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CLINICAL & BASIC RESEARCH

The Pattern of Female Nuptiality in Oman

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الأنماط المتعلقة بزواج الإناث في عمان

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الملخص: **الهدف**: تهدف هذه الدراسة إلى دراسة الأنماط العمانية المتعلقة بزواج الإناث، بما في ذلك سن الزواج والعوامل المؤثرة في تحديد السن الذي تتزوج فيه المرأة لأول مرة. **الطريقة**: استخدمت الدراسة بيانات من المسح الوطني للصحة عام 2000. وقد تم تحليل البيانات باستخدام التحليلات الإحصائية الأحادية والثنائية ومتعددة المتغيرات، بما في ذلك تحليل الانحدار اللوجستي. **النتائج**: يعد زواج الأقارب أحد أهم أنماط الزواج المنتشرة في عمان، حيث يشكل زواج الأقارب أكثر من نصف إجمالي الزيجات في عمان (52%)، الزواج من ابن العم هو النوع الأكثر شيوعا في زواج الأقارب، حيث يشكل 39% من جميع حالات الزواج و 75% من جميع حالات زواج الأقارب. شكل تعدد الزوجات حوالي 11% من إجمالي الزيجات. كما لا يزال الزواج المبكر واسع الانتشار في عمان. أما بالنسبة لسن الزواج، فإن 75%من النساء اللاتي شملتهن الدراسة وتراوحت أعمارهن بين 20–44 سنة قد تزوجن قبل سن العشرين، وأن متوسط السن عند زواجهن الأول كان 16 سنة. ومع ذلك فإن متوسط سن المرأة عند الزواج يتزايد تدريجيا، حيث أن هذا التغيير أصبح واضحا بشكل خاص في الآونة الأخيرة في زواج الجيل الأصغر من الإناث، وفي فئات اجتماعية وثقافية معينة. أظهر التحليل متعدد المتغيرات أن تعليم الإناث، الفئة العمرية، الحالة السكنية، منطقة الإقامة، أنواع الزواج، والتوظيف، تعد من أهم العوامل التي تحدد سن المرأة العمانية عند الزواج. **الخلاصة**: إن التزايد الملحوظ في عدد الشباب في عمان مع ميولهم إلى تأخير الزواج قد يشكل ظاهرة ديموغرافية خطيرة ذات تداعيات اجتماعية واقتصادية وسياسية، مما يبرز الحاجة الماسة لفهم خصائص الجيل الجديد من الشباب واهتماماتهم ومتطلباتهم وذلك لوضع السياسات الملائمة لمعالجة هذه القضايا والتحديات التي تواجه الشباب غير المتزوجين.

مفتاح الكلمات: السن عند الزواج الأول، زواج الأقارب؛ الزواج؛ تعدد الزوجات؛ عمان.

ABSTRACT: ***Objectives:*** The purpose of this study was to examine Omani patterns of female nuptiality, including the timing of marriage and determinants of age at a woman's first marriage. ***Methods:*** The study utilised data from the 2000 Oman National Health Survey. Univariate, bivariate, and multivariate statistical methods, including logistic regression analysis, were used for data analysis. ***Results***: One of the most important aspects of the marriage pattern in Oman is the high prevalence of consanguineous marriages, as more than half (52%) of the total marriages in Oman are consanguineous. First cousin unions are the most common type of consanguineous unions, constituting 39% of all marriages and 75% of all consanguineous marriages. About 11% of the marriages are polygynous. Early and universal marriage is still highly prevalent in Oman. Three-quarters (75%) of married women respondents aged 20–44 years were married by age 20, with their median age at their first wedding being 16 years. However, women's average age upon marriage is gradually increasing. The change is especially apparent in more recent marriages or among younger cohorts of women, and for certain socio-cultural groups. Multivariate analysis identified female education, age cohort, residential status, region of residence, types of marriage, and employment as strong predictors of Omani women's age at marriage. ***Conclusion:*** The growing number of young adults, accompanied by their tendency to delay marriage, may have serious demographic, social, economic, and political ramifications for Oman, highlighting the need to understand the new situation of youth, their unique characteristics, and their interests and demands. Culturally appropriate policies need to be implemented to address the issues and challenges of unmarried young adults.

