

Shifting Paradigms: Marriage Salience and Premarital Intimacy and Sex among Elite Women in Tehran

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This study examines the relationship between marriage salience and premarital sexual behavior among female college students in Tehran, Iran, amid ongoing social and cultural transformations. Using a cross-sectional design and a comprehensive theoretical framework—including the Second Demographic Transition and Sexual Scripts Theory—the research investigates how attitudes toward marriage, gender norms, family influence, religiosity, and peer norms predict premarital sexual activity. Data from 1055 female college students in Tehran reveal that significant predictors of premarital sexual behaviors among female college students included Higher Social Prospect of Marriage (OR = 1.123, 95% CI [1.065, 1.184], $p < .001$), New Marital Attitudes (OR = 1.525, 95% CI [1.410, 1.648], $p < .001$), Low respect for Parents' Values (OR = 0.851, 95% CI [0.800, 0.905], $p < .001$), Liberal Peer Sexual Norms (OR = 1.125, 95% CI [1.059, 1.195], $p < .001$), and Age (OR = 1.087, 95% CI [1.035, 1.142], $p = .001$), accounting for about 24% of variance. Findings highlight the evolving perceptions of marriage and sexuality in a society balancing traditional norms with modern influences, emphasizing the importance of culturally sensitive education and policies to address youth sexual health and behaviors.

Keywords: Marriage, Premarital sex, Female college students, Iran, Demographic trends

Introduction

In recent years, young people in conservative societies have been exposed to paradoxical influences. On one hand, factors such as delayed marriage, limited opportunities for marriage, and wide access to modern values through new communication technologies and global media (Azad -Armaki, Sharifi- Saie et al. 2011) encourage exploration of premarital relationships, including intimacy and sexual activity (Khalajabadi-Farahani and Cleland 2015). On the other hand, social norms, stigma, family values, and traditional marital customs—such as the importance placed on virginity—act as barriers, especially for females, due to a prevailing gender double standard regarding premarital intimacy and sex.

Therefore, young people in Iran, particularly women, find themselves at a strategic decision-making juncture during the pre-marriage period, which necessitates appropriate guidance and orientation (Khalajabadi-Farahani et al. 2019). The predominantly traditional culture of Iran faces challenges imposed by modernization,

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particularly regarding the emergence of new models of pre-marital relationships. Recent evidence indicates a rise in the prevalence of premarital sexual behaviors and an increasing acceptance of such behaviors among the younger generation (Khorshidzadeh and Zangooee 2006, Mohammadi et al. 2006, Motamedi et al. 2016, Farahani 2020, Khalajabadi-Farahani 2020). However, detailed information regarding how young individuals navigate these social contexts to find their paths in life and toward marriage remains scarce or non-existent. The factors influencing why some youths choose to abstain from premarital sexual relations while others engage in such behaviors are not clearly understood (Khalajabadi-Farahani et al. 2019). Additionally, it is unclear how Iranian girls with premarital sexual experiences confront the social norms associated with marriage and family expectations.

A survey among female college students in 2005 revealed a high prevalence of premarital heterosexual friendships, but a relatively low rate of sexual intercourse (Khalajabadi-Farahani 2008). This indicates that young people in conservative societies are increasingly navigating complex decision-making process related to premarital sex. Being together while living apart is also becoming a common feature of some premarital relationships, with sexual activity often occurring within these arrangements. A study conducted in Yazd aimed at examining family changes revealed that, according to a significant proportion of respondents, there will be an increase in marriage age, premarital sexual relations, and divorce within Iranian families, with estimates of 86.3%, 76.6%, and 88.2%, respectively (Abbasi-Shavazi and Askari-Nodoushan 2012). Conversely, a greater proportion of young people perceive premarital dating as socially acceptable, whereas premarital sexual relations face limited social acceptance. It appears that youth have broken traditional norms regarding romantic and emotional relationships with the opposite sex; however, a substantial number still adhere to traditional norms concerning premarital sexual conduct and marriage (Khalajabadi-Farahani and Cleland 2015, Motamedi et al. 2016). These scientific and occasionally contradictory or conflicting data may indicate a society in transition. Much of this adherence could be attributed to the religious, customary, and legal marital salience for any form of sexual contact in Iran, combined with the high generalisability of marriage in the country.

Changes in Sexual Attitudes, Behaviors, and Marriage Patterns in Iran

In recent years, various studies and evidence—derived from cross-sectional surveys conducted on a small scale—indicate an increasing trend in premarital sexual behaviors among youth and adolescents (Khalajabadi-Farahani et al. 2012, Ahmadabadi et al. 2015, Khalajabadi-Farahani 2015, Shokoohi et al. 2016). A meta-analysis of studies carried out between 2001 and 2015 revealed that the prevalence of premarital sexual experiences ranged from approximately 8% to 41%. These experiences were significantly more common among males than females, with an estimated prevalence of 22.5% in Tehran and 14.7% in other cities. Considering the proportion of Tehran's population relative to the entire country, the average prevalence of premarital sexual experience among youth aged 16.6 to 23.5 years was estimated at 16% (Khalajabadi-Farahani 2015).

A national study conducted in 2016 aimed to assess awareness, attitudes, and behaviors of young people aged 15 to 29 in 13 urban and rural provinces

across Iran. This study involved 2,456 men and 2,412 women, providing a representative sample of the youth population. It found that 21% of young people had experienced premarital sexual activity; among males, this figure was approximately 32%, whereas among females, it was around 10% (Shokoohi et al. 2016). This was the only nationally representative study on youth sexual behaviors, and its findings aligned with the meta-analytical results from 2001 to 2015 (Khalajabadi-Farahani 2015).

A study in 2005 among female university students in Tehran revealed that about 52% had experienced romantic relationships with the opposite sex, approximately 39% reported physical contact, and around 23% had engaged in sexual contact. Romantic relationships among female students often began at age 12, with roughly 40% experiencing at least one such relationship by age 18. Sexual contact typically started around age 15, with about 20% engaging in sexual activity by age 20. Intimate sexual contact generally commenced much later, beginning around age 18, and approximately 10% reported sexual contact by age 23 (Khalajabadi-Farahani 2008).

