AN EXPLORATION OF NUPTIALITY PATTERNS IN EGYPT AND THE MAGHREB COUNTRIES

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ABSTRACT

This research studies the nuptiality patterns in Egypt and the Maghreb countries of Algeria, Morocco, and Tunisia. Despite the importance of nuptiality as a demographic component, it is considerably under studied when compared to fertility, or mortality, particularly in the Arab region. Nuptiality studies in the Arab region are very sparse and marital status is usually analysed in terms of education and age without looking at other potential explanatory variables and interactions. In general, education and employment experiences can enhance autonomy and self-recognition, which in turn change people's expectations and prospective gains from marriage. However, the effect of both education and employment on marriage decisions is rather complex and does not usually follow the expected pattern in all the countries in the region. For example, the persistence of the kinship system, in many countries in the region, which benefits arranged marriage can well limit the role of education and employment on marriage. Such observations invited the elaboration of an analytical framework that takes into account the relationships between different factors that can interact and affect nuptiality.

Both the Demographic and Health Surveys (DHS) and Pan Arab Project surveys (PAPCHILD) provide national information on some of marriage aspects in the four countries. The data used come from the Egypt DHS 1995, Morocco DHS 1992, Tunisia DHS 1988, and Algeria PAPCHILD 1993. The available data are used to study the nuptiality patterns in the four countries and draw comparisons between them in the light of the proposed fame-work. In addition to the standard DHS questionnaires, the Egypt DHS 1995 includes a women's status module, which provides richer information on the marriage and husband selection process as well as indicators of post marital inter-spousal dynamics. Such information is used to perform an in-depth analysis of nuptiality patterns in Egypt and to study the relationship between the intermediate variables and characteristics of the marriage, as well as with inter-spousal relationships and the post-marital profile of women.

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CHAPTER I: INTRODUCTION

This chapter is consisted of three main sections: the first section briefly introduces the importance of marriage and family formation in the Arab region with a brief description of such patterns. The second section describes the organisation of the thesis and summarises the content of each chapter. The third section draws an overview picture of nuptiality patterns in the Arab region with a brief reference to the experience of other developing regions.

I.1 MARRIAGE AND THE ARAB REGION

The League of Arab States includes twenty-two Arab countries. Among these, four countries, Djibouti, Comoro, Somalia and Mauritania, are suspected to be influenced by a different set of cultural and social forces, as their history, language, and religious composition are quite different from the rest of the Arab countries. The remaining eighteen Arab countries, which appear to be more socially and culturally homogeneous differ a great deal in the amount and type of information on marriage.

Marital status is one of the most important social and demographic variables. The nuclear family is the fundamental procreative and socialising unit. Patterns of family formation and dissolution serve as basic indicators of a population's social structure and potential for growth. Moreover, in the Arab region, the only acceptable context for sexual activity and parenthood is within marriage. In this cultural context, non-marriage and dynamics within marital unions may have important implications on well being of individuals, offspring and society as whole.

Rashad and Osman (forthcoming) describe the marriage patterns in the Arab region during the first half of the twentieth century as having been similar to the non-European marriage type characterised by early marriage and a relatively low incidence of celibacy. This pattern was supported by a number of economic, cultural and social factors that operated in many developing countries at this period of time. The agrarian production system and the extended family system, which is characterised by strong common economic and family ties, supports early marriages as it provides the economic needs for the newly married couples. Furthermore, marriage in the Arab society is a legally and socially well-defined turning point in the life of both males and females and reflects

status attainment. The marriage pattern in the Arab region, during this period, was characterised of early female age at marriage, with high chances for the bride to co-reside with her in-laws; marriage is more likely to occur among relatives, with the husband older than the wife.

Most of the Arab region countries share more than just the same language and religion, they have more or less the same cultural values and morals and all have been, and many still are, through long political struggles and colonisation. However, the more recent picture of marriage pattern across the region is far from being as consistent as it used to be at the beginning of the twentieth century.

Rashad and Osman (forthcoming) observe that most of the Arab countries are going through some sort of 'nuptiality transition' from one pattern of marriage to another, and that different countries are in different stages of such transition. They described three distinctive female marriage patterns, which are based on the UN (1990a) definition: one of early timing and universality of marriage, the second of late timing and universality of marriage, and the third of late timing and non-universality of marriage. The authors assume that each country passes from one pattern to another in order and the last stage of such transition is to reach the third pattern of late and non-universal marriage. Their choice of the threshold to move from one stage to another was rather arbitrary. They measured early marriage by the percentage of women aged 20-24 who had married by age 20 and universality of marriage by the percentage of women aged 35-39 who had ever married. Their chosen threshold to move from early to late timing of marriage that the percentage of women age 20-24 married by age 20 is less than 40 percent, and the threshold to move from universality to non-universality of marriage that the percentage of never married women at age 35-39 is greater than 10 percent. Using the previous definition they observe that different Arab countries were at different 'transition stages' during the 1990's. For example, they found that Egypt in 1995, Oman in 1995, and Yemen in 1997 are still in stage 1 with early and universal marriage; while Tunisia in 1995, Algeria in 1992, and Morocco in 1995 were in stage 2 of the transition with late and universal marriage; and finally Lebanon in 1996, Kuwait in 1996, and Libya in 1995 were in stage 3 with late and non-universal marriage.

The distribution of the Arab countries according to the defined 'nuptiality transitional stages', by Rashad and Osman (forthcoming), can be highly criticised, as the choice of each stage's threshold is rather obscure. Moreover, the quality of data used has not been examined in most of the data sets used. However, the distribution emphasises the

conclusion that there is currently no unique marriage pattern that can describe the nuptiality experience of all the Arab countries. Given the common culture, religion and strong emphasis on family in all the Arab countries, such observations raise the questions as to why different Arab countries have different marriage patterns and what factors can explain such variations. The variations in nuptiality patterns in the region do not necessarily follow a simple explanation. For example, we cannot simply justify such variations by assuming that the more educated the women, and therefore the more they are exposed to new ideas, the more likely they are in a higher nuptiality transitional level. Because, for example, the percentage of female 20-24 who had secondary education or more is 43 percent in Egypt 1995 while it was 24 percent in Algeria 1992, yet Egypt was in stage 1 while Algeria in stage 2 of the transition according to Rashad and Osman definitions.