Keywords: Nuptial; Consanguinity; Marriage; Polygyny; Oman.

Advances in Knowledge

- *This study sheds light on the pattern of female nuptiality in Oman which has implications for an evidence-based approach for all spheres of women's reproductive health.*
- *Understanding the determinants of the timing of a woman's first marriage is very important from a population policy perspective.*

Application to Patient Care

- *Studying Omani patterns of female nuptiality has a direct impact on the allocation of resources and the laying of groundwork for evidence-based family planning and the formulation of health policy, planning, and management.*

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Oman is an oil-rich Arab Muslim country, located in the southeast of the Arabian Peninsula. According to the 2010 population census, the population is about 2.7 million, of which 27% are non-Omanis, occupying a land area of 309,500 square kilometers (about 8 persons per km^2). The country had a turbulent past, characterised by internal tribal strife in the 19th and early 20th centuries. Prior to the commercial exploitation of oil in late 1960s, the economy of Oman consisted of subsistence agriculture and fishing. Social and economic infrastructure was almost non-existent. By late 1980s, Oman had been transformed into a modern state with modern facilities and infrastructure. The standard of living, women's education, and the status of Omanis have all improved enormously since the mid-1980s.[1] Women's participation in the paid labour force is also increasing in Oman.[2]

The social system in Oman is structured around the family and linked to traditional and religious teachings that consider family formation to be the basic function of society. The family is the unit in which reproduction is authorised; reproduction is expected to occur through marriage. Marriage and establishing a family are treated as essential and sacred. Hashemi gives the legal minimum age at which boys and girls can marry as 18 years.[3] In the past, the primary role of women was to bear and raise children. Today, this role is still central, but has been modified somewhat given the increasing participation of women in higher education and in the labour force.[4]

Like most other countries in the Arab world, Oman is in the midst of social, economic, and cultural transformations that are dramatic in pace and effect. Families are undergoing major changes as new patterns of marriage and family formation emerge across the Arab world.[5] Arab and Muslim countries of the region have traditionally been characterised by women marrying in their teens. Traditionally, men have married later. There has been an expectation of universal marriage for both sexes, a large age difference between spouses, high levels of consanguineous marriage or endogamy (particularly marriages between maternal and paternal cousins), and the presence of polygyny.[6–10] However, this tradition of early and universal marriage has been diminishing and the mean age of marriage rising. In Oman, the singulate mean age at marriage (SMAM) for females increased from 19.2 years in 1988 to 23.5 years in 2000.[11,12] More Arab women are staying single longer or not marrying at all.[5,8] All of these changes are introducing new issues and challenges into Arab societies.

Changes in marriage patterns have been seen as precursors of demographic transition in most societies.[13] Changes in nuptiality patterns have played a very significant role in many European demographic transitions.[14] In Western Europe, people typically stay single longer, leading to later first marriages. The combination of widespread celibacy and the trend of later marriage has led to lower fertility rates. Female age at marriage is becoming an important demographic variable due to its influence on fertility and population growth, especially in countries like Oman where rates of contraceptive use are still low.[15]

Oman's universality of marriage and relatively early marriages, coupled with the onset of childbearing soon after marriage, makes it imperative, from a population policy perspective, to understand the determinants and correlates of the timing of marriage. Thus, the objective of this study was to analyse Oman's marriage patterns and examine the levels, trends, and determinants of age at first marriage.