Furthermore, comparisons of youth attitudes across different surveys indicate that the proportion of individuals favoring abstinence before marriage has declined in recent years, which may reflect changing behavioral patterns among young people. For example, in 2005, about 75% of female students supported abstaining from premarital sexual contact; however, this figure decreased to approximately 53% in a comparable survey conducted in 2018. Conversely, the percentage of female students opposing premarital abstinence increased from 14.6% in 2005 to around 29.2% in 2018 (Khalajabadi-Farahani et al. 2012).

Consistent with evolving attitudes and behaviors among youth, a study in 2012 demonstrated that premarital sexual experience among Iranian young people is associated with delayed marriage. Specifically, individuals who have not engaged in romantic relationships with the opposite sex tend to marry significantly earlier than those with sexual experience do. Furthermore, early sexual encounters with the opposite sex before marriage are linked to notable postponements in marriage, with this delay particularly pronounced among males compared to females (Khalajabadi-Farahani 2012).

Trends in Age at Marriage

In 2016, the average age at marriage was 27.1 for men and 23 for women (Statistical Centre of Iran 2016). In contrast, in 1976, the average ages of marriage were 24.1 for men and 19.7 for women, indicating that over the years of 1976-2016 (four decades), men and women have married approximately 3 and 3.3 years later, respectively. This trend reflects an increasing gap between adolescence and marriage, suggesting a growing period of maturity and independence before formal unions.

Despite this general trend, some regions still report marriages before the age of 18. The percentage of girls aged 15–19 who are married varies significantly across provinces, from 12.5% in Ilam to 33.2% in Razavi Khorasan. In Tehran, only 13.3% of girls aged 15–19 are married. Overall, about one-fifth of girls under 18 are married. Moreover, in the north-eastern and north-western provinces approximately one-third of girls under 18 have entered into marriage (Alizade et al. 2017), underscoring regional disparities and cultural diversity.

Aims and Objectives

This study aims:

- To assess in what ways the meanings of marriage—such as marital salience, prospects or hopes, and attitudes—differ between women who engage in premarital sex and those who abstain before marriage?
- To examine to what extent various factors related to marriage—such as beliefs and attitudes towards marriage, family influences, individual motivations and desires, social and gender norms, and religious considerations—determine the intention to engage in or actual experience of premarital sexual relationships among girls?
- To assess whether marital salience, prospects, and attitudes predict premarital sex when controlling for other factors?

Literature Review

Considering the relationship between attitudes toward the importance of virginity and sexual behaviors in religious and traditional societies, studies within this domain are applicable. Cinthio (2015) examined the different meanings and various claims regarding virginity, analyzing norms related to relationships, gender, marriage, and conflicts between diverse normative systems. The researcher, through in-depth interviews with immigrant students from countries such as Iraq, Iran, Palestine, Pakistan, and Somalia in Sweden, demonstrated that for most adolescents, marriage is regarded both as a significant matter and as a central component influencing other topics. Protecting chastity is a fundamental social concern for them. For these individuals, virginity is perceived as a valuable asset within the marriage economy, a matter that extends beyond individual concerns to involve families and social networks (Cinthio 2015). The view of marriage as a core issue influencing other domains was among the key findings of the above-mentioned study.

One related study aimed to investigate the impact of premarital interactions with the opposite sex on the age at marriage and the inclination toward marriage among university students in Tehran. It revealed that sexual experience significantly determines the increase in the age at marriage. Furthermore, friendship with the opposite gender was associated with a greater desire to marry among females, whereas males' intentions for engaging in such friendships were not primarily motivated by marriage (Khalajabadi-Farahani 2012). This research demonstrated clear gender differences regarding the motives for premarital relationships, with girls valuing marriage more in such interactions, unlike boys, for whom friendship did not necessarily imply an intention to marry.

A review of domestic studies also indicates a form of intergenerational shift in the value placed on marriage. A study aimed at illustrating generational changes in the valuation of marriage, employing a sociological-cultural perspective, was conducted in 2013 among 500 women born between 1963 and 1995 in Zanjan. It showed that the valuation of marriage among women born between 1988 and 1995

was significantly lower than that of women born before 1983. Religiosity was directly and significantly related to the importance of marriage, whereas experiences of globalization showed a negative correlation (Saraie and Ojaghloo 2013). Additionally, a study conducted in Yazd among 155 mothers and 155 daughters found that daughters held more modern values concerning celibacy and spouse selection, including consanguineous marriage, compared to their mothers. This difference may be attributable to ideological and generational changes between the two groups (Nodoushan et al. 2009). Moreover, a survey involving 723 women aged 15–49 in Yazd revealed that changes in attitudes toward bachelorhood, the prioritization of marriage over education, delayed marriage, and premarital friendships are increasingly influenced by individualism, self-actualization, and cultural capital (Nodoushan et al. 2009).

In this context, Hosseini and colleagues (2018) conducted a phenomenological qualitative study aimed at uncovering the latent meanings of marriage among young people residing in Tehran. They found that reluctance to marry was attributed to four categories: "fear," "disinclination," "decline of transcendent values," and "hedonism." These reasons were interpreted through three identified conceptual frameworks: "economic insecurity of men," "inability to manage expenses," and "financial independence of women." Additionally, newly emerging value systems—comprising moral values and social-communicative relations — such as social status and intercultural interactions between genders, were also discussed. This research effectively illustrates the relationship between considerations related to marriage and shifting patterns of communication between genders before marriage. Furthermore, the value of sexual freedom as the core conceptual category explaining premarital sexual behavior was demonstrated in one qualitative study employing a grounded theory approach (Hosseini et al. 2018).

Despite these findings, Iranian society, particularly in some provinces, continues to hold a traditional perspective on chastity and virginity for unmarried girls. This point was supported by a study among newly engaged men in Kerman, which examined attitudes of 790 young men toward one of the most vital marriage values virginities. Nikirashidi et al. (2019) revealed that 90% of these young men considered virginity as essential for girls, and 82% regarded it as a valuable asset. This indicates the persistence of a conservative norm regarding virginity among young men. However, it is also necessary to consider the country's heterogeneity in attitudes and sexual behaviors. Similar studies should be conducted in other regions with varying levels of development and cultural and ethnic differences to generalize these findings across Iranian society (Nikirashidi et al. 2019). A recent study involving 700 unmarried girls in Tabriz, conducted in 2021, found that only approximately 35.2% regarded preserving virginity as an important issue before marriage in contemporary society. About 27% were uncertain on the matter, while roughly 38% considered it unimportant. The perceived importance of virginity, measured by a score range of 7–35, was significantly higher among girls born in the 1970s compared to those born in the 1980s and 1990s ($p < 0.05$). According to a multivariate linear regression analysis, key factors influencing the importance placed on virginity included older age, stronger religious affiliation, living with both parents, and lower consumption of the internet and social media for sexual information (Naghizadeh 2024).

