men are more strategic in presenting their socio-economic status and some personality traits than women and that women are more strategic in presenting their physical attributes than men (e.g. Hall, Park, Song, and Cody 2010; Haferkamp, Eimler, Papadakis, & Kruck 2012), all studies have confirmed that both genders are strategic in their self-presentation online. Such a finding is in line with the current result that male and female users are equally selective.

Table 6. Gender Differences in Selective Self-presentation

Variable		Females (N =134)	Males (N = 168)	Chi-square
		N (%)	*N (%)*	
positive attributes	Few	30 (22.4%)	39 (23.2%)	
	Some	71 (53.0%)	89 (53.0%)	χ2 = .043, p=.979
	Much	33 (24.6%)	40 (23.8%)	
negative attributes	Few	30 (22.4%)	39 (23.2%)	
	Some	73 (54.5%)	89 (53.0%)	χ2 = .068, p=.967
	Much	31 (23.1%)	40 (23.8%)	

The variable of users' tribe of origin was examined through the usage of the chi-square test of associations and its results are presented in Table 7. The results show that Saudis in the sample do not differ in presenting their positive attributes ($\chi2$= 5.217, p=.074), or deemphasizing negative attributes ($\chi2$= 4.160, p=.125) according to their tribe of origin. Previous studies suggest that ethnic group identity affects a person's self-presentation. For example, a study by Berinsky (2004) found that being black correlates positively with some aspects of self-presentation. Murry, Berkel, Brody, Miller, & Chen (2009) also found that racial and ethnic socializations were linked with some aspects of self-presentation. Based on social exchange theory, the demand for some qualities, including ethnic group identity, differs based on the marriage market (Sahib, Koning, & Witteloostuijn, 2006; Jakobsson & Lindholm,2014). Both tribes of origin seem to be required in the Saudi marriage market, which does not put members of one type under more stress to be strategic in presenting their positive attributes and minimizing the negative ones than the other tribe of origin.

Table 7. Tribe of Origin Differences in Selective Self-presentation

Variable		Qabily	Hadari	Chi-square
		N (%)	*N (%)*	
positive attributes	Few	30 (21.3%)	39 (24.2%)	
	Some	84 (59.6%)	76 (47.2)	χ2 = 5.217, p=.074
	Much	27 (19.1%)	46 (28.6%)	
negative attributes	Few	30 (21.3%)	39 (24.2%)	
	Some	84 (59.6%)	78 (48.4%)	χ2 = 4.160, p=.125
	Much	27 (19.1%)	44 (27.4%)	

A chi-square test of associations was used to determine whether Saudis differ in selective self-presentation according to their economic status (see Table 8). The results show that there is no significant association between income level and being selective in presenting positive attributes ($\chi2$=9.233, p=.683) and deemphasizing negative attributes ($\chi2$=9.776, p=.680). Reviewing the previous literature shows that few studies have found a relationship between income and self-presentation. For instance, a study conducted by Hall, Park, Song, & Cody (2010) found that income level correlates positively with some aspects of self-presentation. However, Saudi Arabia is one of the wealthiest countries in the world and the majority of its population is considered middle class (Al-Khateeb, 2008). In addition, Saudi young people are financially dependent on their fathers until they get married. Being raised in such condition could explain why Saudis' focus on self-presentation is not affected by their income levels.

Table 8. Income Level and Selective Self-presentation

Variable		None	<SA 1,500	SA 1,501 – 3,999	SA 4,000 – 6,999	SA 7,000 – 9,999	SA 10,000 – 14,999	SA15,000 – 20,000	Chi-square
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
positive attributes	Few	16 (18.6%)	8 (33.3%)	9 (15.0%)	16 (25.0%)	10 (29.4%)	5 (23.8%)	5 (38.5%)	χ2 = 9.233, p=.683
	Some	49 (57.0%)	12 (50.0%)	34 (56.7%)	32 (50.0%)	18 (52.9%)	11 (52.4%)	4 (30.8%)	
	Much	21 (24.4%)	4 (16.7%)	17 (28.3%)	16 (25.0%)	6 (17.6%)	5 (23.8%)	4 (30.8%)	
negative attributes	Few	16 (18.6%)	8 (33.3%)	9 (15.0%)	16 (25.0%)	10 (29.4%)	5 (23.8%)	5 (38.5%)	χ2= 9.776, p=.680
	Some	50 (58.1%)	12 (50.0%)	35 (58.3%)	32 (50.0%)	18 (52.9%)	11 (52.4%)	4 (30.8%)	
	Much	20 (23.3%)	4 (16.7%)	16 (26.7%)	16 (25.0%)	6 (17.6%)	5 (23.8%)	4 (30.8%)	

The above findings partially confirm the research hypothesis:

H1: Saudi users differ by their demographic variables in their selective self-presentation of their positive and negative attributes on matrimonial websites.

They reveal that relationship status, educational level, and religious variables affect sender's level of selectiveness.

3.1.2 Receiver

Hyperpersonal theory argues that the receiver of a message starts to form a perception about the sender from the latter's non-verbal cues. If the first impression formed about the sender is positive, such a process may take the form of idealization. Therefore, this section answers the research question and tests the hypothesis regarding the factors that influence Saudis' perceptions of other users of matrimonial websites. It also analyses whether the relative influence of these factors varies according to the receivers' demographic variables.

To examine the research hypothesis:

H2: Due to the lack of social cues, the receiver utilizes several strategies to fill in the blanks with regard to missing information about the sender.

A principal components factor analysis with varimax rotation was performed on the responses to items regarding the factors that influence the receiver when forming the impression about the sender, to determine whether these items could be considered one or more sub-strategies and provide maximal separation of the revealed factors (Thompson, 2004). As seen in Table 9, four factors were extracted with eigenvalues > 1, with strong factor loadings (> .5) for each questionnaire item, cumulatively explaining 61.9% of the variance. Factor 1 included five items concerning the sender's compatibility with social norms, explaining 21.6% of the variance. Factor 2, explaining 15.8% of the variance, included four items concerning the sender's writing style. Factor 3, explaining 14.4% of the variance, included three items concerning the sender's non-verbal cues. Factor 4, with three items concerned with the sender's timing of being online, explained 10.0% of the variance.

Table 9. Factor Analysis (Rotated Component Matrix) of Items Measuring Impression Formation of the Receivers

Item	Factor Loadings (> .5)			
	Factor 1	Factor 2	Factor 3	Factor 4
Choosing a sexy photo for the member	.975			
Choosing a sexy name for the member	.975			
Sexual indications	.965			
Displaying the member's real first name	.955			

Item	Factor Loadings (> .5)			
	Factor 1	Factor 2	Factor 3	Factor 4
Displaying the member's family name	.955			
Spelling mistakes in writing sentences		.897		
Simple expressions		.897		
Grammar mistakes		.745		
Awkward sentences		.597		
Adding the member to the favourite list			.975	
Knowing that the member has visited the profile			.975	
Receiving smiley faces			.975	
Sending a private message late at night				.790
Last seen time				.790
Duration of time taken to reply				.534
Eigenvalue	4.76	3.47	3.18	2.20
% of Variance Explained	21.6	15.8	14.4	10.0
Cumulative %	21.6	37.4	51.8	61.9

Beyond constructing a quantitative tool to measure how the factors influence the receiver's perception of the impression formed by sender, the current research contributes to hyper personal theory in that it classifies the social cues into four distinct factors. It also provides an understanding of the order of importance of each factor to the Saudi users of matrimonial websites. One of the limitations of previous hyper personal studies is that they mainly depended on qualitative data, which does not provide a clear ranking of social cues factors (e.g., Heino, Ellison, & Gibbs, 2005; Whitty, 2008). The current result, on the other hand, reveals that the most important factor that influences Saudi matrimonial website users when forming an impression about senders is the extent to which their online behaviours are in line with Saudi social norms. Although matrimonial website users may be viewed as radical people who escape from the traditional methods of finding a spouse, this result proves that they do not totally challenge their social norms when searching for a future spouse through this online method. On the contrary, these social norms are their main criterion when forming impressions about potential spouses.