Methods

This study utilised data extracted from the 2000 Oman National Health Survey (ONHS). The details of the survey may be seen elsewhere.[12] The survey was conducted by the Ministry of Health (MOH) of Oman with technical support from United Nations (UN) organisations such as the United Nations Population Fund (UNFPA) and the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), and the UN Statistics Division. The survey considered households of Omani nationals only. Women who were under 50 years of age and were or had ever been married were eligible respondents. The ONHS 2000 covered a nationally representative sample of 2,013 Omani households and 2,037 eligible women were successfully interviewed. The survey contained a wide range of data on general health of the household members and reproductive health characteristics of women including their nuptiality patterns. The MOH allowed researchers access to

Table 1: Distribution of respondents by selected background characteristics (Oman, 2000)

Background characteristics	Number	Percent
Age		
<20	95	4.7
20–29	851	41.8
30–39	7 55	37.1
40–49	336	16.5
Mean age	31.02 years	
Birth cohort		
Before 1965	711	34.9
1965–1974	823	40.4
1975 or after	503	24.7
Residential Setting		
Urban	1492	73.2
Rural	545	26.8
Geographic region		
Muscat	446	21.9
Al-Batinah	644	31.6
Dhofar	259	12.7
Al-Sharqiyah	226	11.1
Al-Dhakhliya	310	15.2
Al-Dhahirah	152	7.5
Education		
No education	879	43.2
Some primary	203	10.0
Primary or preparatory	567	27.8
Secondary or higher	388	19.0
Work status		
Work for remuneration	266	13.1
Do not work for remuneration	1771	86.9
Occupation		
Professional/Administrative	158	7.8
Clerical	39	1.9
Sales and service	34	1.7
Manual worker	35	1.7
Housewife	1771	86.9
Live births		
0	199	9.8
1–2	460	22.6
3–5	561	27.5
6–8	424	20.8
9+	393	19.3
Mean		**4.94 children**
Total	**n = 2037**	**100.0**

the data set for the present study.

The data were analysed using univariate (frequency distribution), bivariate, and multivariate methods. The results of the bivariate analyses were tested for statistical significance by a chi-square test for categorical data, and analysis of variance (ANOVA) was used for the continuous level data. A value of significance was set at P <0.05. The analysis was based on complete information given by the 2,037 ever-married. First, the characteristics of marriage were examined using univariate and bivariate analysis. This was followed by an examination of age patterns in marriage, and those patterns' trends, differentials, and determinants. Median age at first marriage, a commonly used summary measure of age at first marriage, was calculated based on retrospective reporting of age at first marriage by women who had been married in the past. It describes the age by which 50% of the women have experienced marriage and has an advantage in that we could use cohorts that still had not stopped "getting married". It is based on the age at first marriage reported by the women interviewed in a survey, and is accordingly a cohort measure. The well-known Demographic and Health Surveys (DHSs) are using the measure to report the age at fist marriage throughout the world. However, this measure typically results in an average age that is lower than mean age, due to selection bias. This is because it considers only the men or women who have been ever married and thus includes only those who have been married early, excluding those who remain single but might marry in later years. However, the differential analysis of age at marriage usually remains unaffected by this selection bias.

The determinants of early marriage, defined as marriage before age 20, were estimated using a logistic regression model. However, a logistic regression model requires a dichotomous dependent variable. Since our dependent variable, or age at marriage, is a continuous variable, we dichotomized

Table 2: Distribution of women aged 15 and above by age and marital status, based on enumerated household population (Oman, 2000)

Age group	Female marital status (n)				Percentage ever-married
	Single	Married	Widowed	Divorced/ Separated	
15–19	92.0	7.6	0.1	0.3	8.0
20–24	53.1	44.9	0.4	1.8	46.9
25–29	18.8	75.3	0.9	5.0	81.2
30–34	5.1	86.3	2.8	5.8	94.9
35–39	2.3	88.9	3.5	5.3	97.7
40–44	0.9	89.3	7.1	2.7	99.1
45–49	0.8	85.1	5.8	8.3	99.2
50–54	0.6	72.8	20.5	6.1	99.4
55–59	1.5	67.3	25.5	5.7	98.5
60–64	0.8	48.5	43.2	7.5	99.2
65+	0.8	31.4	58.8	9.0	99.2
Total	**36.7**	**51.6**	**8.1**	**3.6**	**63.3**

it as follows: y = 1, if the respondent married before age 20, and y = 0, when a respondent married at age 20 or above. Thus, we used the following regression model:

$$\text{logit}\ (p) = \log\left(\frac{p}{1-p}\right) = b_0 + b_1x_1 + b_2x_2 + \ldots\ldots + b_kx_k$$

where $p = prob(y = 1)\ and\ b_i's\ (i = 1, 2, \ldots\ldots\ldots, k)$ are the linear regression coefficients, indicating the effect of the predictor variables $x_i s\ and\ b_0$ is the intercept. However, in logistic regression analysis, the effects of the predictors on original variables are measured by odds ratio (OR) defined by e^b. An odds ratio of 1.000 indicates the reference category of a predictor variable. An odds ratio greater than 1.000 for a category of the predictor variable indicates a higher likelihood of getting married early in that category as compared with that of the reference category.