Significance of the Study

Some young people perceive interactions with the opposite sex as opportunities to develop romantic relationships and enhance their prospects for marriage. However, there is limited information regarding their reasoning processes in such situations, as well as the strategies they adopt toward marriage and their approaches to premarital sexual relations. Particularly given the societal importance attributed to marriage, scant data exists on how the meaning of marriage has evolved and the role it plays in predicting premarital sexual behaviors.

While many theories explain premarital sex, most are rooted in liberal societal contexts, and there are few—if any—explicit theoretical frameworks addressing changes in premarital sexual behaviors within conservative societies that place strong emphasis on marriage.

This study seeks to assess whether perceptions of the salience of marriage, marital prospects, and marital values influence premarital sex among young unmarried women in Iran. Its primary aim is to examine the association between the meaning of marriage and premarital sexual activity, and to evaluate a theoretical framework that considers the role of various factors at different levels in predicting premarital sex.

The lack of existing theoretical models that explicitly incorporate cultural and contextual factors—such as the perceived importance and meaning of marriage—in explaining premarital sexual behaviors underscores the importance of this research. Exploring the cultural and social antecedents of premarital sexual conduct and addressing the paucity of studies in this domain are critical for advancing knowledge in this field. The coexistence of conservative, traditional norms surrounding marriage and its significance alongside evidence of premarital sexual activity requires further investigation, explanation, and scholarly attention.

Most existing research in Iran has either focused on aspects of health and social dimensions of premarital sexual behavior or specifically examined marriage and related values. However, there has been no study to date that investigates the relationship between these two phenomena: (1) changes in premarital sexual behaviors, and (2) shifts in attitudes and values toward marriage. This study aims to address this significant research gap by assessing the interrelation between meaning of marriage (Salience, aspiration, and values) and premarital sexuality among educated females in Tehran.

Theoretical Perspective

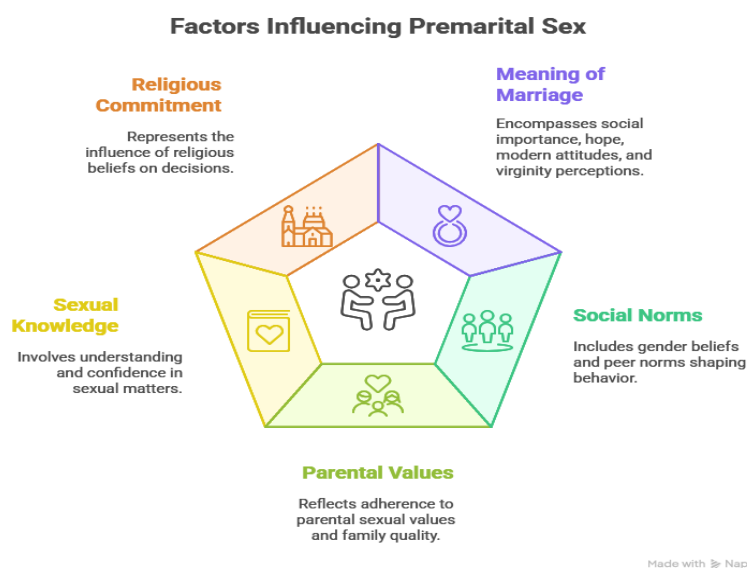
The change in the perceived meaning of marriage is grounded in the Second Demographic Transition theory (Van de Kaa 2002, Lesthaeghe 2010), which emphasizes shifts in individuals' attitudes toward marriage as the sole family structure. This perspective and understanding of the importance of marriage, its sexual function, attitudes toward sexual relations, and the significance of virginity was assessed. Another relevant theory, based on symbolic interactionism, is the Sexual Scripts Theory. Scripts are metaphors used to understand and describe human behaviors within social life. This study hypothesizes that girls' sexual behaviors are guided by these scripts, serving as guidelines for different aspects of life (Simon 1973). According to this framework, societal norms, peer influences, gender norms at the

cultural scenario level, family relationships, and adherence to parental sexual values operate within interpersonal scripts, as do individual attitudes and sexual knowledge at the intrapersonal level. Intrapyschic scripts involve personal understanding and reinterpretation of sexuality and its meanings. Individuals critically and creatively play the role of responsible agents in these scripts, which leads them to interpret their ideal sexual scripts for behavior (Simon and Gagnon 2003). Additionally, elements such as attitudes, self-efficacy, social norms, and behavioral intentions incorporated in the conceptual model are aligned with the Theory of Reasoned Action (Ajzen and Fishbein 1980).

Conceptual Framework

This study incorporates elements from several theoretical foundations, which are elaborated upon below. Since the research aims to empirically test a conceptual model derived from a qualitative investigation, the proposed theoretical framework reflects the considerations of girls at both micro- and macro-social levels regarding their decisions to engage in premarital sexual relations (Khalajabadi-Farahani et al. 2019) (Figure 1).

Figure 1. *Conceptual Model of the Socio-Cultural Factors Influencing Premarital Sexual Behavior*



According to this model, one significant consideration for girls when deciding to engage in premarital sexual activity is marriage itself, including importance and motives for marriage, hope for marriage (marital Prospect), and the meaning and values attached to marriage and sexuality. Other crucial factors influencing their sexual behavior decisions revolve around their perceptions of social and gender norms, religious adherence, conformity to parental values and expectations, family relationship quality, as well as sexual knowledge and self-efficacy.

Material and Methods

This article is based on cross-sectional data collected from female students at undergraduate, master's, and doctoral levels in both public and private universities in Tehran. The data collection was conducted in 2018 using a multistage cluster sampling method. Tehran accounts for a significant proportion of the student population and is more exposed to rapid social changes compared to other provinces; provinces typically follow behavioral shifts observed in major cities. Therefore, female students from Tehran were chosen as the study population.