The first factor includes first name, family name and sexual indications. For the first name, previous studies indicate that online dating users conceal their real names and use nicknames rather than real names (e.g., Ellison, Hancock, & Toma, 2011; Whitty, 2010). While Saudi users of matrimonial websites also use nicknames rather than their real names, they do not accept the usage of sexy names within online community. As family names are considered an indicator of the user's tribe of origin, users' opinions vary as to whether or not to display the family name, a form of identifiable information (Aljasir, 2015). While users can exchange profile photos within the website, sexy photos are unacceptable among Saudis as sexiness contradicts Saudi social norms. All of this may explain why this is the most important factor that influences Saudi matrimonial website users when forming an impression about senders.

The second most significant factor influencing Saudi matrimonial website users' impressions concerns the sender's writing style. As written text is the primary means of communication in an online setting, Saudi users of matrimonial websites seem to be highly concerned about text cues, including the spelling of words, the grammatical construction of sentences, and the complexity of sentences. While some previous studies have mentioned the importance of some of these factors in affecting online daters' impressions (e.g., Whitty, 2008; Farrer & Gavin, 2009), no previous study, to the researchers' knowledge, has revealed the detailed items concerning the writing style of the sender. The importance of this factor shows the extent to which Saudis value other members' writing styles in evaluating them.

The third factor relates to senders' non-verbal cues, such as visiting the profile of the receiver, or using the 'favorite' feature and emoticons. Previous studies also show that online users try to seize any information about other members, even the non-verbal ones, to construct an image about them (Long, 2010). The last factor concerns timing, including items related to the time the sender has seen or sent a message to the receiver as well as the time

the sender takes to reply to private messages. While Saudi users of matrimonial websites take the timing factor into consideration when forming an impression about a potential spouses, this factor influences them the least. Since previous studies focused on the receiver as being strategic when forming an impression online about the sender and did not cover the factors that might have influenced such an impression (e.g. Whitty, 2008; Vasalou & Joinson, 2009; Ellison, Hancock, & Toma, 2011), this research contributes to the literature by showing the ranking of four factors in affecting the receiver's impression of the sender.

Given that the current research hypothesizes that the influence of the receivers' factors differs according to their demographic variables, it investigates whether there are relationships between age, gender, tribe of origin, relationship status, level of education, income level, and religiosity and these factors when forming a perception about other members of matrimonial websites. The results reveal that four relationships out of these seven relationships were significant and three relationships were not.

This section answers the research question and tests the hypothesis regarding the influence of the receivers' factors that could differ according to their demographic variables. One-way Analyses of Variance (ANOVAs) confirmed that there were significant relationships between gender and the influence of the receivers' factors in the overall score (F=52.716, p=.000) and in the four factors (see Table 10), with men scoring higher than women (68.3. vs. 65.2). There are also significant differences in the Social Norms dimension, with men scoring higher than women (11.6 vs. 8.2; F=220.908, p=.000). However, it should be noted that the differences seen in the overall scores are driven by the differences observed in Social Norms. The restrictions on women' behaviors in offline Saudi life seem to have been transferred to online settings. Men as receivers are more concerned with the extent to which women as senders are following the social norms in their online behaviors. To test the normality, Shapiro-Wilk test was used. The result shows that the p-value is 0.761 for the overall score on receiver scale and thus it could be concluded that the data comes from a normal distribution. Therefore, the assumption of normality has been met for this sample.

Table 10. Gender and the Factors that Influence the Receiver's Impression Formation

Variable		Females	Males	ANOVA
Overall Score	Mean	65.23	68.32	F = 52.716, p =.000
	SD	(3.77)	(3.60)	
Writing style of the sender	Mean	19.13	19.35	F = .757, p = .385
	SD	(2.22)	(2.12)	
Non-verbal cues about the sender	Mean	17.94	17.98	F = .059, p = .808
	SD	(1.50)	(1.47)	
Time of the sender being online	Mean	19.66	19.67	F = .013, p = .909
	SD	(1.20)	(1.20)	
Sender's compatibility with social norms	Mean	8.23	11.60	F = 220.908, p = .000
	SD	(2.03)	(1.87)	

One-way Analyses of Variance (ANOVAs) were used to evaluate whether or not there were significant relationships between the receiver's level of education and the factors that influence their perception in the overall score and in the four factors. As seen in Table 11, there are significant differences in the influence of the non-verbal cues factor (F=4.469, p=.002) and sender's writing style factor (F=6.860, p=.000) on impression formation depending on the receivers' levels of education. Previous studies regarding non-verbal cues in offline settings reveal that people do not differ in forming impressions about others depending on their level of education; however, the current study shows that in online settings, those with higher education are more influenced by the non-verbal cues factor (Kirouac & Dore, 1985). Being able to judge others according to their writing style also requires an adequate level of education. This may explain why users with higher levels of education are more affected by this factor when forming an impression about potential spouses.

Table 11. Level of Education and the Factors that Influence the Receiver's Impression Formation

Variable		Elementary school	Middle school	High school	Bachelor	Post-graduate	ANOVA
Overall Score	Mean	67.67	67.18	66.89	66.55	64.87	F = 1.456, p =.216
	SD	(2.89)	(3.56)	(3.67)	(4.30)	(3.31)	
Writing style of the sender	Mean	7.78	9.09	10.03	9.89	14.00	F = 6.860, p=.000
	SD	(2.34)	(2.61)	(2.52)	(2.45)	(1.73)	
Non-verbal cues about the sender	Mean	16.00	17.65	17.83	18.04	18.74	F = 4.469, p = .002
	SD	(0.00)	(1.53)	(1.55)	(1.31)	(1.29)	
Time of the sender being online	Mean	19.00	20.18	19.62	19.62	19.57	F = 1.571, p = .182
	SD	(0.00)	(0.98)	(1.19)	(1.29)	(0.90)	
Sender's compatibility with social norms	Mean	18.67	19.24	19.19	19.20	19.87	F = .557, p = .694
	SD	(1.16)	(1.71)	(2.10)	(2.42)	(1.01)	

The relationships between the receivers' levels of religiosity and the factors that influence their perception in the overall score and in the four factors were measured using One-way Analyses of Variance (ANOVAs). As seen in Table 12, there is a significant relationship between the receiver's religiosity and the overall scores (F=0.482, p=.001) and the score of caring about the sender's compliance with the social norms factor (F=0.839, p=.000), with respondents in the highly religious groups scoring higher in both. It should be noted that the differences in the overall scores are driven by the differences observed in Social Norms. According to Al-Lily (2011), religious instructions and social norms overlap in Saudi Arabia and there is continuous debate among Saudi liberals and conservatives about how to distinguish between religious and social issues. However, this debate does not stop religious people from protecting social norms as part of their religious identity. This may explain why highly religious users are affected more by the social norms factor than less religious groups when searching for a future spouse.