Some of the covariates that affect when couples marry are a woman's birth cohort, place of birth and/or residence, parents' education levels, and a respondent's education level, family background, work status, and type of marriage.[16–19] Year of birth is included in the models to estimate the secular trend. Place of birth, place of residence and region of residence partially explain the socialisation process of the respondents since people born in rural areas tend to display more traditional behaviours such as early marriage, higher consanguinity rates, and polygyny, even if they later live in urban areas.[6] Also, the longer a woman stays in school, the less likely it is for her to marry early. A number of covariates are thought to affect the timing of marriage. It has been observed that young men and women who have higher levels of education are likely to develop higher levels of autonomy by having better knowledge and better opportunities for paid employment and economic independence, which usually results in later marriage.[16,17] Furthermore, young women with a higher level of education are more likely to be employed and employment is likely to delay marriage.

Results

Table 1 shows the distribution of the sample respondents by selected background characteristics. Most of the respondents in the sample (~80%) were in their prime reproductive ages (20–39 years) while about 17% were at the end of their childbearing ages (40–49 years). Women aged 15–19 years comprised about 5% of the sample. The average age of the respondents was 31 years. A total of 75.3% of respondents were born before 1975. About 73% of the respondents lived in urban areas. Among the six major geographical regions in Oman, over half of the respondents came from the Al-Batinah (32%) and Muscat (22%), both regions on the northern

Table 3: Prevalence of consanguineous marriage (Oman, 2000)

Types of marriage	2000 ONHS		1995 OFHS	
	Number of women	Prevalence (%)	Number of women	Prevalence (%)
Consanguineous				
Paternal first cousin	565	27.7	1,635	25.5
Maternal first cousin	221	10.8	525	8.2
Other relation	266	13.1	1,319	20.6
Non-consanguineous	985	48.4	2,927	45.7
Total	2037	100.0	6,405	100.0

ONHS = Oman National Health Survey; OFHS = Oman Family Health Survey.

coast. A total of 43% of women had never attended school; 10% had some primary education; 28% had completed primary education, while 19% had secondary or higher level education.

Most of the respondents (87%) were housewives; only 13% of the women were engaged in paid work. Most of the latter were working as professionals or administrators with high levels of education. Nearly 19% had a very high parity of 9 or more children [Table 1]. In contrast, 23% of the women had only one or two children, while three-quarters had 3 or more children, and about 10% still had none. The distribution of women by live births indicated very high fertility in Oman, reflected by their high average number of children (~5 children); 32% of the married women were using family planning methods.

Table 2 shows the distribution of the female population aged 15 and above enumerated by current age and marital status, calculated from the household population in the 2000 ONHS. It is evident that 8% of women aged 15 and above were married between ages 15 and 19. The proportion of married women increased rapidly with age. By age 50, almost 100% of women had been or were married, indicating universal marriage in Oman.

The proportion of currently married women increased rapidly to ages 40–44 and then declined due to the effects of widowhood and/or divorce [Table 2]. About 8% of women aged 15 and above were widowed and another 4% were divorced. Between ages 25 and 49, the proportion of divorcees ranged from 3–8%, while the proportion of widows ranged from 1–7%. Overall, 37% of the women aged 15 and above were single in 2000. The corresponding figure in 1995 was 29%, indicating a rising trend in the proportion of single women in Oman.[20] The 2000 ONHS documented a similar pattern of divorced and widowed women as had been observed in the 1995 Oman Family Health Survey (OFHS).