Inclusion criteria for participation were: informed consent to participate, enrollment in one of the specified academic levels (Bachelor's, Master's, or Doctorate) at selected public and private universities in Tehran, and holding Iranian nationality. The sampling approach was quota-based cluster sampling. The sampling plan was designed based on the proportion of students from public and private universities, various fields of study, and academic levels. Accordingly, the appropriate sample size was allocated proportionally to each subgroup.

After obtaining approval from the selected universities in 2018 (1397-1398), sampling was carried out in both public and private institutions. Three multi-disciplinary public universities were randomly selected based on cooperation levels, and necessary permissions were secured. Similarly, two private non-profit universities were chosen randomly, and required permissions were obtained.

The first stage of sampling involved stratifying by university type, while the second stage stratified by field of study. Within each field, one or more faculties were randomly selected, and sampling was conducted. Class lists for daytime courses were obtained based on academic year, and with coordination from department officials, about the first or last 10 minutes of selected classes were dedicated to sampling. During coordination, students' male classmates and instructors were asked to leave the classroom for 10 minutes. The researcher then provided information about the study to participating female students and invited them to participate by giving their email addresses or mobile numbers anonymously so that an online survey link could be sent to them. Prior to participation, informed verbal consent was obtained, emphasizing confidentiality and anonymity. The email or mobile number was collected without names, and within 48 hours, the researcher sent the online survey link (Café Pardazesh¹). A reminder email was also sent after two days to those who had not yet completed the questionnaire.

The primary tools of this study include an online questionnaire consisting of 71 items and 12 questions related to the demographic and socio-economic characteristics of the individual. Each item was measured using a 5-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). This study was approved by the research council of the National Institute of Population Research² in Iran in 2018. All ethical standards, including anonymity, confidentiality, and voluntary participation, were strictly upheld.

¹<http://www.cafepardazesh.ir/>

²<http://www.nipr.ac.ir>

Pilot and Instrument Development

The pilot was conducted on 182 young women aged 18 to 40 using an online questionnaire and a snowball and convenience sampling method. Feedback from the participants regarding the questions and items was collected, and the pilot data were used for exploratory factor analysis and assessment of internal consistency (reliability). Based on the results of the factor analysis and participants' feedback, some items were removed, and the wording of some questions was revised. Items that, upon removal, increased the internal consistency (reliability) of the scale or had high correlation with other items within the same factor were eliminated. As a result, the total number of items was reduced from 71 to 61.

Variables

The demographic and socio-economic variables in this study included:

- Age: under 20 years, 20-21 years, over 21 years
- Living situation: living with both parents, living with one parent, residing in a student dormitory, living with friends in a private residence, living alone, or others
- Employment status: Yes, to earn income; Yes, without the goal of earning income; No
- Monthly income: less than 20 million Rials, between 20 and 40 million Rials, more than 40 million Rials (IRR) (on average, 1 US dollar equal to 40,787 IRR, 2018)
- Mother's education: illiterate, elementary school, guidance school, high school/ diploma, bachelor's degree, master's degree, doctoral degree
- Father's education: illiterate, elementary school, guidance school, high school/ diploma, bachelor's degree, master's degree, doctoral degree
- University type: public or private
- Educational level: associate degree, and bachelor's, master's, specialized doctorate
- Field of study: humanities, basic sciences, agriculture, arts, engineering, medical sciences

Some variables were categorized as follows:

- Cigarette use: never, occasionally, often, always
- Alcohol consumption: less than 5 times, more than 5 times, never
- Experience with relationships with the opposite sex: no experience, only friendship; both friendship and sexual relationship; no response preference

Other variables were constructed based on related items and examined through factor analysis, along with assessments of internal consistency (reliability) and validity. Details of these variables are presented in Table 1.

Table 1. Scales and related Items, Score Range and Cronbach's Alpha, Direction of the Construct

Variable	Scale or Construct	Range	Cronbach's Alpha	Direction of Construct	Items (Questions/Statements)
Independent	Salience of Marriage (Importance of marriage)	7-35	0.871	A higher score indicates high importance of marriage, lower score indicates low importance	1. Within the next 5 years, my most important plan is to get married. 2. Marriage is a higher priority for me than continuing my education. 3. I do not intend to get married at all. 4. If the opportunity for marriage arises, I want to get married very much. 5. Marriage is very important to me. 6. I prefer to get married sooner rather than having a friendship with boys. 7. Marriage is the only solution to meet young people's sexual needs.
	Marriage prospect	4-20	0.707	A higher score indicates more optimism and hope for marriage or better optimism, and vice versa	8. Nowadays, the opportunity for girls to get married is less available. 9. The intention of boys to be friend with girls is only to have fun. 10. Boys nowadays are not trustworthy for marriage. 11. The conditions for marriage have become so difficult that fewer boys are thinking about marriage.
Independent	Virginity Importance	4-20	0.832	A higher score indicates greater importance of virginity, and vice versa	12. Preserving virginity is very important to me. 13. A girl's value is not based on her virginity. 14. Virginity is a red line that must be maintained. 15. Even the most enlightened boys consider their future wives' virginity very important at the time of marriage.
	Adherence to Parental Values	3-15	0.801	A higher score indicates more adherence, and vice versa	16. To respect my parents, I do not engage in sexual relations before marriage. 17. My family has worked hard for me, so I do not ignore their values. 18. If I engage in sexual relations, I feel I have betrayed my family.

Variable	Scale or Construct	Range	Cronbach's Alpha	Direction of Construct	Items (Questions/Statements)
	Family Relationship Quality	30-6	0.756	A higher score indicates better relationship quality and vice versa	19. My mother always gives me good guidance. 20. My parents overall don't trust me very much. 21. Often there isn't a close, intimate relationship between my parents. 22. My mother has fewer opportunities to have close communication with us. 23. My family considers talking about sexual matters to be contrary to modesty and chastity. 24. If I am in a relationship with someone of the opposite sex, I discuss it with my mother.