Despite the importance of nuptiality as a demographic component, it is considerably under studied when compared to fertility, or mortality, particularly for the Arab region. Nuptiality studies for the Arab region are very sparse and marital status is usually analysed in terms of education and age without looking at other potential explanatory variables and interactions. In general, education and employment experiences can enhance autonomy and self-recognition, which in turn change people's expectations and prospective gains from marriage. However, the effect of both education and employment on marriage decisions is rather complex and does not usually follow the expected pattern in all the countries in the region. Such observations invited the elaboration of an analytical framework that takes into account the relationships between different factors that can interact and affect nuptiality. For example, the persistence of the kinship system, which benefits arranged marriage, in many countries in the region can well under play the role of education and employment on marriage. Within the context of strong ties and kin groups it is very difficult for individuals to change these norms. However, there are many variables that compete with such norms. Higher education and employment on the micro level and the development process at the macro level are main factors in shaping new values that favour different nuptiality elements.

I.2 THESIS DESCRIPTION

This research studies the nuptiality patterns in Egypt and the Maghreb countries: Algeria, Morocco, and Tunisia. The choice of these countries was mainly based on the

availability of enough comparable and accessible data sets. It also aims to draw comparisons between relatively homogenous set of countries representing the North African region with its relatively common history and cultural context. Both the Demographic and Health Surveys (DHS) and Pan Arab Project surveys (PAPCHILD) provide national information on some of marriage aspects in the four countries. The data used come from the Egypt DHS 1995, Morocco DHS 1992, Tunisia DHS 1988, and Algeria PAPCHILD 1993. The available data are used to study the nuptiality patterns in the four countries and draw comparisons between them in the light of the proposed framework. In addition to the standard DHS questionnaires, the Egypt DHS 1995 includes a women's status module, which provides richer information on the marriage and husband selection process as well as indicators of post marital inter-spousal dynamics. Such information is used to perform an in-depth analysis of nuptiality patterns in Egypt and to study the relationship between the intermediate variables and characteristics of the marriage, as well as with inter-spousal relationships and the post-marital profile of women.

This thesis is composed of seven chapters in addition to the introduction chapter. Chapter II discusses and builds the analytical framework used in this research. The proposed framework suggests nuptiality to be formulated of four main elements, timing, prevalence, stability and characteristics. The current framework suggests that both macro and micro level variables interact and influence three major intermediate variables, which in turn shape the nuptiality patterns. The interactions between different variables are expected to be crucial in explaining their net effects on the intermediate variables. A major factor in determining changes in marriage patterns in the Arab region can be the existent kinship structure and laws governing marriage. These two may play an important role in shaping the norms of desirable marriage elements. On the macro-level, laws governing marriage and relations, kinship and gender structure, religious structure of the country, development level of the country, political disruption, migration and type of residence are important factors that can influence nuptiality. On the micro-level, the families' characteristics, individuals' characteristics, and social background are some of the main factors to be considered. The intermediate variables set of factors includes cost of marriage, norms of acceptable marriage elements, and partner selectivity and availability of mates.

Chapter III thoroughly reviews different methods used to study various nuptiality elements. In this chapter each method is explained and data required are mentioned.

Also the advantages and disadvantages of each method are discussed. In Chapter IV the data quality of different surveys' data for the four chosen countries: Egypt, Algeria, Morocco, and Tunisia, are assessed in terms of age and age at marriage reporting.

The results of the nuptiality analysis for the three Maghreb countries; Algeria, Morocco and Tunisia, are discussed in Chapter V. Chapter V starts by providing some background demographic information and comparisons between the three countries, followed by description of data and variables used for each country in the study. Then the results of each marriage element for the three countries are explained. A brief comparison of nuptiality patterns in the three countries is drawn at the end of chapter V.

Chapter VI is allocated to the results of the analysis of nuptiality patterns in Egypt using the standard Demographic and Health Survey questionnaire. This chapter contains the results of analyses similar to those performed for the three Maghreb countries without using the women's status module for comparability. Chapter VII is designated for the in-depth analysis of nuptiality elements where information is only available for Egypt using the Demographic Health Survey, 1995, women's-status questionnaire. This chapter covers the study of partner selectivity process in Egypt and its link with some post-marital inter-spousal relations as well as with some marriage elements.

Chapter VIII is the conclusion chapter, where the results for the nuptiality patterns analyses for the four North African countries are compared. Interpretations and implications of different findings as well as proposed areas for further research are discussed.

I.3 AN OVERVIEW OF NUPTIALITY PATTERNS IN THE ARAB REGION

Before studying the detailed nuptiality patterns of the four chosen countries, it will be useful to draw an overview of existing nuptiality patterns in the Arab region in general. This overview is mainly based on published data and cannot cover all the Arab countries for all nuptiality elements. Some of the Arab countries only have information from as far as 1981, yet others reflect more recent experience up to 1998. However, most of the data points were during the late 80's and early 90's. It should be kept in mind that the quality of the data has not been tested, because of the inaccessibility of the original data sets, and thus may prove unreliable in some cases.

However, they will be used to provide a rough picture of marriage elements in the countries of the region and extreme figures should be interpreted with caution.

I.3.1 Prevalence of Marriage

One of the ways to examine the level of marriage prevalence in one population is to look at the percentage of ever-married women at a relatively older age, where the chances of getting married after such age will be reduced significantly given the traditional acceptable and preferred set of marriage norms. In this section we will compare both proportions of ever-married women at age groups 35-39 and 45-49. Map i.3.1 presents the distribution of most of the Arab countries by proportion of women ever married at age group 35-39; figures are presented in table i.3.1.

Map i.3.1 shows that all the countries covered have a prevalence of marriage that is higher than 85 percent, with the exception of Lebanon in 1996 and Qatar in 1987. Only Libya in 1995 and Palestine in 1998 have a percentage of women ever married at age 35-39 that is between 85 and 89 percent, and the rest of the countries have a prevalence of marriage that is 90 percent or more.