As in other parts of the Arab and Muslim world, consanguineous marriage is very common in Oman. According to the 2000 ONHS data, more than half of married women under 50 years of age (52%) reported that they had a blood relationship with their husbands. First cousin marriages, both maternal and paternal, constituted 38.5% of all marriages and more distant forms of blood relation constituted 13% of all marriages. Specifically, paternal first-cousin marriages constituted 27.7% of all marriages and 72% (565/786) of all first-cousin marriages, while maternal first-cousin marriages constituted 10.8% of all marriages and 28%

Table 4: Prevalence of polygynous marriages among currently married women (Oman 2000)

Polygyny	2000 ONHS		1995 OFHS	
	Number (N)	Prevalence (%)	Number	Prevalence (%)
Yes	215	11.5	666	11.3
No	1,658	88.5	5,238	88.7
Total	1,873	100.0	5,904	100.0

ONHS = Oman National Health Survey; OFHS = Oman Family Health Survey.

Table 5: Median age at first marriage according to selected characteristics (Oman, 2000)

Characteristics	No. of cases	Median	*P* value
Total	2,037	16.10	
Age			**0.008**
20–24	401	17.70	
25–29	450	17.01	
30–34	372	15.51	
35–39	383	15.14	
40–44	218	15.45	
45–49	118	15.68	
Birth year cohort			**0.003**
Before 1965	711	15.21	
1965–1974	823	16.18	
After 1975	503	17.29	
Residential Setting			0.010
Urban	1,492	16.28	
Rural	545	15.77	
Region of residence			**0.005**
Muscat	446	17.25	
Al-Batina	644	15.84	
Dhofar	259	15.82	
Al-Sharqiah	226	15.73	
Al-Dhakhlia	310	15.57	
Al-Dhahirah	152	17.00	
Educational level			**0.000**
No education	879	15.57	
Some primary	203	15.43	
Primary	345	15.81	
Preparatory	222	16.40	
Secondary or higher	388	18.58	
Work status			**0.000**
Work for remuneration	266	18.05	
Not working for remuneration	1,771	15.93	
Have say in family decision			**0.015**
Yes	444	16.78	
No	1,593	15.43	
Types of marriage			**0.001**
Consanguineous	1,052	15.47	
Non-consanguineous	985	16.86	

(221/786) of all first-cousin marriages. Although the overall prevalence of consanguineous marriages declined slightly from 54% in 1995 to 52% in 2000, the prevalence of first-cousin marriages increased from 33.7% in 1995 to 38.5% in 2000 [Table 3]. This pattern of consanguineous marriage may be related to deeply rooted cultural practices as well as the social and economic advantages of first cousin marriages.[6]

Polygyny is when a man is simultaneously married to more than one wife. Table 4 presents the prevalence of polygynous marriages among married women in Oman as observed in the 1995 OFHS and the 2000 ONHS. The data indicated that 1 in 9 marriages (11%) in Oman is polygynous. Over the study period, the rate of polygamous marriages remained stable.

Table 5 presents the median age at first marriage for women responding to the 2000 ONHS according to select background characteristics. Overall, the median age at first marriage was 16 years, indicating that early female marriages are still prevalent in Oman. It also indicates that most of the female marriages took place before age 20. However, the age of women when they first marry is increasing in Oman, as indicated by the rising trends in median age at first marriage across the age cohorts and birth cohorts. Women's age at first marriage is significantly higher for the younger cohort than their older counterparts (P <0.01). For women aged 45–49 years, the median age at first marriage was found to be 15.68 years, which increased to 17.70 years for women aged 20–24 years. Birth year cohorts also showed a significant rising trend in age at first marriage (P <0.01). The median age at first marriage increased from 15.21 years for women born before 1975 to 17.29 years for women born after 1975—an increase of two years.