Table 12. Religiosity and the Factors that Influence the Receiver's Impression Formation

Variable		Highly religious	Moderate religious	Religious to a small extent	Not religious	ANOVA
Overall Score	Mean	66.64	66.50	67.28	66.00	F = .482, p =.001
	SD	(3.26)	(4.02)	(3.85)	(6.00)	
Writing style of the sender	Mean	19.43	19.15	19.69	19.14	F = .760, p = .517
	SD	(1.10)	(2.33)	(1.52)	(2.91)	
Non-verbal cues about the sender	Mean	17.86	18.03	17.87	16.86)	F = 1.549, p = .202
	SD	(1.58)	(1.48)	(1.30)	(1.53)	
Time of the sender being online	Mean	20.00	19.64	19.69	19.14	F = 1.218, p = .303
	SD	(0.98)	(1.21)	(1.30)	(0.90)	
Sender's compatibility with social norms	Mean	10.86	10.26	9.68	9.34	F = .839, p = .000
	SD	(2.60)	(2.44)	(2.56)	(2.86)	

One-way Analyses of Variance (ANOVAs) were used to evaluate whether or not there were significant relationships between the receivers' relationship status and the factors that influence their perception in the overall score and in the four factors (see Table 13). The results reveal that relationship status significantly affects receivers' concerns about senders' compliance with social norms (F=7.909, p=.000), with single people showing the highest score. In Saudi traditions, singles are more concerned about their reputation. In particular, women need to protect their honour (*Sharaf*) and (*'ird*) to avoid scandal (*Fadiha*) (Kulwicki, 2002). Therefore, female singles are concerned about how men approach them, to protect their reputation. Single men are also concerned about their

reputation, as it is not acceptable for them to be known as playboys (Zoepf, 2008). This may explain why singles are the ones who are most affected by the social norms factor when forming an impression about a potential spouse.

Table 13. Relationship Status and the Factors that Influence the Receiver's Impression Formation

Variable		Single	Married	Divorced	Widow/Widower	ANOVA
Overall Score	Mean	66.83	65.46	66.69	66.18	F = 1.271, p =.284
	SD	(3.83)	(4.03)	(4.60)	(3.22)	
Writing style of the sender	Mean	19.22	19.40	19.00	20.00	F = .984, p = .401
	SD	(2.03)	(2.78)	(2.48)	(0.79)	
Non-verbal cues about the sender	Mean	18.01	18.26	17.70	17.71	F = 1.242, p = .295
	SD	(1.50)	(1.07)	(1.61)	(1.53)	
Time of the sender being online	Mean	19.67	19.83	19.61	19.41	F = .504, p = .680
	SD	(1.28)	(1.01)	(1.07)	(1.12)	
Sender's compatibility with social norms	Mean	10.37	7.97	9.92	9.00	F = 7.909, p = .000
	SD	(2.31)	(1.81)	(2.64)	(2.42)	

As Spearman's rho coefficient is used to measure the correlation between two variables, it was used to determine if there were significant relationships between the receivers' ages and the factors that influence their perceptions in the overall score and in the four factors. It has been used rather than Pearson's correlation coefficient, because Spearman's rho operates on ordinal variables and does not entail normally distributed variables measured at the scale/interval level. As seen in Table 14, there is no significant relationship between the receiver's age and the overall score (r = -.002, p= .392) and each of the four factors (r = .049, p = .392; r = .086, p = .137; r = 008, p = .883; r = -.052, p = .364). Age does not appear to play a role in affecting the way users perceive senders. This means that age as a variable does affect either sender or receiver.

Table 14. Age and the Factors that Influence the Receiver's Impression Formation

	Variable	Spearman's rho	P
	Overall Score	-.002	.392
	Writing style of the sender	.049	.392
Age	Non-variable cues about the sender	.086	.137
	Time of the sender being online	.008	.883
	Sender's compatibility with social norms	-.052	.364

One-way Analyses of Variance (ANOVAs) revealed that there were no significant relationships between the receivers' tribe of origin and the factors that influence their perception in the overall score (F = .664, p =.416) and in the four factors (F = .137, p = .712; F = 1.553, p = .214; F = .003, p = .953; F = .686, p = .408). The results are presented in Table 15. While it is understandable that the tribe of origin may not be affected by the writing style and other cues, it was expected that users from different tribes would be affected differently by the social norms factor, given that previous studies showed that Saudis of Qabily origin are more concerned about following social norms than Hadari (Samin, 2012). However, the result reveals that there were no differences among Qabily and Hadari related to the social norms factor.

Table 15. Tribes of Origin and the Factors that Influence the Receiver's Impression Formation

Variable		Qabily	Hadari	ANOVA
Overall Score	Mean	66.32	66.73	F = .664, p =.416
	SD	(4.16)	(3.90)	
Writing style of the sender	Mean	19.31	19.22	F = .137, p = .712
	SD	(2.37)	(2.08)	
Non-variable cues about the sender	Mean	17.80	18.03	F = 1.553, p = .214
	SD	(1.51)	(1.47)	
Time of the sender being online	Mean	19.66	19.67	F = .003, p = .953
	SD	(1.17)	(1.22)	
Sender's compatibility with social norms	Mean	9.54	9.81	F = .686, p = .408
	SD	(2.50)	(2.61)	

One-way Analyses of Variance (ANOVAs) showed that there were no significant relationships between the receiver's income level and the factors that influence their perception in the overall score (F = 1.456, p =.216) and in the four factors (F = .557, p = .694; F = 4.469, p = .302; F = 1.571, p = .182; F = 6.860, p=.420), as presented in Table 16.

Table 16. Level of Income and the Factors that Influence the Receiver's Impression Formation

Variable		None	<SA 1,500	SA 1,501 – 3,999	SA 4,000 – 6,999	SA 7,000 – 9,999	SA 10,000 – 14,999	SA15,000 – 20,000	ANOVA
Overall Score	Mean	67.94	66.96	66.90	65.92	64.59	65.24	66.54	F = 1.456, p =.216
	SD	(4.04)	(3.46)	(3.96)	(4.15)	(2.77)	(3.94)	(3.57)	
Writing style of the sender	Mean	19.13	19.79	19.03	19.58	18.62	19.71	19.30	F = .557, p = .694
	SD	(2.05)	(1.25)	(2.41)	(2.44)	(2.41)	(1.87)	(0.63)	
Non-variable cues about the sender	Mean	18.13	18.04	17.97	17.97	17.59	17.62	18.23	F = 4.469, p = .302
	SD	(1.36)	(1.55)	(1.46)	(1.53)	(1.52)	(1.69)	(1.54)	
Time of the sender being online	Mean	19.87	19.71	19.62	19.56	19.41	19.43	20.00	F = 1.571, p = .182
	SD	(1.03)	(1.16)	(1.30)	(1.27)	(1.33)	(1.25)	(1.08)	
Sender's compatibility with social norms	Mean	10.81	9.42	10.28	8.81	8.97	8.48	9.00	F = 6.860, p=.420
	SD	(2.45)	(2.26)	(2.46)	(2.47)	(2.76)	(2.27)	(1.63	

Thus, the research hypothesis:

H3: The influence of the receivers' factors differs according to their demographic variables.

has been partially confirmed. The influence of the receivers' factors on Saudi users of matrimonial websites differs according to their gender, level of education, relationship status, and religiosity. They do not, however, differ according to their age, tribe of origin, or income level.

3.1.3 Channel

According to early Computer Mediated Communication studies (Sproull & Kiesler, 1986; Reicher, Spears, & Postmes, 1995), online channels are not capable of conveying as much rich information as face-to-face

communication due to their lack of social cues. However, it could be argued that in societies that apply gender segregation in almost all aspects of life and discourage direct eye contact and other cues between sexes, the conditions are different. Therefore, this section answers the research question: What are Saudi users' perceptions of the effectiveness of using a matrimonial website as a channel to find a spouse? It also examines the gender differences regarding the capability of online channels to convey rich information in comparison with face-to-face communication. Table 17 summarizes the extent to which the participants view online matrimonial websites as an effective channel for finding a spouse. The results reveal that all scores are very high, ranging from 6 to 7, which means that all of the responses fell in the top categories of agreement with the effectiveness of using matrimonial websites for finding a spouse.