Table 2. Scales and related Items, Score Range and Cronbach's alpha, Direction of the Construct

Construct (Factor)	Scale Range	Cronbach's Alpha	Direction for Scoring	Statement
			My knowledge about girl-boy relationships is insufficient. (<i>higher score = good knowledge, lower score = weak</i>)	
Sexual Knowledge	3-15	0.741	higher score = good knowledge, lower score = weak	I have enough information about sexual issues. I can obtain any kind of information about sexual health from the internet. I am capable of managing my relationships with others.
Self-efficacy	3-15	0.605	higher score = good knowledge, lower score = weak	I can define my boundaries in relationships with boys. I cannot easily say no to others' requests. Virginity is important to most of my friends.
Peer Norms	4-20	0.724	higher score = permissive peer norms, lower score = conservative	Most of my friends believe that if they love someone, they can have sex with them. Most of my friends think that someone who hasn't experienced sex before marriage is not modern. Most girls still adhere to avoiding sex before marriage.
Belief in gender equality regarding premarital sex	2-10	0.747	higher score = belief in gender equality in sexual relationships, lower score = traditional dual-gender beliefs	If a girl has sex before marriage, the boy won't marry her. Sex before marriage causes many problems for girls.

Construct (Factor)	Scale Range	Cronbach's Alpha	Direction for Scoring	Statement
			My knowledge about girl- boy relationships is insufficient. (<i>higher score = good knowledge, lower score = weak</i>)	
Religious commitment	3-15	0.868	higher score = stronger religiosity, lower score = weaker	The most important factor preventing me from having sex before marriage is my religious beliefs.
				I believe that when someone is religious, they are under divine control.
				My religious beliefs have prevented me from entering relationships with the opposite sex I am not permitted to.
				Even if I like a boy, I would not have sex with him.
Premarital sex intention	4-20	0.916	higher score = stronger intention to abstain, lower = weaker	I would have sex with someone of the opposite sex whom I truly love.
				Even if someone intends to marry me, I would not have sex with him.
				I plan to experience sex before marriage to see what it is like.

Based on the sample size calculation formula for case-control studies, the estimated sample size was 780 individuals. Considering a design effect of 1.5 and the cluster sampling method, the final sample size was estimated at 1170 individuals. Due to operational, fieldwork, and time constraints of the research, the sampling was halted with a total of 1060 female students.

Based on the pilot study, and given the high response rate and minimal missing data, this sample size was deemed adequate for analysis. The response rate to questions ranged from 98% to 99%. During the analysis phase, 5 questionnaires were excluded due to incomplete responses or neutral answers to most items. In total, 1055 questionnaires were ultimately analyzed.

The online questionnaire data were extracted in Excel format and analyzed using SPSS. The sample was proportionally matched to the desired representation of students from public and private universities. However, due to fieldwork difficulties and lack of cooperation from some faculties, such as the Faculty of Arts, the number of responses in some disciplines was less than expected in the student population. During analysis, data were weighted based on the study field variable to correct for this disparity. Therefore, differences between the sample and the target population regarding the study field were adjusted using weighting based on academic group. During descriptive and bivariate analyses, data were weighted according to these coefficients. The weighting coefficients were applied as follows: humanities (0.98), basic sciences and agriculture (0.39), arts (0.65), engineering sciences (1.07), and medical sciences (1.39).

Data Analysis

Since the questionnaire was completed online, the data extracted from the Excel form were imported into SPSS. After reviewing the data for missing values, data cleaning procedures were applied to each variable. In describing the sample, the data were weighted based on the type of university. Each construct of the independent variables was examined using exploratory factor analysis, and the mean scores of these constructs among girls—based on their experiences with relationships before marriage—were compared using independent t-tests and ANOVA. Subsequently, multivariate analysis was conducted using various dual regression models, where the effects of each factor were controlled for one another to determine the predictive role of each variable after adjusting for the others. The final model identified the key predictors of the intention and behavior regarding premarital sexual activity.

Results

Description of the Demographic Characteristics of the Sample

The average age of females recruited in this study was 21.2 years ($SD = 3.3$), with ages ranging from 17 to 40 years. From among them, 31.5% were under 20 years old, approximately 36% were between 20 and 21 years old, and about 33% were over 21 years old. Most lived with both parents (80%), around 9% reported living in a dormitory, and about 6% lived with one parent. Only about 1% lived with friends in a private residence, and approximately 2.7% lived alone.

The majority of the female students investigated had no work experience (64.3%), while 35.7% had work experience, and around 27% of them worked to earn an income. Regarding household income status, approximately 48% reported a monthly income exceeding 40 million IRR, 40% had income between 20 and 40 million IRR, and about 12% of families reported earning less than 20 million IRR.

In terms of parental education, most had mothers with high school diploma (43.6%) and bachelor's degrees (31.2%), while only 8.8% held postgraduate degrees. Interestingly, the fathers of girls generally had higher levels of education (38%, a high school diploma, 28% holding a bachelor's degree, and 20% possessed master's or doctoral degree).

About 58% of girls studied at an Islamic Azad University, and approximately 42% at a public university. Most students were enrolled at the bachelor's or associate degree level (81%), 18% at the master's level, and only 1.4% at the doctoral level. The majority of the sample (48%) studied in the Human Sciences group, followed by about 30% in Engineering Sciences, 6% in Basic Sciences and Agriculture, 0.9% in Arts, and 2.6% in Medical Sciences.

Approximately 81% of the female students have never tried smoking; about 13% have smoked occasionally, only 3% smoked frequently, and 2% are regular smokers. Regarding alcohol consumption, 75% have never used alcoholic beverages; around 14% have tried alcohol fewer than 5 times, and about 11% have consumed alcohol more than 5 times. In terms of searching for sexually explicit materials on the

internet, 27.1% have done so 1-2 times, 33.2% have searched for such content more than 5 times, while 28.2% have never searched for this type of content online.

Experience of Relationships with the Opposite Sex before Marriage among Female Students, 2018

Among the female students studied in 2018, about 9% did not wish to report their sexual behavior before marriage. Approximately 42% reported having no type of relationship, including friendship or sexual relations, before marriage. About 36% had only experienced friendships, and around 13% had experienced both friendship and sexual relationships before marriage.