Urban women were more likely to marry at a later age than rural women (P < 0.05), and women's ages at marriage varied significantly (P <0.01) across the geographical regions. The Muscat and Al-Dhahirah urbanised regions showed a later age at marriage (about 17 years) while the Al-Dhakhlia central region showed the youngest (15.5 years). Age at marriage in other regions was closer to 16 years. Female education had a strong positive, statistically significant effect on age at first marriage (P <0.001). For example, the median age at marriage was about 16 years among women with

Table 6: Percentage of marriages by exact ages, listed by age cohort (Oman, 2000)

Age Cohort	Percentage who were married by exact age						Percentage never married
	15	18	19	20	22	25	
15–19	3.1	-	-	-	-	-	92.0
20–24	13.2	29.3	33.3	38.3	-	-	53.1
25–29	33.7	53.0	57.7	61.8	70.3	78.7	18.8
30–34	54.1	75.6	78.7	82.5	88.8	92.6	5.1
35–39	65.4	82.3	84.3	88.4	90.7	94.4	2.3
40–44	62.5	86.2	89.7	92.4	96.4	97.3	0.9
45–49	28.9	62.4	70.3	75.7	-	-	2.7

- = not applicable.

no education, while it was about 19 years among women with an educational level of secondary or above. Women's work status also showed significant differential effects on median age at marriage (P <0.001). Women who were employed married later. Age at marriage was likely to be higher among the women who felt empowered and could participate in the decision-making process regarding family matters.

The type of marriage, specifically whether it was consanguineous or non-consanguineous, had a statistically significant effect on the timing of the marriage with consanguineous marriages likely to occur at an earlier age (median age 15 years), but about 17 years for non-consanguineous marriages (P <.001).

Table 6 shows the age cohort trend at Omani women's first marriage. Nuptiality cohort trends were examined by comparing the distribution of the proportion of ever-married women by age for successive age cohorts. In the 25–29 year old cohort, one-third of women were married by age 15, 58% were married by age 19, and 79% by age 25. Overall, nearly 30% of the women aged 20–44 were married by 15 years old. By age 19, 62% of the women aged 20–44 were married and only 25% were married after age 20 indicating a long tradition of early female marriage in Oman. However, recently there has been a substantial shift towards later marriage among women. For example, the proportion married by age 20 fell steadily from the oldest to youngest age groups. The proportion fell from 92% for women aged 40–44 to 38% for women aged 20–24.

The differential analysis of age at first marriage showed that all the selected background variables had a statistically significant effect on age at marriage. However, these are unadjusted effects and encounter complications due to the influence of other variables which may be correlated. To disentangle the effects on the dependent variable of each of the inter-correlated variables, a multivariate logistic regression model was applied to the data in order to assess the effects of various background characteristics more fully and to provide a succinct summary of the effects.

Table 7 shows the effects (odds ratios) of selected background characteristics of women by age at marriage. The logistic regression analysis suggests that women's age, residential status, region of residence, education, types of marriage, and family size as measured by number of children born were significant determinants of age at first marriage.

As expected, the age of women has a strong negative effect (P <0.001) on the likelihood of early marriage. Today's young women are less likely to marry early than their older counterparts. Three additional factors are associated with delaying early marriage: 1) residential status; 2) being born or brought up in urban areas (urban women were about 30% less likely to marry early than rural women), and region of residence. Except for Muscat, the other 6 regions had a higher likelihood of early marriage than the Al-Dhahirah western urbanised region. The effects are statistically significant for Dhofar, the southernmost region (P <0.01) and the Al-Sharqiah eastern desert region (P <0.05).

Attainment of a level of education beyond primary had a strong negative effect on early marriage. Women with primary, preparatory,

Table 7: Logistic regression analysis showing the extent of the effect (odd ratios) of selected correlates on women younger than 20 at first marriage (Oman, 2000)

Variables	Coefficient (β)	SE of β	P-value	Odds ratio (OR)
Age	-.116	.013	.000	0.890
Residential Setting				
Urban	-.363	.152	.012	0.695
Rural (ref.)				1.000
Region of Residence				
Muscat	-.011	.241	.180	0.989
Al-Batina	.232	.232	.287	1.261
Dhofar	.915	.290	.001	2.496
Al-Sharqiah	.662	.292	.015	1.940
Al-Dhakhlia	.353	.263	.152	1.424
Al-Dhahirah (ref.)				1.000
Educational Level				
No education (ref.)				1.000
Some primary	-.012	.226	.952	0.988
Primary/preparatory	-.354	.166	.014	0.702
Secondary or higher	-.561	.185	.001	0.571
Work Status				
Work for remuneration	-.260	.195	.015	0.771
Not working for remuneration (ref.)				1.000
Type Marriage				
Consanguineous	-.467	.126	.000	0.627
Non-consanguineous (ref.)				1.000

ref. = reference category.