Table 17. Evaluation of the Effectiveness of Online Matrimonial Websites as a Channel to Find a Spouse

Item	Minimum	Maximum	Mean	Std. Deviation
Make the interaction with the potential spouse possible	6.00	7.00	6.7881	.40935
Make the interaction with the potential spouse comfortable	6.00	7.00	6.7881	.40935
Make the interaction with the potential spouse easier	6.00	7.00	6.7848	.41167
Enable me to overcome cultural and social restrictions	6.00	7.00	6.7881	.40935
Enable me to obtain information directly from the potential spouse	6.00	7.00	6.7881	.40935
Enable me to have more time to examine the compatibility of a potential spouse	6.00	7.00	6.7881	.40935
Enable me to provide more information about myself	6.00	7.00	6.7881	.40935
I can view other members' profiles or reply to their messages in my own time frame	6.00	7.00	6.7881	.40935
I have more time to examine the possibility of compatibility with a potential spouse	6.00	7.00	6.7881	.40935

Gender was examined to test the research hypothesis:

H4: Saudi users differ by gender in their perceptions of the effectiveness of using a matrimonial website as a channel to find a spouse.

In order to test this hypothesis, the overall evaluation score was computed by adding all nine channel items and male and female users' scores were compared using independent sample t-tests to reveal any gender differences as this test is usually used to compare the sample mean of two independent groups. As seen in Table 18, there are significant differences in how men and women evaluate the matrimonial but only at a 10% significance level, very small as shown by the means of each group (61.4 vs. 60.6, t=-1.831, p=.068). This result contributes to the Computer Meditated Communication debate regarding the richness of online settings in conservative, segregated societies, as it shows that online communities can provide more information for users who belong to such societies than their offline lives. That means the nature of the online message (i.e., one of the main elements of the communication process) in segregated societies is entirely different from exchange messages in Western context. The written message is a valuable source of information for Saudis. To test the normality, Shapiro-Wilk test was used. The result shows that the p-value is 0.252 and thus it could be concluded that the data comes from a normal distribution. Therefore, the assumption of normality has been met for this sample.

Table 18. Gender Differences in the Evaluation of the Effectiveness of Online Matrimonial Websites as a Channel to Find a Spouse

Variable	Females	Males	Statistic
	M (SD)	M (SD)	t-test, p-value
the effectiveness of online matrimonial websites as a channel to find a spouse	60.65 (3.97)	61.44 (3.41)	t = -1.862, p = .068

3.2 Mate Preference Strategies of Saudi Matrimonial Website Users

According to Buss & Schmitt (1993), men strategically seek the following characteristics for long-term mating relationships: paternity confidence, commitment, female reproductive value, gene quality, and good parenting skill. By contrast, the authors proposed that women seek the following characteristics: investment of resources, commitment, physical protection, gene quality, and good parenting skills (Buss & Schmitt, 1993). However, there are distinctive features of Saudi culture that may affect their strategies of mate preferences when looking for potential spouse. Therefore, this section answers the research question: What are Saudi men's and women's mate preferences when looking for a spouse? It also examines the research hypotheses regarding the similarities and differences between Saudi men's and women's preferences and the preferences described by Buss & Schmitt (1993). This section also presents the relationship between demographic variables and men's and women's preferences.

3.2.1 Mate Preferences Factors

In sexual strategies theory, Buss & Schmitt (1993) indicate men have five preferences in a long-term mating context: paternity confidence (measured by the Loyal, Honest, Good moral character, and Chastity items), commitment (measured by the Wants commitment and Wants children items), female reproductive value (the Good looking, Physically attractive, and In shape items), gene quality (measured by the Tall, Intelligent, and Healthy items) and good parenting skill (measured by the Likes children, Good housekeeper, Good cook, and Home-oriented items).

A principal components factor analysis with varimax rotation was performed on the responses regarding mate preferences reported by the male participants in the questionnaire. As seen in Table 19, seven factors were extracted with eigenvalues > 1, and strong factor loadings (> .5) for each questionnaire item, cumulatively explaining 75.7% of the variance. Questionnaire items with weak factor loadings <.5 were excluded because they contributed little to the variance in each factor. Factor 1, named 'paternity confidence and commitment', explaining 23.7% of the variance, included Honest, Wants commitment, Good moral character, Loyal, Chasity, and Wants children. Factor 2, named 'good parenting skills', explaining 14.7% of the variance, included Good housekeeper, Good cook, Likes children, and Home-oriented. Factor 3, named 'female reproductive value', explaining 8.6% of the variance, included In shape, Physically attractive, and Good looking. Factor 4, named 'gene quality', explaining 8.4% of the variance, included Intelligent, Healthy and Tall. Factor 5, named 'family background', explaining 7.7% of the variance, included Having a tribal origin and Good family background. Factor 6, named 'religion', explaining 7.1% of the variance included Praying, Religious point of view, and Religious look. Factor 7 named 'profession', explaining 5.1% of the variance, included College graduate and Professional Degree.

Table 19. Factor Analysis Solution (Rotated Component Matrix) of Mate Preferences Reported by Male Participants

Item	Loadings (> .5)						
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
2. Honest	.948						
7. Wants commitment	.943						
3. Good moral character	.938						
1. Loyal	.934						
4. Chasity	.854						

Item	Loadings (> .5)						
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
8. Wants children	.819						
10. Good housekeeper		.942					
11. Good cook		.942					
9. Likes children		.935					
12. Home-oriented		.935					
14. In shape			.960				
6. Physically attractive			.960				
5. Good looking			.787				
16. Intelligent				.883			
13. Healthy				.842			
15. Tall				.586		.	
27. Having a tribal origin					.976		
19. Good family background					.969		
25. Praying						.759	
23. Religious point of view						.644	
24. Religious look						.536	
17. College graduate							.709
18. Professional Degree							.577
Eigenvalue	6.16	3.83	2.25	2.19	1.99	1.84	1.43
% of Variance Explained	23.7	14.7	8.6	8.4	7.7	7.1	5.1
Cumulative %	23.7	38.4	47.0	55.5	63.2	70.2	75.7

The above table shows that there are differences between Buss & Schmitt's (1993) proposed mate preferences and Saudis' preferences. While Buss & Schmitt's (1993) first factor only includes paternity confidence items, Saudi men treat paternity confidence and commitment as one factor, which means that both of them occupy the top priority rank. This result is compatible with the important norms and values in Saudi culture. In particular, the values of *Sharaf* and *'ird*,which are associated with men's honour, may lead them to be eager to find a spouse committed to the marriage relationship. The second factor, good parenting skills, includes items related to women's typical role in Saudi society, which may explain why caring for the house and children are at the top of men's priorities in this sample, whereas Buss & Schmitt (1993) ranked this factor last. The gene quality factor and female reproductive value factor, concerned with the attractiveness and fertility of women, occupied the same level of importance for both Saudi men and Buss & Schmitt's (1993) study. The fifth factor for Saudi men relates to family background, an important consideration in Saudi culture as it is considered an indicator of the family's reputation, including its origin and economic status. The Saudi courtship norms literature stresses the importance of women's family backgrounds. Although religion has a low rank among other factors, it appears as an independent factor in Saudi men' strategies. Such a finding is in line with Islamic values in mate preferences, which stress having a religious bride in order to have a long-standing marriage life (Al-Anzi, 2009). The last factor concerns women's profession. The low rank this factor occupies confirms that women's typical role among Saudi men is to take care of children and the home (Aljuhani, 2005; Mirah,&Masa'deh, 2014). However, the fact that it is an independent factor means that it is still a priority in men's mate preferences.