Map i.3.1 reflects that the dominant pattern across the region is of high prevalence of marriage. Figure i.3.1 presents the proportions of women ever married at both age groups 35-39 and 45-49 for different Arab countries. It is clear from the data that marriage is almost universal in almost all the Arab countries. However, some

Map i.3.1 Percentage of women ever married at age 35-39 at time of survey

countries, such as Lebanon marriage cannot be considered universal even among women at age 45-49 where 12 percent of women at this age group are still never married.

Figure i.3.1 Percentage of ever married among women age 35-39 and 45-49 at time of survey in some Arab countries

Country and year

☐ 35-39
■ 45-49
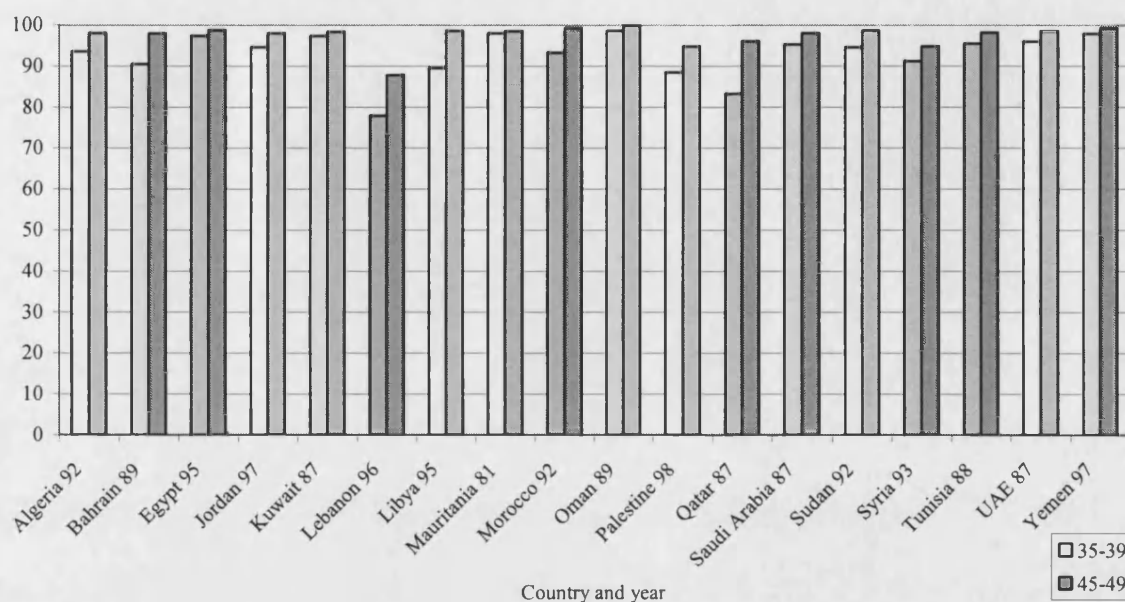
In comparison to other developing countries, we find that most sub-Saharan countries have a prevalence of marriage that is equal or higher than that in the Arab region, with the exception of few countries such as Namibia in 1992 and Botswana in 1988. The experience of Latin American countries, is also similar where all of the countries covered by the DHS surveys have a proportion of ever-married women at age 45-49 that is 95 percent or more, with the exception of Colombia in 1995, 92 percent, and Paraguay in 1990, 93 percent. On the other hand, the prevalence of marriage among women age 45-49 is higher among the Indian sub-continent than that in the Arab region. For example, the proportion is 99 percent in India in 1999 and Bangladesh in 1996/97. The same proportion was 94 percent or more in all other Asian developing countries with the exception of Vietnam in 1997 and Philippines in 1998 (data are extracted from the Demographic and Health Surveys and presented in the appendix, Section I.4).

I.3.2 Timing of Marriage

Adolescent marriage

Adolescent marriage reflects how very early marriage is practiced, and thus accepted, in a society. A good index of early marriage is to compare the proportions of women married by a relatively young age, such as 15 or 16; however, such an index is not

available for most Arab countries. To have an idea about the variations in adolescent marriages in the region, the proportion of women ever married at age 15-19 can be compared for different countries. The choice of this proportion as an index of the prevalence of adolescent marriage is mainly due to its availability for most of the Arab countries. However, we have to keep in mind that this age group does not entirely reflect the very young females as the legal age of marriage for females in all Arab countries ranges from 16 to 18 years old, and females who marry at age 18 or 19 are not considered very young by most of the Arab societies. Map i.3.2, and data in table i.3.1, presents the percentage of ever-married women at age group 15-19 for some of the Arab countries at time of surveys.

Although the variations in the prevalence of marriage are very minor, the differentials in timing of marriage between different Arab countries seem to be wider. The data show that adolescent marriages, represented in the proportion ever-married at age 15-19, vary widely across the region from only 1 percent in Libya 1995 to

Map i.3.2 Percentage of women ever-married at age 15-19
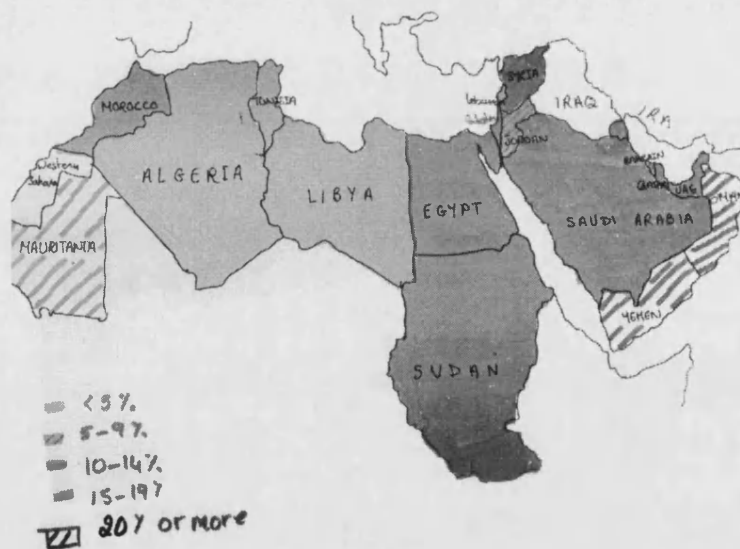
37 percent in Oman 1989 and 39 percent in Mauritania 1981. The majority of North African countries, Algeria, Tunisia and Libya in addition to Lebanon in the Middle East reported a proportion of adolescent marriage that is lower than 5 percent. On the other hand, most of the gulf countries, Saudi Arabia, United Arab Emirates, Oman, and Yemen reported that 15 percent or more of women aged 15-19 had ever married. Egypt, Morocco, Sudan, Syria, Kuwait and Qatar have a middle rate of adolescent marriage with 10-14 percent of women aged 15-19 ever married.