secondary, or a higher level of education had a lower risk of getting married early than the women with no education. This may be due to time spent in schooling, an increased interest in finding an appropriate match, or an increased interest in getting employment. Working women were 23% less likely to marry early than their non-working counterparts. The type of marriage, consanguineous or non-consanguineous, appeared to be a strong determinant of marital timing. Consanguinity is one of the key cultural factors mediating marriage timing. The data indicated that women who had a consanguineous marriage are 37% more likely to have married early.

Discussion

This study analysed female marriage patterns and timing of marriage in Oman by utilising recent national level survey data. The results indicate that marriage is universal in Oman, as by age 50 almost all women (99.4%) are or have been married at least once. Many aspects of the nuptial behaviour of Omani women continues to follow traditional patterns. A key aspect of marriage patterns is the high prevalence of consanguineous marriage, as more than half (52%) of married women are blood relatives of their husbands. This is a very similar pattern to that in other Arab countries. However, the overall prevalence of consanguineous marriage in Oman is higher than in most Arab and Middle East countries, except Saudi Arabia (58%), Mauritania (60%) and Sudan (65%).[6,9,21] This reflects

both prevailing religious and cultural practices in the region.

Although the overall prevalence of consanguineous marriages declined slightly, from 54% in 1995 to 52% in 2000, the prevalence of first-cousin marriages increased from 33.7% in 1995 to 38.5% in 2000. This is mainly due to a decline in second cousin or more distant cousin marriages. Women's increasing education levels, their declining fertility resulting in lower numbers of suitable relatives to marry, participation in paid employment, cultural empowerment, and urbanisation may have caused the decline in overall consanguineous marriage. The apparent increasing trend in first cousin marriages may be related to deeply rooted cultural practice as well as the significant social and economic advantages of first cousin marriages in Oman.[6] Consanguineous marriages, particularly the first cousin marriages, promote family ties, reduce dowry or bride-wealth payment requirements, simplify premarital negotiations, offer a greater compatibility between spouses and other family members, offer a lesser risk of hidden financial and health issues, and keep family property within the parental families.[22,23]

The data reveals that about 12% of ever-married women have one or more co-wife, indicating that the rate of polygynous marriage is also quite high in Oman. Over the period analysed, the rate of polygynous marriages remained more or less stable. As residents of an Islamic state, Oman's men are legally allowed to have up to four wives if they can afford it. We speculate that the stability of this rate may be attributed to the affluence in the country.

These findings indicate a trend in rising age at women's first marriage in Oman, even though marriage remains virtually universal. The change was apparent especially for more recent marriages and among younger cohorts of women and for certain sociocultural groups. This was evidenced by the fact that 33% of women aged 20–24 were married by their age 19 compared with 58% of those aged 25–29 years and 79% by age 30–34 years. The proportion of single females of reproductive age doubled (from 18 to 36%) between 1988 and 1995 and was 44% in 2000.[11,12] Over that period, the proportion of single women increased in almost all age groups. The most remarkable rise occurred in the younger age groups, particularly in 15 to 29 year olds. Thus, the pattern of women's age at first marriage in Oman is changing from an early and universal pattern to one of delayed but universal marriage, which is similar to the Eastern European marriage pattern.[24–26] Such a change is expected to continue and as a consequence the fertility-inhibiting effect of Oman's changing nuptiality pattern will increase over time.[27]

The results of the multivariate analysis indicate that women's educational levels, age cohorts, residential status, region of residence, and types of marriage were the most important factors affecting age at marriage and had both direct and indirect effects on participation in the labour force. Respondents' residential status (i.e. rural or urban) in general reflects their cultural background, marriage norms, and family system. Urban females tend to marry later compared to rural ones. This phenomenon is a possible consequence of modernisation, which has already resulted in an expansion of educational opportunities and changes in the work force and occupational activities, particularly for females in Oman. However, occupational effects on marriage are largely a function of education.