Focusing on women' preferences in long-term mating contexts, Buss & Schmitt (1993) proposed that women hold six mate preferences: ability to invest (measured by College graduate and Professional Degree, Good family background, and Good earning capacity items), willingness to invest (Generous item), commitment (measured by Wants commitment and Wants children items), physical protection (measured by Physically Strong item), gene quality (measured by Tall, Intelligent, and Healthy items), and good parenting skills (measured by Likes children,

Good housekeeper, Good cook, and Home-oriented items).

A principal components factor analysis with varimax rotation was conducted on the responses regarding mate preferences reported by the female participants in the questionnaire. As seen in Table 20, seven factors were extracted with eigenvalues > 1, and strong factor loadings (> .5) cumulatively explaining 86.3% of the variance. Factor 1, named 'able and willing to invest', explaining 27.5% of the variance, included College graduate, Professional Degree, Good earning capacity, Good family background, and Generous. Factor 2, named 'religion', explaining 16.4% of the variance, included Religious look, Praying, Religious point of view, and Highly religious. Factor 3, named 'gene quality', explaining 10.2% of the variance, included Healthy, Intelligent, and Tall. Factor 4, named 'morality', explaining 9.2% of the variance, included Good moral character and Honest. Factor 5, named 'commitment', explaining 8.3% of the variance, included Wants commitment and Wants children. Factor 6, named 'protection', explaining 8.0% of the variance, included Physically strong and Having a tribal origin. Factor 7, named 'good parenting skills', explaining 7.9% of the variance, included Likes children and Home-oriented.

Men's capability and willingness to invest seem to be linked from Saudi women's point of view, which may explain why these two factors have been merged into one factor for them. This first factor also confirms the importance of the typical male role in the Saudi marriage institution of being responsible for the house's expenses (Aljuhani, 2005). Interestingly, religion was the second factor, which indicates that religion has priority in Saudi women's lists. Such a finding is in line with the Islamic instructions regarding mate preferences, which assert that religiosity should have the most priority among the characteristics of a potential spouse (Al-Anzi, 2009). The commitment factor in Buss & Schmitt's (1993) list has been replaced by the religion factor in Saudi women's list of priorities. This could be because Saudi women believe that looking for a religious male will guarantee his commitment, as Islamic instructions do not tolerate deception or infidelity (Aljuhani, 2005). Gene quality ranked third among the emergent factors, which means that this strategy a similar priority in the Saudi women's list as in Buss & Schmitt's (1993) list, where it was ranked fourth. Morality emerged as an independent factor in Saudi women's list and ranked fourth, followed by commitment. Such a finding shows the keenness of Saudi women to have a stable marriage life. Interestingly, protection, including both physical and psychological protection, appeared as an independent factor. It seems that for women, having a tribal origin provides a kind of protection, as the family reputation and male's family name means a great deal in Saudi society (Samin, 2008). Although good parenting skills ranked last, the existence of this factor means that it has become one of the female mate preferences. It seems that sharing the responsibility at home is starting to be part of the typical role of men in Saudi society and one of the characteristics that women are looking for in their future husbands.

Table 20. Factor Analysis Solution (Rotated Component Matrix) of Mate Preferences Reported by Female Participants

Item	Factor Loadings (> .5)						
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
17. College graduate	.996						
18. Professional Degree	.996						
20. Good earning capacity	.996						
19. Good family background	.996						
21. Generous	.996						
24. Religious look		.885					
25. Praying		.885					
23. Religious point of view		.885					
26. Highly religious		.882					
13. Healthy			.967				
16. Intelligent			.967				
15. Tall			.839				
3. Good moral character				.904			

Item	Factor Loadings (> .5)						
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
2. Honest				.904			
7. Wants commitment					.903		
8. Wants children					.897		
22. Physically Strong						.938	
27. Having a tribal origin						.938	
9. Likes children							.968
12. Home-oriented							.968
Eigenvalue	7.14	4.26	2.63	2.38	2.15	2.08	2.04
% of Variance Explained	27.5	16.4	10.2	9.2	8.3	8.0	7.9
Cumulative %	27.5	43.9	53.9	63.1	71.4	79.4	87.3

The factor analysis indicated that Saudi men and women differed in their mate preferences. Although the first four factors (Factors 1, 2, 3, and 4) explained most of the variance (> 50%) in both of their mate preference rankings, the items within each of these four factors were different for men and women. While the most important mate preference factors for men are paternity confidence and commitment, good parenting skills, female reproductive value and gene quality; the most important factors for women are ability and willingness to invest, religion, gene quality and morality. Whereas family background, religion, and profession were the least important factors for Saudi men, Saudi women were least concerned about commitment, protection, and good parenting.

Thus, examining the research hypothesis:

H5: Saudi matrimonial websites users have different mate preferences from those described by Buss and Schmitt (1993)

Reveals that the mate preferences proposed by Buss & Schmitt (1993) appear to be partly applicable in the Saudi context and thus this set of hypotheses have been partially confirmed. The five preferences reported by Saudi men in the marriage context (paternity confidence, commitment, female reproductive value, gene quality, and good parenting skill) were all described by Buss and Schmitt. However, it seems that Saudi men also have three further priorities (family background, religion, and profession). In addition, the six preferences defined by Buss & Schmitt (1993) for women in a long-term mating context (ability to invest, willingness to invest, commitment, physical protection, gene quality and good parenting skills) were all expressed by Saudi women. Saudi women also seem to have two further priorities (morality and religion). This finding contributes to the theories on mate preferences in general and sexual strategies theory in particular as it advances the understanding of mate preferences in an Islamic context.

3.2.2 Strategic Mate Preferences and Demographic Variables

To test the hypothesis that Saudi users differ in their strategic mate preferences according to their demographic variables, this section presents the results and discussion of the relationships between the demographic variables and the mate preferences of men and women.

Spearman's rank correlation was used to determine whether there is a relationship between age and preferences. As seen in Table 21, there is a strong positive correlation between age and paternity confidence and commitment in men's mate preferences rankings (r=.517, p=.000) and a weak positive correlation between age and reproductive value in men's mate preferences (r=-210, p=.006). There is a positive strong correlation between age and the commitment in women's mate preferences ranking (r=.729, p=.000).

Table 21. Relationship between Age and Mate Preferences

Males' mate preferences strategies	Spearman's rho	P
Paternity confidence and commitment	.517**	.000
Good parenting skills	.056	.475
Female reproductive value	.210**	.006
Gene quality	.095	.220
Family background	.102	.189
Religion	.123	.112
Profession	.017	.823
Females' mate preferences strategies		
Able and willing to invest	-.120	.168
Religion	.012	.894
Gene quality	.003	.974
Morality	-.073	.402
Commitment	.729**	.000
Protection	-.018	.834
Good parenting skills	-.045	.609

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

From the above table, it seems that commitment begins to take first priority as people get older, for both men and women. The importance of other qualities starts to diminish in comparison with commitment. Such a finding is in line with the result of an American study conducted by McWilliams & Barrett (2014) among older online daters, which reveals that men seek committed relationships and women desire companionship. Older Saudi men are also concerned with reproductive value, which means that beauty and female fertility maintain their importance for older Saudi men.

An independent sample T-test (see Table 22) revealed a significant relationship between tribe of origin and family background and men's mate preferences (t=-5.823, p=.000), with the Qabily scoring higher than Hadari. There are also significant differences in women's preference for protection between tribes (t=-13.3, p=.000), with the Qabily scoring higher in the importance of commitment than the Hadari. To test the normality, Shapiro-Wilk test was used. The result shows that the p-value is 0.874 for the overall score on the males' mate preferences strategies and 0.63 for the overall score on the males' mate preferences strategies. Thus, it could be concluded that the data comes from a normal distribution. Therefore, the assumption of normality has been met for this sample.