Comparing the proportion of ever-married women at age 15-19 in the Arab region to other developing countries, we notice that this proportion is much higher in most sub-Saharan countries than in the Arab region. The proportion of ever-married women at

age 15-19 in most of Sub-Saharan African countries and the Indian sub-continent is 25 percent or more (see Tables i.4.3 and i.4.5 in appendix). In Latin American countries also, the proportion of ever-married women at the same age group ranges from 13 percent to 35 percent. We do not notice the very low proportions observed in some Arab countries, such as Libya where only 1 percent of women 15-19 were ever married and again we ought not to trust such extremely small proportion. However, a number of other Arab countries have relatively law prevalence of marriage at age 15-19, less than 5 percent, such as Algeria and Tunisia, which may indicate a slightly different pattern of adolescent marriage than that in other developing countries.

Table i.3.1 Percentage of ever-married women at different age groups for some of the Arab countries at different points of time

Country and year	Age at time of survey		
	15-19	35-39	45-49
North Africa			
Libya 95[2]	1.0	89.5	98.6
Algeria 93[2]	3.6	93.6	98.1
Tunisia 95[2]	3.2	94.0	97.2
Sudan 92[1]	10.6	94.6	98.7
Morocco 96/97[1]	12.7	88.5	96.6
Egypt 95[1]	14.3	97.4	98.8
Middle East (Northern)			
Lebanon 96[4]	4.4	78.0	87.8
Jordan 97[4]	8.2	94.6	98.0
Syria 93[2]	13.9	91.2	94.8
Palestine 98[4]	19.6	88.5	94.8
Gulf Countries			
Bahrain 89[3]	5.6	90.5	98.0
Qatar 87[3]	10.0	83.3	96.1
Kuwait 87[3]	11.7	97.4	98.4
Saudi Arabia 87[3]	16.1	95.3	98.1
UAE 89[3]	18.5	96.0	98.5
Yemen 97[1]	26.8	97.9	99.2
Oman 89[3]	37.2	98.6	99.9

Sources: 1- DHS surveys, 2- PAPCHILD surveys, 3- Gulf Child Health Surveys, 4- PFHS surveys. Countries are ordered by region and within each region ordered ascending according to percentage ever married at age 15-19.

Female Median Age at First Marriage (MAFM)

The median age at first marriage for women age 25-49 at time of survey has been gathered for some of the Arab countries and at different points of time if available. Table i.3.2 presents the median age at first marriage for the specified age group for

different countries and the source and date of data collection. Table i.3.2 shows that Yemen and Sudan had the lowest median age at first marriage ranging from 16 years to less than 18 years; note that the same two countries had a relatively higher proportion of ever-married women at the age group 15-19. On the other hand, the highest median age at first marriage was around 21 years and found in Tunisia 1988 and Jordan 1997 who also had low proportion of ever-married women at age 15-19. When excluding Sudan and Yemen, we notice that the differences in the MAFM between the remaining 4 countries is around two years or less.

Table i.3.2 Median ages at first marriage for women age 25-49 at time of survey for some Arab countries

Country	Source and Date	Median age at first marriage
Egypt	DHS 1988 DHS 1992 DHS 1995	18.5 19.2 19.3
Morocco	DHS 1987 DHS 1992 DHS 1995	18.5 18.8 20.2
Sudan	DHS 1989/90	17.8
Tunisia	DHS 1988	21.1
Jordan	PFHS 1990 PFHS 1997	19.6 21.5
Yemen	DHS 1991/92 DHS 1997	15.8 16.0

Map i.3.3 presents the median age at first marriage among women of age cohort 30-34 for the countries in the region at time of survey, the data can be found in table i.3.4. We chose the age cohort 30-34 of women to show the timing of marriage among a middle age cohort and avoid selectivity biases at older

Map i.3.3 Median age at first marriage for women age cohort 30-34 at time of survey

15-16
17-18
19-20
21-24

24
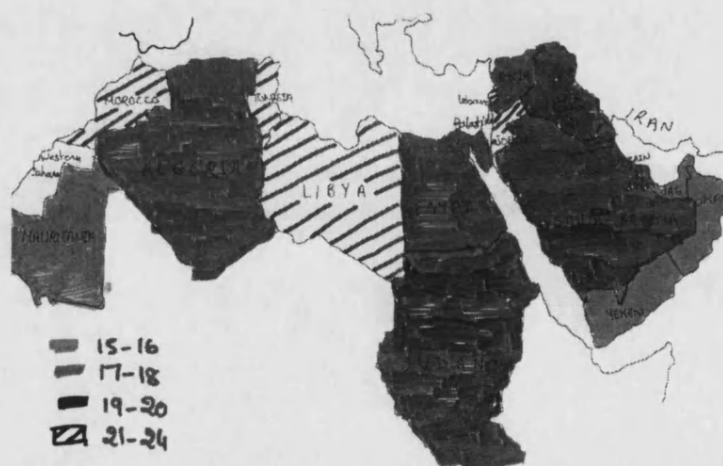
and younger age cohorts.

Map i.3.3 shows that in all North African countries, Morocco, Algeria, Tunisia, Libya, and Egypt, the median age at first marriage for women age 30-34 was 19 years or higher. On the other hand, all west Asian countries, with the exception of, Lebanon, Palestine, Jordan and Syria, have a median age at first marriage for women 30-34 that was 18 years or lower.

The data show that the median age at first marriage in the Arab region is not very low when compared to other developing countries.

For example, the median age at first marriage for women 25-49 in all Sub-Saharan African countries is 18 years or less reaching 15.8 in Chad 1996, with the exception of Botswana in 1988 and Namibia in 1992 where it was 24 and 24.8 years respectively. However, the Latin American countries show a narrower range of MAFM ranging around 19 to 21 years (comparisons based on Demographic and Health surveys published data and is presented in the appendix).