Salience of Marriage

The importance of marriage, from the perspective of female students, was measured using six attitude statements on a five-point Likert scale. Descriptive results showed that about 25% of students were not very confident and had no specific opinion regarding their marriage plans within the next five years. Approximately 40% agreed or somewhat agreed that marriage is their main plan in the next five years, while slightly less (35%) disagreed. Responses followed a normal distribution.

Regarding the priority of marriage over continuing education, a significant proportion of students (61%) disagreed with this, and only about 20% believed marriage should take priority over further studies; this is an important finding. Overall, about 76% of girls intended to marry, with most opposing the statement "I do not intend to marry at all." Only around 10% agreed or strongly agreed, meaning they did not intend to marry. The responses to this statement showed a positive skew (tending toward higher values), indicating a high desire for marriage among girls and a lack of complete celibacy.

Descriptive analysis of the fourth statement revealed that about 50% believed they would like to marry if the opportunity arose, while only 19.3% did not have such an inclination, and nearly 30% had no opinion on the matter. The percentage who considered marriage very important was about 51%, whereas a smaller portion (27.3%) thought it was not very important.

Regarding the preference for early marriage over having a serious relationship with the opposite sex, responses were normally distributed. About 44% favored marriage, indicating they preferred marrying rather than engaging in relationships; an equal proportion (43%) opposed this view, and 16% had no opinion. This suggests that friendships with the opposite sex are not seen as competing with marriage but are separate concepts. Lastly, regarding the statement "Marriage is the only way to satisfy young people's sexual needs," a significant proportion disagreed (35.4%), while about 47% agreed, and around 18% had no opinion.

Table 1. *Description of the attitudes towards Marriage among Female College Students, 2018*

Statement	Strongly Agree	Disagree	Neutral	Disagree	Strongly Disagree
Marriage Main Plan next 5 Years	12.9%	27.2%	24.6%	22.1%	13.1%
Marriage, higher priority than education.	6.2%	11.8%	20.0%	39.2%	22.9%
No intention to marry	3.4%	6.5%	14.9%	37.9%	37.3%
Really love to marry if opportunity arises	17.1%	33.7%	29.8%	16.7%	2.4%
Marriage, very important to me.	15.8%	34.1%	22.1%	20.6%	6.7%
Marry better than heterosexual romantic relations	18.9%	24.9%	16.4%	26.9%	12.0%
Marriage, the only solution for sexual needs.	23.7%	23.4%	17.0%	22.0%	12.9%

Table 2. *Pearson Correlation Coefficients between various Attitude, Normative, Behavioral Scales, and the Importance of Marriage*

Variables	Marital Salience	Marital Prospect	Marital & Sexual Attitudes	Compliance with parental values	Peer Sexual Norms	Compliance with religion	Premarital Sexual Intention
Marital Salience (importance)	1						
Social Prospect of marriage	-0.198**	1					
New Marital & Sexual Attitudes	0.501**	-0.280**	1				
Compliance with parental values	0.341**	0.235**	0.551**	1			
Peer Sexual Norms	-0.262**	-0.032**	0.412**	0.288**	1		
Compliance with religion	0.502**	0.172**	0.553**	0.414**	0.349**	1	
Premarital Sexual Intention	0.418**	0.212**	0.659**	0.511**	0.537**	0.541**	1

This table presents the Pearson correlation coefficients among several variables related to attitudes, social norms, behaviors, and the importance of marriage. Notably, there are strong positive correlations between the importance of marriage (marital salience) and attitudes toward marriage and sexual matters, religious adherence, and premarital sexual intentions, highlighting how these factors tend to move together. For instance, the highest correlation is observed between marital and sexual attitudes

and premarital sexual intention ($r = 0.659$), suggesting a close link between positive attitudes in these areas.

Additionally, social and familial influences such as compliance with parental values, peer norms, and religious commitment are significantly correlated with each other and with the importance of marriage, indicating that social context plays a crucial role in shaping individuals' marriage-related attitudes and intentions. Conversely, perceived marriage prospects show weaker, negative associations, implying that lower optimism about marriage prospects might be related to a higher emphasis on the importance of marriage. Overall, the correlations underscore the interconnectedness of personal attitudes, social norms, and behavioral intentions regarding marriage.

Determinants of Premarital Sexual Behavior among Female Students in Tehran

A logistic regression analysis was conducted to identify predictors of premarital sex among female college students. The model included variables such as Marital Salience, Social Prospect of Marriage, New Marital Attitudes, Respect for Parents' Values, Peers' Sexual Norms, Religiosity, and Age. The overall model was statistically significant, $\chi^2(7) = 95.038$, $p < .001$, and explained a substantial portion of the variance in premarital sexual activity.

Significant predictors included *Social Prospect of Marriage* (OR = 1.123, 95% CI [1.065, 1.184], $p < .001$), *New Marital Attitudes* (OR = 1.525, 95% CI [1.410, 1.648], $p < .001$), Compliance with *Parents' Values* and attitudes (OR = 0.851, 95% CI [0.800, 0.905], $p < .001$), *Peer Sexual Norms* (OR = 1.125, 95% CI [1.059, 1.195], $p < .001$), and *Age* (OR = 1.087, 95% CI [1.035, 1.142], $p = .001$). Higher perceptions of marriage prospects, more liberal marital attitudes, liberal peer sexual norms, and older age increased the likelihood of engaging in premarital liberal sex.

Religiosity approached significance (OR = 0.941, 95% CI [0.882, 1.003], $p = .064$), suggesting a potential trend where greater religiosity might be associated with lower odds of premarital sex, though this was not statistically significant.