Table 22. Tribes of Origin and Mate Preferences

Males' mate preferences strategies		Qabily	Hadari	T-test, p-value
Paternity confidence and commitment	Mean	36.07	36.29	t = 1.026, p = .307
	SD	(1.98)	(1.55)	
Good parenting skills	Mean	24.71	24.88	t = -.536, p = .593
	SD	(2.04)	(1.76)	
Female reproductive value	Mean	19.29	19.39	t = -.409, p = .683
	SD	(1.847)	(1.26)	
Gene quality	Mean	17.61	17.47	t = .340, p = .734
	SD	(2.40)	(2.47)	

Males' mate preferences strategies		Qabily	Hadari	T-test, p-value
Family background	Mean	8.12	5.67	t = -5.823, p = .000
	SD	(2.39)	(2.67)	
Religion	Mean	14.27	14.54	t = -1.184, p = .238
	SD	(1.34)	(1.36)	
Profession	Mean	9.122	9.08	t = .154, p = .878
	SD	(2.19)	(1.61)	
Females' mate preferences strategies		Qabily	Hadari	T-test, p-value
Able and willing to invest	Mean	31.26	31.28	t = -.044, p = .965
	SD	(2.60)	(2.50)	
Religion	Mean	17.40	17.14	t = .316, p = .753
	SD	(4.72)	(4.37)	
Gene quality	Mean	16.07	15.84	t = .540, p = .590
	SD	(2.60)	(2.20)	
Morality	Mean	12.45	12.52	t = -.438, p = .662
	SD	(0.97)	(0.79)	
Commitment	Mean	9.53	9.76	t = .547, p = .585
	SD	(2.20)	(2.37)	
Protection	Mean	12.60	9.67	t = -13.279, p = .000
	SD	(1.26)	(1.03)	
Good parenting skills	Mean	9.40	9.47	t = -.354, p = .724
	SD	(0.86)	(0.99)	

This result could be interpreted from two perspectives: the first is to read the result from a Saudi cultural prospective. Saudi tribes vary in their reputation and position in society. While tribes with a high position, based on their density, do not allow their members to get married to Hadari or low-position Qabily, tribes with a low position are more tolerant toward allowing their members to get married to Hadari people. At the same time, Hadari people do not have this kind of restriction (Samin, 2012). *Kafāʾafī l-nasab* or the compatibility in marriage recently appeared as a debatable case that reached the Saudi Supreme Court by Qabily (The Ministry of Justice, 2013). Secondly, this result could be interpreted in light of the homogamy perspective, which adopts the idea that individuals are attracted to the company of people similar to themselves in characteristics such as race because they believe that deep homogamy in values and beliefs should lead to successful partner selection (e.g., Reiss, 1960; Lewis, 1973; Levinger, 1983).

One-way Analyses of Variance (ANOVAs) was used to measure the relationship between the relationship status and the mate preferences of men and women (see Table 23), revealing that there is a significant relationship between relationship status and female reproductive value in men's mate preferences (F=3.145, p=.027), with married men scoring the highest in this strategy.

Table 23. Relationship Status and Mate Preferences

Males' mate preferences strategies		Single	Married	Divorced	Widow/Widower	ANOVA
Paternity confidence and commitment	Mean	36.28	36.45	35.59	35.63	F = 1.561, p = .172
	SD	(2.15)	(3.05)	(2.69)	(1.19)	
Good parenting skills	Mean	24.85	24.34	25.41	25.50	F = 1.760, p = .157
	SD	(1.80)	(2.15)	(1.06)	(1.93)	

Males' mate preferences strategies		Single	Married	Divorced	Widow/Widower	ANOVA
Female reproductive value	Mean	19.39	19.74	18.76	18.38	F = 3.145, p = .027
	SD	(1.19)	(1.26)	(2.07)	(2.77)	
Gene quality	Mean	17.39	18.03	16.76	18.38	F = 1.473, p = .224
	SD	(2.49)	(2.51)	(2.22)	(1.30)	
Family background	Mean	6.02	6.28	6.29	6.50	F = .743, p = .528
	SD	(1.13)	(1.36)	(1.53)	(1.77)	
Religion	Mean	14.62	14.17	14.11	14.25	F = 1.466, p =.226
	SD	(1.39)	(1.01)	(1.79)	(0.89)	
Profession	Mean	9.16	8.65	9.18	9.75	F = 1.130, p =.339
	SD	(1.64)	(1.95)	(1.85)	(2.66)	
Females' mate preferences strategies		Single	Married	Divorced	Widow/Widower	ANOVA
Able and willing to invest	Mean	31.52	--	30.97	30.11	F = 1.663, p =.194
	SD	(2.44)	--	(2.63)	(2.67)	
Religion	Mean	17.11	--	17.59	16.78	F = .197, p = .822
	SD	(4.32)	--	(4.99)	(3.93)	
Gene quality	Mean	15.89	--	16.03	15.67	F = .099, p = .905
	SD	(2.16)	--	(2.68)	(2.60)	
Morality	Mean	12.60	--	12.38	12.00	F = 2.653, p = .174
	SD	(.78)	--	(0.98)	(0.71)	
Commitment	Mean	12.82	--	9.68	8.78	F = 1.411, p = .212
	SD	(0.88)	--	(0.75)	(0.97)	
Protection	Mean	9.55	--	9.68	9.89	F = .120, p =.887
	SD	(2.17)	--	(0.75)	(2.42)	
Good parenting skills	Mean	9.52	--	9.38	9.00	F = 1.391, p =.253
	SD	(0.97)	--	(0.89)	(0.87)	

Married men in the current research are those who are looking for a second wife. Thus, the relationship between looking for a second wife and reproductive values could mean that they are either looking to have children in general, as they may not have before with their first wives, or they are looking to have a specific gender of child, such as looking for boys. They may even want to have beautiful children, as beauty is included in this reproductive value factor. These three choices are in line with Saudi men's beliefs when they looking for a second wife. According to Al-Khateeb (2008), having a boy is very important in Saudi culture. When men feel that they failed to have a boy or to have children in general, most of them resort to a second marriage.

One-way Analyses of Variance (ANOVAs) were used to evaluate whether or not there were significant relationships between the level of education and the mate preferences of men and women. As seen in Table 24, the results show that there are significant relationships between education and men's mate preferences for gene quality (F = 19.529, p = .000), family background (F = 2.828, p = .040) and religion (F = 10.742, p =.000). There are other weaker relationships (10% significance) with the preferences for female reproductive value (F = 2.553, p = .057) and profession (F = 2.420, p =.068). There are significant relationships between education and the following women's mate preferences: ability and willingness to invest (F = 5.073, p =.001), gene quality (F = 6.429, p = .000), morality (F = 3.406, p = .011) and protection (F = 7.351, p =.000).