Trends in Female Median Age at First Marriage

One of the ways to look at the trends in timing of marriage is to compare the median age at first marriage (MAFM) across different age cohorts within the same survey. Such data were published for quite a few countries in the region, which can allow us to observe any changes in timing of marriage. Table i.3.3 presents the median age at first marriage for age-cohorts of women in some Arab countries as well as the source and date of the data.

The available data shows that Lebanon in 1996 had the highest median age at first marriage across all age cohorts. For example, the median age at first marriage for the age-cohort 25-29 in Lebanon 1996 was 24.5 years which is close to that in Morocco 1995, 23.8 years, Tunisia 1995, 23.2 years, and Jordan 1997, 23.1 years. However, the median age at first marriage for the cohort aged 25-29 was at least 8 years lower in Oman 1988/89 (15.7 years), nd Yemen 1997 (16.6 years). Such observations illustrate the more recent diversities in timing of marriage across the region. The table also shows that some countries have relatively younger median age at first marriage across all age-cohorts than other countries. Thus, Oman, United Arab Emirates, and Yemen, are characterised more by consistent early marriage. On the other hand, other countries, such as Jordan, Lebanon and Tunisia have higher median age at marriage for younger age cohorts.

Table i.3.3 Median ages at first marriage for age cohorts of women in some Arab countries at most recent points of time

Country and year	Age-cohort at time of survey				
	25-29	30-34	35-39	40-44	45-49
North Africa					
Libya 95[2]	a	22.3	18.7	17.3	17.0
Morocco 95[1]	23.8	21.2	19.6	18.9	17.5
Tunisia 95[2]	23.2	21.2	20.0	b	b
Algeria 93[2]	21.9	19.1	18.3	16.9	16.3
Egypt 95[1]	20.2	19.4	19.2	19.0	18.0
Sudan 93[2]	19.5	18.0	15.6	14.9	14.8
Middle East (Northern)					
Lebanon 96[2]	24.5	23.8	21.9	21.7	20.9
Jordan 97[4]	23.1	22.1	20.9	19.7	19.4
Iraq 89[3]	19.9	17.8	16.9	16.4	16.0
Gulf Countries					
Bahrain 89[3]	22.5	19.9	17.9	19.0	18.0
Qatar 87[3]	21.4	18.0	16.6	16.5	15.9
Kuwait 87[3]	19.1	18.7	18.0	17.3	17.1
Saudi Arabia 87[3]	18.1	17.2	16.5	16.5	16.6
UAE 87[3]	17.7	16.8	16.3	16.0	16.2
Yemen 97[1]	16.6	16.0	15.9	15.8	15.7
Oman 88/89[3]	15.7	15.6	15.2	15.0	14.7

Sources: 1- DHS surveys, 2- PAPCHILD surveys, 3- Gulf Child Health Surveys, 4- PFHS surveys. Countries are ordered by region and within each region ordered descending according to median age at first marriage for the age-cohort 25-29. a Less than 50% of women in this age group had been married at time of survey. b Data not available. Extracted by the Social Research Centre, the American University in Cairo and presented in the Nuptiality Group meeting in 1999.

Figures i.3.2 to i.3.4 present the median age at first marriage for women by calendar year, which is calculated from table i.3.4. Figure i.3.2 chart presents the experience of the North African countries, Libya, Morocco, Tunisia, Algeria Egypt, and Sudan. Figure i.3.3 presents the experience of the three Northern Middle Eastern countries, Lebanon, Jordan and Iraq, while figure i.3.4 presents the Gulf countries. The three charts are plotted to the same scale to allow comparability.

Figure i.3.2 shows that the MAFM has increased over time in all the countries. However, the level of increase in the MAFM is different among different countries. The three Maghreb countries as well as Libya and Egypt had higher MAFM than Sudan in all years. However starting form the early 80's the gap in the MAFM between Sudan and Egypt started to be much smaller. Although that up to year1975 the MAFM in Egypt had similar MAFM to that among other North African countries, however, during the 80's the MAFM in Egypt only increased slightly while that in the other countries accelerated.