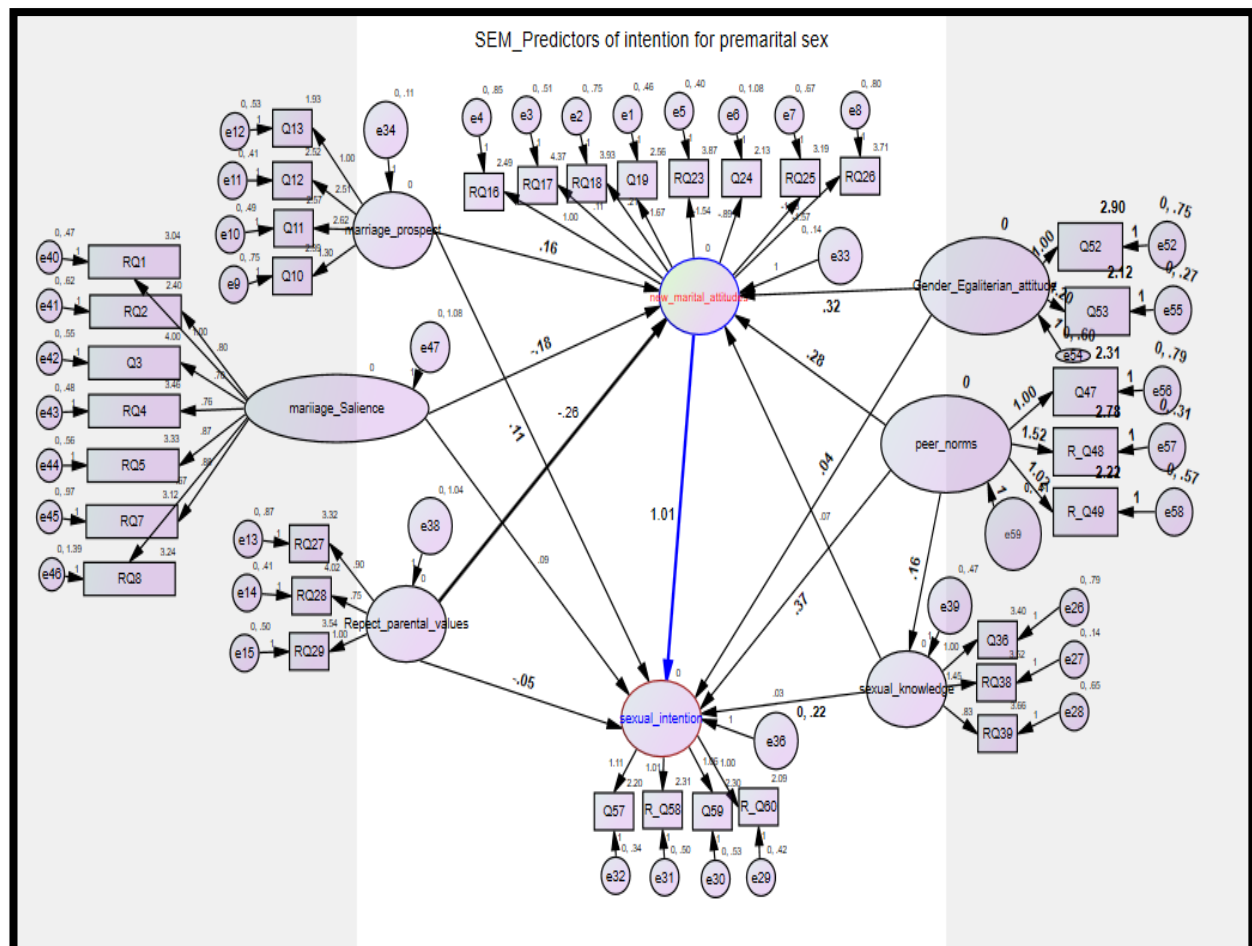
Table 3. *Predictors of Premarital Sex among Female College Students using Binary Logistic Regression*

Predictor	B	S.E.	Wald	Df	p	OR (Exp(B))	95% CI for OR
Marital Salience	0.013	0.015	0.669	1	.413	1.013	0.983 – 1.044
Social Prospect of Marriage	0.116	0.027	18.633	1	<.001	1.123	1.065 – 1.184
New Marital Attitudes	0.422	0.040	112.499	1	<.001	1.525	1.410 – 1.648
Respect for Parents' Values	-0.161	0.031	26.301	1	<.001	0.851	0.800 – 0.905
Peer Sexual Norms	0.118	0.031	14.561	1	<.001	1.125	1.059 – 1.195
Religiosity	-0.061	0.033	3.440	1	.064	0.941	0.882 – 1.003
Age	0.083	0.025	11.076	1	.001	1.087	1.035 – 1.142

Note: The variables entered into the model included Marital Salience, Social Prospect of Marriage, New Marital Attitudes, Compliance with Parents' Values, Peer Sexual Norms, Religiosity, and Age. The model accounted for approximately 24.0% of the variance in premarital sex (Cox & Snell $R^2 = 0.240$). The overall model was statistically significant, $\chi^2(8) = 21.908$, $p = 0.005$, as indicated by the Hosmer-Lemeshow goodness-of-fit test ($p = 0.005$).

In order to explain predictors of premarital sexual intention among female college students, based on the identified factors, a Structural Equation Model was constructed using AMOS.

Figure 1. Structural Equation Model of Predictors of Premarital Sexual Intentions among Female College Students in Tehran



Minimum was achieved, Chi-square = 4033.379, Degrees of freedom = 513, Probability level = .000

Based on the above model, the strongest effect on the intention to engage in sexual behavior before marriage comes from the modern attitude toward marriage and premarital sexual relations (effect size = 1.01). This strong positive coefficient indicates the important role of attitude changes in the domain of sexual relations and the significance of sexual skills for marital success, as well as the reduced emphasis on virginity in shaping the intention and, consequently, the premarital sexual behavior. This sexual attitude is influenced by changes occurring in the social structure and the surrounding environment of girls: negatively affected by the decreasing importance of marriage (-0.18), and positively affected by the outlook or prognosis of marriage (0.16). Changes in the outlook and importance of marriage have meaningful impacts on sexual attitudes.

Another important factor is autonomy or, conversely, adherence to parental sexual values; the less salient these are, the more dominant the modern sexual values become (-0.26). Egalitarian beliefs about sexuality in the pre-marital context are also a determinant of premarital sexual behavior, with a high and positive impact on sexual attitudes (0.32). Finally, peer norms are also a significant determinant of premarital sexual behavior (0.28); with these factors, the role of religious institutions diminishes. In fact, religion exerts its influence on sexual attitudes and intentions through adherence to parental sexual values and other gendered attitudes and peer norms. Finally, girls' sexual knowledge is a determinant factor in intention and behavior (0.22).