The results of this study are consistent with the findings of other studies which indicate that educational attainment and employment reduce women's' likelihood of early marriage.[18,28] Women in school are likely to postpone marriage either because of the time spent in school or because of exposure to Western middle class ideals and norms, which influence preferences and lifestyle choices. Women who work are likely to postpone marriage due to greater social independence from their families and communities, and thus a less exposure to pressures to marry. Financial independence as well as control over earnings also allow working women to postpone marriage.

As mentioned earlier, marriage type is also one of the key factors affecting timing. The data showed that women who have non-consanguineous marriages are more likely to marry late. It is possible that this is because consanguineous marriages are easier to arrange and may cost less in terms of dowry payments.

It is speculated that the increasing costs of marriage: bridal cost and gifts, ceremony, furniture, and appliances might be related to the rising marriage age for both males and females. Few studies in the Arab region or other developing countries,

with the exception of India and Bangladesh, have linked delays in marriage to increases in the cost of marriage.[29,30] The cost of marriage is considered the "hidden variable in the new Arab demography."[29]

Changes in fertility, age composition, and family demography are clearly associated with nuptiality changes. The future direction of fertility change is very much related to the ongoing changes in nuptiality as well as possible changes in marital fertility patterns to offset the fertility-inhibiting effects of later marriages in Oman.[27] Understanding determinants of nuptiality change, the response of married females to shorter fecund periods of life, and the health consequences of different reproductive patterns are all areas for future research needed to guide future planning.

Conclusion

Changing demographic patterns of marriage in Oman reflect broader social and economic changes that are taking place throughout the Arab world. The majority of the Arab world's population, including Oman, now lives in cities and is involved in the industrial or service sectors. Arab youth are more educated compared with previous generations, and young educated women are more likely to work outside their homes. These changes challenge women's traditional roles in the household and society as a whole and have a positive impact on rising trends in age at first marriage. The delay in marriage among recent female Omani cohorts may also be related to the persistence of traditional cultural attitudes and gender norms, combined with the increasing cost of marriage, which is related to increasing bridal and living costs, and higher expectations of living standards. Women's rising age at marriage in recent years in Oman not only stimulates the demographic transition but also gives rise to many issues and challenges. Due to delayed marriage, fertility is declining and changing the age structure. The population of Oman is moving from a very young age structure to one where young adults aged 10–24 constitute more than one-third of the population. This growing young adult population, accompanied by delayed marriage, and the growing autonomy of females, gender equality, and exposure to Western media will have serious social, economic and political ramifications for Oman, highlighting the need to understand the new situation of youth, and their characteristics, problems, and demands.

The consequences of these demographic transitions are evident today in many Arab countries, and expected to be even more pronounced in the coming years. The Arab Spring may be one of the symptoms of such consequences. There is a demographic window of opportunity due to a notable decline in fertility, but Oman's potential success in benefiting from this demographic bonus will depend on good national population policy. Better understanding young people's sexuality is another area of concern. The social transition to later marriage in Oman, however, is unlikely to be painless for Oman's society, families, or the government, since delayed marriage means prolonged exposure to at least the possibility of premarital sex and its consequences. Culturally appropriate policies need to be undertaken to address the issues and challenges of unmarried young adults in Oman.

Despite recent trends in delayed age at first marriage, a substantial proportion of Oman's marriages are still undertaken by young women. The negative health, demographic, social, and economic consequences of these types of marriages are well-documented in literature. This study therefore underscores the need for government policies to support the reduction of teen marriages in Oman. Considering that a large proportion of women of reproductive age, particularly the women from older marriage cohorts, have never gone to school, information and education stressing the disadvantages of early marriage and motherhood should be made available to all girls and women in their community. This could be done through mass media programmes. In view of the ever-increasing proportion of girls that are attending school due to universal free education in Oman, school-based reproductive health programmes need to be introduced to raise awareness about reproductive health.

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