Table 24. Level of Education and Mate Preferences

Males' mate preferences strategies		Elementary school	Middle school	High school	Bachelor	Post-graduate	ANOVA
Paternity confidence and commitment	Mean	--	37.28	37.47	37.63	37.75	F = .222, p =.881
	SD	--	(2.42)	(3.15)	(2.66)	(2.47)	
Good parenting skills	Mean	--	24.44	24.81	25.00	25.00	F = .396, p = .756
	SD	--	(2.37)	(1.78)	(1.91)	(1.03)	
Female reproductive value	Mean	--	19.00	19.21	19.35	19.94	F = 2.553, p = .057
	SD	--	(0.82)	(1.04)	(1.53)	(1.79)	
Gene quality	Mean	--	16.47	18.55	19.00	19.44	F = 19.529, p = .000
	SD	--	(1.21)	(1.35)	(2.40)	(2.24)	
Family background	Mean	--	5.31	6.00	6.24	6.26	F = 2.828, p = .040
	SD	--	(0.95)	(1.14)	(1.19)	(1.72)	
Religion	Mean	--	13.60	14.26	15.00	15.63	F = 10.742, p =.000
	SD	--	(1.71)	(1.83)	(0.91)	(1.10)	
Profession	Mean	--	8.80	9.06	9.59	9.65	F = 2.420, p =.068
	SD	--	(2.11)	(1.50)	(1.77)	1.84	
Females' mate preferences strategies		Elementary school	Middle school	High school	Bachelor	Post-graduate	ANOVA
Able and willing to invest	Mean	30.33	30.11	30.58	32.00	32.32	F = 5.073, p =.001
	SD	(2.89)	(2.14)	(2.12)	(2.69)	(2.00)	
Religion	Mean	16.83	17.61	17.16	18.33	22.00	F = 1.046, p = .386
	SD	(4.36)	(5.10)	(3.96)	(4.53)	(8.50)	
Gene quality	Mean	14.67	15.00	15.67	16.27	17.78	F = 6.429, p = .000
	SD	(0.58)	(2.51)	(2.32)	(1.81)	(3.21)	
Morality	Mean	12.00	12.28	12.30	12.33	12.80	F = 3.406, p = .011
	SD	(0.00)	(2.50)	(0.84)	(0.86)	(0.58)	
Commitment	Mean	13.33	10.00	11.11	11.75	11.80	F = 1.850, p = .123
	SD	(0.58)	(2.05)	(1.72)	(1.78)	(2.00)	
Protection	Mean	8.59	9.67	9.95	10.33	11.44	F = 7.351, p =.000
	SD	(2.31)	(2.40)	(2.13)	(1.84)	(2.10)	
good parenting skills	Mean	8.67	9.37	9.50	9.61	9.67	F = 0.813, p =.519
	SD	(0.58)	(1.14)	(0.93)	(0.92)	(0.58)	

Awareness of the importance of each mate preference's value seems to increase when the level of education increases. With higher levels of education, both men and women start to have more mate preferences. This result could also be interpreted in light of social exchange theory (Thibaut & Kelley, 1959): the more education members have, the higher their value in the marriage market, which may lead them to raise the qualifications they are looking

for in their potential spouse. Such a finding is consistent with a Russian study conducted by Sahib, Koning, &Witteloostuijn (2006) that found that speaking English well is positively correlated with success in the marriage market.

Spearman's rank correlation was used to determine whether there is a relationship between level of income and mate expectations. As seen in Table 25, there is a negative correlation between income level and men's preference for family background (r=-.161, p=.037), although it is a weak, almost negligible correlation since the index is lower than 0.2. There is a significant negative correlation between income level and women's mate preferences for ability and willingness to invest (r=-.222, p=.010) and protection (r=-.294, p=.001). There is a significant positive correlation between income level and women's preference for commitment (r=.179, p=.038).

Table 25. Relationship between Income Level and Mate Preferences

Males' mate preferences strategies	Spearman's rho	P
Paternity confidence and commitment	.049	.532
Good parenting skills	.072	.357
Female reproductive value	-.030	.698
Gene quality	. -.079	.306
Family background	-.161*	.037
Religion	.052	.499
Profession	.025	.751
Females' mate preferences strategies		
Able and willing to invest	-.222**	.010
Religion	-.106	.224
Gene quality	.006	.944
Morality	.016	.855
Commitment	.179*	.038
Protection	-.294**	.001
Good parenting skills	.019	.830

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

A male with a low income looking for women with a good family background could be interpreted in light of a completion perspective. This perspective is based on the fulfillment of needs principle, in that people search for partners who complement them, fulfill their unfulfilled dreams, or resemble their ideal selves in order to obtain a productive relationship (Winch, 1958). As good family background has a high value in Saudi culture, it seems that Saudi men with low incomes may try to marry women with a higher level of tribe of origin and good economic status. On the other hand, women with low incomes are looking for men who are able and willing to invest, which are considered typical female mate preferences and in line with sexual strategies theory (Buss & Schmitt, 1993). On the contrary, women with high levels of incomes are concerned with commitment and successful relationships rather than men with high incomes. Such a finding is interesting as it shows that when Saudi women are able to spend money on themselves, they start to alter their typical preferences in potential spouses.

One-way Analyses of Variance (ANOVAs) were used to measure the relationship between religiosity and the mate preferences of men and women (see Table 26). The result reveals that there are significant positive relationships between religiosity and men's preferences for religiosity (F=15.937, p=.000). Those highly religious men score higher in religious mate preferences. The non-religious dimension should be disregarded since there is only one subject in that category. As expected, the result reveals that religiosity of women is associated with them seeking religious men (F=32.7, p=.000), with those in the highly religious category scoring the highest in the religion dimension.

Table 26. Religious Level and Mate Preferences

Males' mate preferences strategies		Highly religious	Moderate religious	Religious to a small extent	Not religious	ANOVA
Paternity confidence and commitment	Mean	36.27	37.62	37.00	36.00	F = 1.412, p =.241
	SD	(2.58)	(2.61)	(3.22)	(.)	
Good parenting skills	Mean	24.33	24.92	24.86	21.00	F = 1.929, p = .127
	SD	(2.58)	(1.80)	(1.32)	(.)	
Female reproductive value	Mean	18.80	19.43	19.36	18.00	F = 1.147, p = .332
	SD	(1.15)	(1.47)	(1.47)	(.)	
Gene quality	Mean	17.93	17.63	16.50	18.00	F = 1.536, p = .207
	SD	(1.98)	(2.47)	(2.48)	(.)	
Family background	Mean	15.33	14.36	14.41	15.00	F = 2.421, p =.168
	SD	(2.55)	(1.19)	(1.01)	(.)	
Religion	Mean	6.50	6.29	4.33	4.00	F = 15.937, p = .000
	SD	(1.54)	(1.10)	(0.82)	(.)	
Profession	Mean	9.53	8.99	9.37	9.00	F = .605, p =.612
	SD	(1.92)	(1.79)	(1.73)	(.)	
Females' mate preferences strategies		Highly religious	Moderate religious	Religious to a small extent	Not religious	ANOVA
Able and willing to invest	Mean	30.08	31.47	31.18	31.00	F = 1.209, p =.309
	SD	(2.96)	(2.39)	(2.32)	(3.95)	
Religion	Mean	25.92	18.83	16.28	15.47	F = 32.674, p = .000
	SD	(2.43)	(7.47)	(3.17)	(3.48)	
Gene quality	Mean	15.85	16.01	15.24	16.33	F = .602, p = .615
	SD	(2.38)	(2.33)	(2.41)	(2.07)	
Morality	Mean	12.23	12.53	12.47	12.67	F = .559, p = .643
	SD	(0..83)	(0.84)	(0.80)	(1.21)	
Commitment	Mean	11.46	11.80	11.29	11.33	F = .525, p = .666
	SD	(1.61)	(1.78)	(2.20)	(1.63)	
Protection	Mean	9.69	9.79	8.65	9.17	F = 1.337, p =.265
	SD	(2.29)	(2.22)	(2.21)	(2.48)	
Good parenting skills	Mean	9.46	9.35	9.94	9.67	F = 2.067, p =.108
	SD	(1.13)	(0.94)	(0.83)	(0.52)	

These findings could also be explained in light of the homogamy perspective. As this perspective assumes that deep homogamy in values and beliefs should lead to successful partner selection (Kerckhoff& Davis, 1962), this may drive highly religious male and female members to approach people who have similar levels of religiosity. While the current results were based on and contribute to sexual strategies theory, drawing in relevant literature from other perspectives adds to a better understanding of these findings.