It appears that the major social institutions of the family, peer norms, and gendered beliefs have substantial impacts on girls' sexual attitudes, with the greatest salience in these three domains. The importance and prognosis of marriage influence sexual attitudes with coefficients of -0.18 and 0.16 , respectively, and prognosis also exerts a relatively substantial direct effect on the intention to engage in sexual behavior (coefficient = 0.11).

Discussion

This study identified several significant predictors of premarital sex among young women, including perceptions of the Social Prospect of Marriage, New Marital Attitudes, Compliance with Parental Values, and Peer Sexual Norms, after controlling for age. Higher perceptions of marriage prospects, more liberal attitudes toward marriage and sexuality, supportive peer sexual norms, and older age were associated with an increased likelihood of engaging in premarital sex. Furthermore, religion appeared to influence sexual behavior indirectly through these mediating factors, although its direct effect diminished in the multivariate analysis. Collectively, these variables accounted for approximately 24% of the variance in sexual experience.

The model confirms that changes in attitudes and values regarding marriage and sexuality are primary factors driving premarital sexual behaviors and intentions. These findings align with a previous meta-analysis of 530 studies which revealed significant shifts in young people's sexual attitudes and behaviors between 1943 and 1999, particularly among women. Over this period, young people became more sexually active at earlier ages. The proportion of sexually active young women increased from 13% to 47, and acceptance of premarital sex grew markedly. Approval among young women rose from 12% to 73%, while among young men, it increased from 40% to 79%. Additionally, feelings of sexual guilt declined, and the link between attitudes and behaviors was stronger among women. These data support theories suggesting that cultural influences have a more substantial impact on female sexuality. Overall, shifts in attitudes and values related to marriage and sexuality are key drivers of premarital sexual behavior and intentions (Wells and Twenge 2005). Notably, the influence of perceptions of marriage prospects on sexual behavior operates through modern sexual attitudes, such as valuing sexual relationships as a means of social and emotional development, which emerged as the most significant predictors. These findings suggest that young women increasingly adopt new perspectives toward marriage, influenced by ongoing structural and cultural changes that challenge traditional

norms. Change In attitudes towards premarital cohabitation, premarital childbearing, premarital sex, and in same sex relations was shown in previous researches as well (Elias et al. 2015, Daugherty and Copen 2016).

An important finding relates to gender double standards and prediction of premarital sexual intention: the belief that boys are permitted premarital sex while girls face severe social and religious sanctions influences sexual intentions. Interestingly, greater gender equality attitudes were positively associated with premarital sex, whereas adherence to the double standard was negatively related. The latter aligns with previous research indicating that strict gender double standards tend to suppress premarital sexual activity among women (Zuo et al. 2012, Lefkowitz et al. 2015, Yaşan et al. 2009, Eşsizoglu et al. 2011). Girls who perceive sexual consequences as equally applicable to both genders are more likely to have engaged in premarital sex, supporting structural theories that link gender equality perceptions with sexual behavior (Beeghley and Sellers, 1986).

The relationship between familial values and peer norms can be understood through the lenses of **symbolic interactionism** and **sexual script theory**. According to these frameworks, girls' sexual behaviors are shaped by familial influences, peers and societal norms (Saftner 2016), operating through culturally embedded scripts—guidelines that prescribe appropriate sexual conduct (Simon 1973). As social independence increases and reliance on family diminishes, young women tend to adopt more modern attitudes and behaviors (Waite, Goldscheider and Witsberger 1986). These progressive attitudes, perceived as interpersonal scripts, are more strongly associated with premarital sexual activity than familial influences, which remain relevant but secondary.

Per **sexual script theory**, perceptions of peers' behaviors, parental expectations, and gender norms serve as collective cultural instructions guiding individual sexual conduct (Gagnon and Simon 2003). These scripts are situational and dynamic, evolving through interpersonal interactions and internal psychological processes. Despite the influence of traditional norms, the findings reveal that many young women now internalize progressive attitudes—reflecting a shift toward modern, individualistic scripts—although familial and societal expectations still exert some influence, often leading to concealment or selective engagement in sexual activity.

From a broader societal perspective, the **network culture model** suggests that factors like the importance of marriage, increasing divorce rates, the significance of virginity, and sexual satisfaction are interconnected and jointly influence young women's attitudes and behaviors regarding premarital sex (Khalajabadi-Farahani et al. 2019, Bachrach 2014). Our findings that higher age is associated with greater sexual experience align with structural theories, emphasizing that growing age and delayed marriage increase opportunities and likelihood of premarital sexual activity (Lagarde et al. 1996, Das and Rout 2023).

The role of religious beliefs appears to be complex: although religion showed an association with abstinence in bivariate analysis, its significance diminishes when accounting for family and social influences, implying that religious transmission occurs primarily through family contexts. This underscores the importance of family relationships in shaping sexual attitudes and behaviors in Iranian society (Kirby et al. 2005, Khalajabadi-Farahani and Cleland, 2011).

In the context of Iranian society—where premarital sex remains socially, legally,

and religiously unacceptable—the lack of formal support or health services for sexually active youth heightens their vulnerability to health risks such as sexually transmitted infections, unwanted pregnancies, and unsafe abortions (Khalajabadi-Farahani et al. 2014). Given these realities, understanding the underlying factors that influence premarital sexual activity is vital for designing culturally sensitive interventions aimed at delaying sexual initiation and promoting health.

Conclusion

Our findings highlight that changing perceptions of marriage and sexual attitudes are key elements in understanding premarital sexual behavior among young women in Iran. As societal norms evolve—with increased age at marriage, shifting gender roles, higher education levels, and greater access to sexual information—these changes influence individual trajectories, often within conflicting cultural expectations. The spectrum of attitudes observed—from traditional to highly liberal—reflects ongoing social transformation.

From a policy standpoint, these insights suggest the need for comprehensive, culturally sensitive sex education and support services that acknowledge diverse attitudes, address vulnerabilities, and foster healthier sexual behaviors. These findings also help explain the changes in delayed marriage among younger generations from a demographic perspective. Future research should employ longitudinal designs to better understand causal relationships and include diverse populations, such as males and non-student groups, to develop a more comprehensive view of youth sexual behaviors in Iran. Additionally, demography should take these trends into account to deepen the understanding of marriage dynamics in conservative societies.

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