Figure i.3.2 Median age at first marriage by calendar year for some North African Arab countries during the period 1954 to 1994
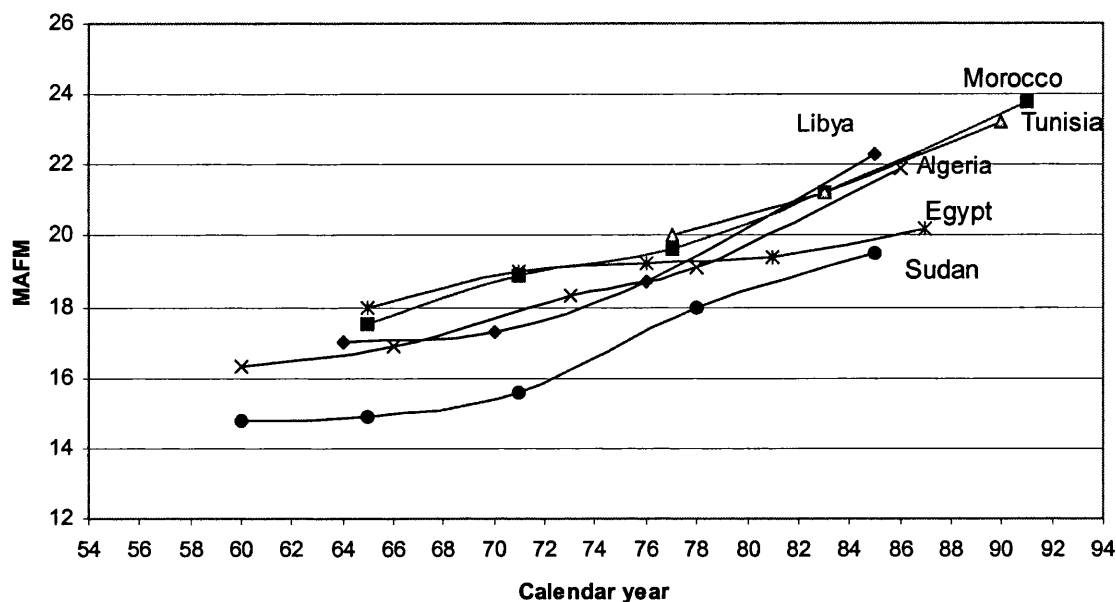
Figure i.3.3 Median age at first marriage by calendar year for some Northern Middle Eastern Arab countries during the period 1954 to 1994
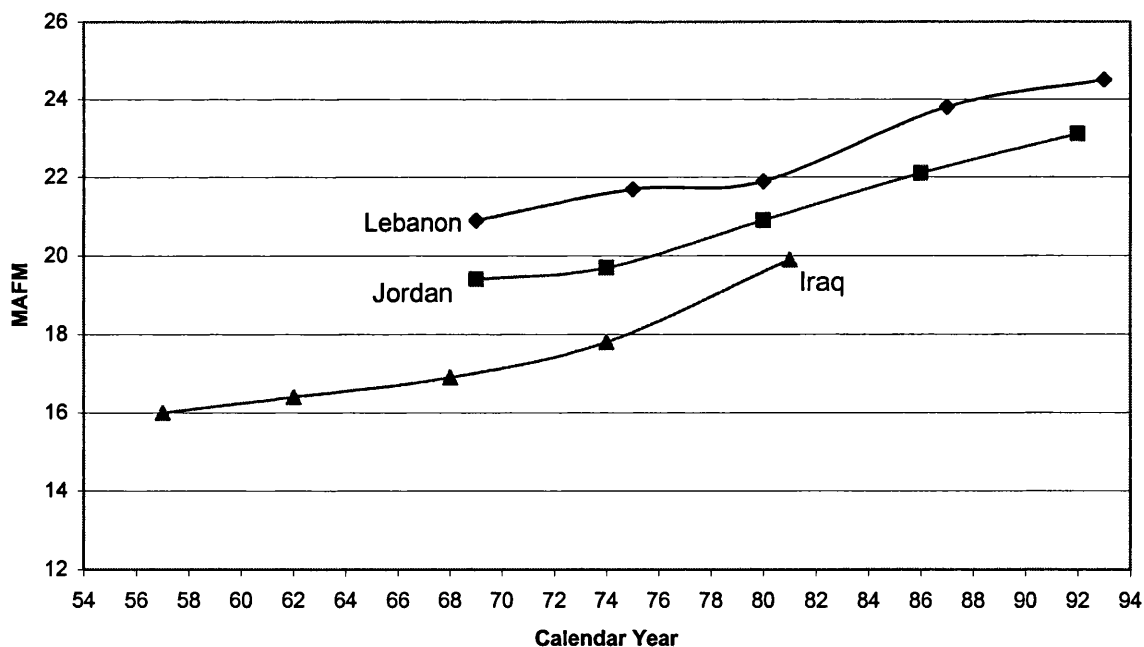
Figure i.3.3 shows that during the 70's Lebanon had the highest MAFM among the three countries presented followed by Jordan with at least one year difference in all years then by Iraq by further one to two years. The MAFM showed a clear increase in the three countries during the period presented. In Iraq, for example the MAFM increased by four years from 1957 to 1982.

Figure i.3.4 shows that the Gulf countries data provides information on the MAFM that is older in time than that for the other countries. The data shows a notable younger MAFM across most of the Gulf countries than other Arab countries. The trends in the MAFM are also more clustered, for example the MAFM for Saudi Arabia, UAE and Kuwait were almost the same up to 1970. Oman and Yemen had an even younger MAFM than the rest of the Gulf countries, and Yemen carried the same young MAFM up to the late 80's. However, data from Bahrain and Qatar show a notable acceleration in the MAFM during the 70's and early 80's. Yet the MAFM in Bahrain is very fluctuating and raise questions about the data quality of this survey.

Figure i.3.4 Median age at first marriage by calendar year for some Gulf Arab countries during the period 1954 to 1986
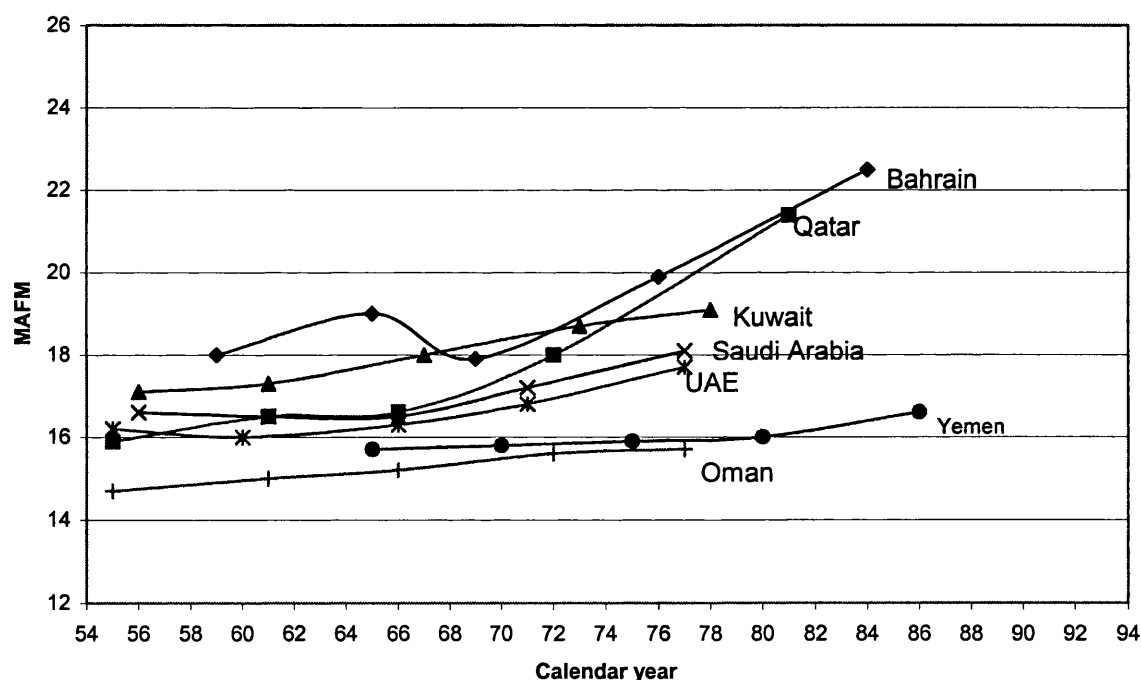
Male Timing of Marriage

To study the timing of marriage for both sexes the singulate mean age at first marriage (SMAM) for males and females is used. It is not recommended to relay on this method to get an indicator of the timing of marriage in the population when the data on exact marriage dates are available. Median age at first marriage is a better and more reliable indicator when the data is available. However, since data on the first marriage timing of males is usually missing from the available survey data one can use the SMAM to have an indication on the timing of male first marriage. When using the singulate mean age at first marriage for males, one should compare it to the same

indicator for females. For full discussion of the calculation method and advantages of each method refer to Chapter III.