By the end of this section, it appears that theresearch hypothesis regarding male users:

*H6: Saudi male users of matrimonial websites differ in their mate preferences according to their demographic variables have*been confirmed as results showed the role of all six variables (i.e., age, tribe of origin, relationship status, educational level, income level and religiosity level). On the other hand, the research hypothesis regarding female users:

H7: Saudi female users of matrimonial websites differ in their mate preferences according to their demographic variables have been confirmed to high extent as the results showed the role of all variables unless the relationship status.

4. Conclusion

This paper answers the research questions and presents the results to find a potential spouse through matrimonial websites. The revealed mate preferences of both Saudi men and women contribute to the theories on mate preferences in general and sexual strategies theory in particular by advancing the understanding of mate preferences in an Islamic context. In addition to investigating the impression formation and mate preferences of Saudi online marriage seekers, the results reveal how these impressions and preferences are affected by the sample's demographic variables. Indeed, current research found that Saudi matrimonial website users ages ranged from 18 to 65, with the majority falling between 31 and 40, both of which resemble the numbers for Western online daters (Gunter, 2013). However, the current finding breaks the stereotype of typical online matchmaking users as divorced: most of them are single. Although matrimonial website users may be viewed as radical people who deviate from the traditional methods of finding a spouse, the research findings prove that they do not completely challenge their social norms when searching for a future spouse through this unconventional online method. Social norms, traditions, and religion all significantly influenced self-presentation, mate preferences, and online courtship processes.

The current research also contributes to the heated theoretical debate regarding the lack of information in online settings. While hyperpersonal theory altered this debate with the idea that a relative lack of information allows users to be selective in their self-presentation (Walther, 1996), this research reveals that people from conservative cultures believe that the offline setting lacks information. This is especially applicable to relationships with the opposite sex. The current research confirms that, for Saudis, an online message and channel carry more information than face-to-face meetings, because an online environment enables Saudi users to experience more intensive interactions than in face-to-face meetings. The current research also contributes to hyperpersonal theory by considering the role of "message" in the online setting and highlighting the differences between the exchange "message" in Saudi and Western contexts.

The research contributes to hyperpersonal theory by running factor analysis, which assists in extracting four factors influencing receivers' impression formation on matrimonial website perceptions: compatibility with social norms, writing style, non-verbal cues, and timing. This classification indicates the order of importance of each factor to the receivers on matrimonial websites. While one of the limitations of previous hyperpersonal studies is that they mainly depended on qualitative data, which does not provide a clear rank of social cue factors, the quantitative results reveal that the most important factor influencing Saudi matrimonial website users in forming an impression about the senders is the extent to which their online behaviors are in line with Saudi social norms.

The research findings reveal that there are similarities and differences between Buss & Schmitt's (1993) proposed strategies of mate preferences and Saudis' preferences. While Buss and Schmitt found that men utilize five strategies and women six in their mate preferences, the current research found that both Saudi men and women employ seven strategies in their mate preferences. Social and religious values were important factors affecting Saudi men's strategies. Paternity confidence and commitment were Saudi men's top priority. Women who have good parenting skills and adhere to Saudi women's typical roles were more desired than others, as were women who maintain a religious look by wearing the hijab. Women's family reputations, including origin and economic status, were also important factors for Saudi men. However, willingness and ability to invest were the highest-ranked preferences for Saudi women, which confirm the importance of the typical male role in Saudi marriage of being responsible for the house's expenses. Religiosity was Saudi women's second priority; Saudi women believe that a man who cares about religious instruction will probably have a good attitude. Interestingly, protection emerged as an independent factor. For women, a man with a tribal origin provides a kind of protection, because the man's family name means a great deal in Saudi society. It is worth noting that men's last set of desirable characteristics concerned women's professions and good parenting skills. Although these factors contradict the typical role, the fact that they are independent factors means that Saudis are starting to accept new gender roles in marriage.

The results show that the restrictions on some women's behaviors in offline Saudi life have been transferred to online settings. Men, as receivers, were more concerned with the extent to which women, as senders, follow social norms in their online behaviors. This concern also appears among religious users; highly religious users are affected more by the social norms factor than less religious groups when searching for a future spouse. In addition, crossing social norms emerges as a sensitive issue to single users. This is in line with Saudi culture, because the reputation of singles could affect the acceptance or rejection of their marriage proposals. There are specific words that describe those who transgress norms such as *Sharaf* and *'ird*. Therefore, singles stay in line with social norms and protect their reputation to avoid any kind of scandals (*Fadiha*). The research assumption regarding the effectiveness of online communication in gender-segregated societies has been proved. While early computer-mediated-communication scholars believed that lack of information limits the effectiveness of online channels, the findings show that the entire sample from a gender-segregated society agrees on the effectiveness of using matrimonial websites as a channel in providing and obtaining more information to find a spouse. Such findings contribute to the computer-mediated-communication debate in general and hyperpersonal theory in particular.

The role of social norms and religion in altering the impressions Saudi users form on matrimonial websites and their mate preferences is a further theoretical contribution of this research. Although matrimonial website users may be viewed as radical people who deviate from the traditional methods of finding a spouse in Saudi Arabia, research findings prove that they do not completely challenge social and religious norms when searching for a future spouse online. The dominant role of these factors in Saudis' offline lives has been transferred to online settings, shaping their self-presentation and mate preferences. The online courtship process also showed the power of social norms and religious factors in affecting users' actions. Indeed, the role of social norms and religion in altering the impressions Saudi users form on MSs is a further theoretical contribution of this research. Although matrimonial website users may be viewed as radical people who deviate from traditional methods of finding a spouse in Saudi Arabia, research findings show that they did not completely challenge their social and religious norms when searching for a future spouse online. The social and religious norms that play an important role in their offline lives have been transferred to online settings, shaping their self-presentation.

The revealed mate preferences of both Saudi men and women contribute to the theories on mate preferences in general and sexual strategies theory in particular by advancing the understanding of mate preferences in an Islamic context. In addition to investigating the impression formation and mate preferences of Saudi online marriage seekers, the results reveal how these impressions and preferences are affected by the sample's demographic variables. Additionally, the current study results show that in long-term mating contexts, traditional marriage in this case, Saudis express different mate preferences than those proposed by Buss and Schmitt (1993). Thus, a recommended future study would be to investigate the extent to which Saudi men and women use the mate preference strategies proposed by Buss and Schmitt (1993) in the short-term mating context, which would be one of the emerging forms of marriage in the Saudi context. However, this kind of research needs comprehensive review in relation to Islamic literature to examine the validity of this kind of comparison.

One of the main challenges encountered during the current research is persuading a matrimonial agency to conduct the research on it. Emails, several calls, and face-to-face meetings with the agency manager were needed. Although the negotiation sessions ended with the agreement between the researcher and the agent to conduct the research, the agent does not provide full access to the data, omitting information such as the number of exchanged messages between members. These data could add valuable findings, because it is more accurate than self-reported data. However, the agent agreed to ask the participants this information. Extracting such data would cost them extra effort, and they state that they are too busy to do that. We overcame this limitation by obtaining an agreement on a list of points that we can ask site members. Finally, the current research provides an in-depth description of the actions and stages Saudi users follow when looking for spouses through matrimonial websites. It is recommended that future studies look at the actions these users would take when initiating friendships between sexes and romantic relationships not initially intended to lead to marriage, for instance, through social media websites.

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