Table i.3.4 lists the singulate mean age at first marriage for males and females in some Arab countries, and the differences between them, at the latest available data point. Note that the latest available data for some countries are relatively older than the others, especially for Iraq 1977 and Jordan 1981.

Table i.3.4 Singulate mean age at first marriage by sex for some Arab countries at different points of time

Country	Year and source	SMAM		Difference in SMAM
		Males	Females	
North Africa				
Algeria	1993[1]	30.1	25.9	4.2
Tunisia	1995[1]	30.1	26.5	3.6
Egypt	1991[1]	27.8	22.6	5.2
Morocco	1982[5]	27.2	22.3	4.9
Libya	1995[1]	32.0	29.2	2.8
Sudan	1992[1]	31.1	25.3	5.8
Middle East (Northern)				
Jordan	1981[4]	26.8	22.8	4.0
Lebanon	1996[1]	30.9	27.5	3.4
Iraq	1977[3]	25.2	20.8	4.4
Syria	1993[1]	28.5	24.5	4.0
Gulf Countries				
Oman	1988[2]	25.6	19.2	6.4
Qatar	1987[2]	26.4	22.9	3.5
Saudi Arabia	1987[2]	25.2	21.8	3.4
Bahrain	1989[2]	29.0	25.4	3.6
Kuwait	1987[2]	24.5	21.7	2.8
UAE	1987[2]	26.3	26.2	0.1

Source: 1- PAPCHILD, 2- GCHS, 3- Demographic Yearbooks, 4- Jordan Demographic Survey, 5- Annual Statistical Abstract, 6- UN statistical office questionnaire.

Table i.3.4 shows that the SMAM for males ranges from 24.5 years in Kuwait in 1987 to 32 years in Libya 1995. The SMAM for males was 30 years or more in Algeria 1992, Lebanon 1996, Libya 1995, and Sudan 1992. The same indicator ranges from 26-29 years in Bahrain 1989, Egypt 1991, Jordan 1981, Morocco 1982, Qatar 1987, Syria 1993, Tunisia 1984 and UAE 1987. Note that the SMAM for females is relatively high in United Arab Emirates (26.2 years) and Bahrain (25.4 years) when compared to that in other Gulf countries. We notice the consistency between the

SMAM for males and females where, in most of the cases, they are both either high or low.

I.3.3 Inter-Spousal Age Gap

The literature review reveals that larger age gap in favour of the husband is preferred in most of the Arab region countries. Age differences between spouses are due to a variety of social and demographic factors and norms, which usually define a range of socially acceptable differences between sexes in age at marriage. Polygyny contributes to larger differences between sexes because the larger, younger female cohorts provide the marriageable girls needed to accommodate the greater demand for brides by older men. Bride-wealth, and other costs of marriage, is another factor that leads to large age gap between spouses where men have to wait until all costs of marriage is collected. Migration may delay the marriage of migrant men and increase age differences either because there is a shortage of marriageable women. For full discussion on inter-spousal age gap and other marriage elements, refer to Chapter II.

The difference in the Singulate Mean Age at First Marriage between males and females is used as an indicator of inter-spousal age gap. Table i.3.4 presents these inter-spousal age gaps for different Arab countries. The differences in singulate mean age at marriage (SMAM) between sexes vary from 0.1 year, in United Arab Emirates 1987, to 6.4 years, in Oman 1988. Lebanon in 1996, Libya in 1995, Tunisia in 1984 and all the rest of the Gulf countries in 1987 had inter-spousal age gaps that were less than 4 years. Algeria in 1992, Jordan in 1981, Egypt in 1991, Morocco in 1982, Sudan in 1992 and Syria in 1993, had inter-spousal age-gaps that ranges from 4 to 6 years.

I.3.4 Polygyny

Polygyny in the Islamic religion is based on strict rules in the Koran. For example, the number of wives is limited to a maximum of four with equal economic support and equal treatment for each wife. If the husband agrees, a woman can secure a marriage contract that ensures that she remains the only wife.

Table i.3.5 presents the percentage of currently married women 15-49 who reported being married in polygynous unions at time of survey for several Arab countries. The proportion varies from as low as 3.6 percent in Egypt 1991 to 20 percent in Sudan 1989. With the exception of Sudan, the proportions of polygynous unions are in general around 10 percent or less.

Table i.3.5 Percentage of currently married women in polygynous unions at time of survey in some Arab countries at different points of time

Country	Source	Year	Percent in polygynous unions
Algeria	PAPCHILD	1993	5.5
Bahrain	GCHS	1989	9.0
Egypt	PAPCHILD	1991	3.6
Jordan	DHS	1997	6.5
Libya	PAPCHILD	1995	5.2
Oman	GCHS	1988/89	10.8
Morocco	DHS	1988	5.1
	DHS	1992	5.1
Syria	PAPCHILD	1993	5.8
Sudan	WFS	1978	16.8
	DHS	1989	20.2
	PAPCHILD	1992	16.8
Yemen	DHS	1991	5.9
	DHS	1997	7.1

It is commonly believed that the additional wives are generally women who had previously been either divorced or widowed, as such women are thought to experience greater difficulties than single women in finding a second husband. However, Chamie in 1986 showed that, according to marriage registration data for Egypt and Jordan during the period 1968 to 1979, sizable proportions of additional wives were single at the beginning of their polygynous marriage. On average, during the period 1968 to 1978, 44 percent of the new wives entering polygynous unions in Egypt, and 61 percent in Jordan, were single at the beginning of the new union.

Trends in Polygyny

Chamie, in 1986, studied polygyny in some of the Arab countries; he used the percentage of men married in polygynous unions collected from published population censuses as his indicator of polygyny. His study provides material to view any trends in polygyny as it provides data for several points of time since 1948 till 1981. The results of his study showed that the proportion of polygynous Muslim males among Arab countries are relatively low, in comparison to many sub-Saharan populations at the same period of time. Table i.3.6 suggests that the trend in polygyny has not been uniform in different Arab countries. In Libya, for example, the percentage of polygynous men, collected from national censuses, has remained relatively stable from 1954 to 1973; in Egypt too, the figures are almost the same, 3.4 percent in 1947

to 3.8 percent in 1960. On the other hand, in Syria and Algeria the percentage of polygynous men have fallen substantially.

In Syria the figure decreased from 4.3 percent in 1960, to 1.9 percent in 1976. In Algeria the same declining trend was observed as the percentage of polygynous men declined from 3.0 percent in 1948 to 1.8 in 1966. However, in Kuwait, the same proportion has increased from 6.7 percent in 1965 to 11.7 percent in 1975. Chamie showed that this increasing trend in Kuwait

Table i.3.6 Percentage of Muslim men married in polygynous unions in some Arab countries at different censuses' points of time

Country	Year	Percent polygynous
Algeria	1948	3.0
	1954	2.0
	1966	1.8
Bahrain	1981	5.4
Egypt	1947	3.4
	1960	3.8
Iraq	1957	7.5
Jordan	1979	3.8
Kuwait	1965	6.7
	1970	8.8
	1975	11.7
Lebanon	1971	3.7
Libya	1954	3.2
	1964	2.9
	1973	3.3
Morocco	1952	6.6
Syria	1960	4.3
	1970	3.6
	1976	1.9
Tunisia	1946	4.5
United Arab Emirates	1975	6.0
Yemen	1975	4.5

Source: Chamie 1986.

have occurred in each five-year age group for men as well as for each level of education.

I.3.5 Marital Stability

Since marital histories are not collected in almost all demographic surveys, the analysis of marital stability is limited to a few basic indicators. One indicator of marital stability is the percent of ever-married women still in their first marriage, which is presented in table i.3.7 for some Arab countries. Ever-married women who are no longer in their first marriage can be divorced, separated, widowed, or remarried. As we expect, the proportion still in their first union declines with increasing duration since first marriage. However, the proportion of women first married over 30 years before the survey and still in their first marriage is highest in Jordan, 86 percent, and lowest in Sudan, 66 percent. Such observations can be related to divorce rates as well as inter-spousal age-gap, which is linked to male death rates and female widowhood

rates. Table i.3.4 suggested that women in Sudan have on average a larger age-gap of

2 years than women in Jordan.

Table i.3.7 Percentage of ever-married women 15-49 still in their first marriage, by duration since first marriage in years, in some Arab countries

Country and year	Years since first marriage							Number
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
Sudan 89/90	94.9	88.2	83.9	79.7	75.5	73.2	65.8	5860
Egypt 88/89	97.1	92.2	88.6	86.3	82.1	76.8	68.1	8911
Algeria 93	94.9	88.5	88.1	87.5	82.6	78.6	64.6	4831
Morocco 92	89.6	84.7	83.1	77.2	74.3	72.5	61.9	5639
Tunisia 88	97.3	95.1	93.9	92.3	91.4	86.6	81.9	4184
Jordan 90	97.8	94.0	91.7	90.7	89.3	88.8	85.9	6461

Source: Westoff et al 1994 based on the Demographic and Health Surveys data and PAPCHILD survey for Algeria 1993.

Table i.3.7 shows that Morocco 92 had the lowest proportions of ever-married women, with duration of marriage 0-4 years, still in their first union, 90 percent followed by Sudan in 89/90 and Algeria in 1993, both 95 percent. On the other hand, Tunisia in 1988 and Jordan in 1990 had the highest proportions, 92 percent and 91 percent respectively, of ever-married women with duration of marriage 15-19 years, still in their first marriage.

The percentage of women who have married more than once by place of residence and women's education level in some Arab countries is shown in table i.3.8. This is a crude measure of marital dissolution, which incorporated the effects of both level of marital dissolution and the level of remarriage. Table i.3.8 shows that both Tunisia and Jordan had the lowest proportion of remarriage opposite to Morocco, and Sudan.

Table i.3.8 Percentage of ever-married women 15-49 married more than once, by place of residence and level of education for some Arab countries

Country and year	Residence		Education			Total
	Urban	Rural	None	Primary	Higher	
Sudan 89/90	9.3	10.5	13.0	7.4	3.3	10.0
Egypt 88/89	5.1	6.3	7.4	5.3	1.4	5.7
Algeria 93	7.4	9.3	9.6	4.1	1.8	8.3
Morocco 92	12.0	13.5	14.9	6.7	5.3	12.8
Tunisia 88	3.1	2.7	3.8	2.1	1.4	2.9
Jordan 90	3.3	3.3	5.3	4.3	2.0	3.3

Source: Westoff et al 1994 based on the Demographic and Health Surveys data. And PAPCHILD survey data for Algeria 1993.

In all six countries remarriages are higher among non-educated than more educated women. Almost no differential in the percentage of ever-married women who had

married more than once was found by urban/rural residence in all five countries. It is noted that the three countries that have higher remarriage rates are characterised by having a large proportion of non-Arab population, Berber in Algeria and Morocco and African Tribal in Sudan.

I.3.6 Conclusion

From the over-view of different nuptiality elements in the Arab region we notice that the timing of marriage in this region tend to be early, however, not earlier than the experience of most of the developing countries during the 1990's period of time. Marriage in most of the Arab countries is almost universal. However, large variations in timing of marriage while minor differentials in the universality of marriage are observed across the region. In general, the oil-rich Gulf countries during the late 80's showed an earlier timing of marriage than the rest of the Arab countries. Libya, Morocco, and Tunisia in addition to Lebanon and Jordan in the late 90's had a higher MAFM for women age 30-34, which was one to 8 years higher than the same index in the rest of the Arab countries. Some Arab countries, such as Morocco, Algeria and Syria, showed relatively large changes in the MAFM across age-cohorts. While other counties, such as Yemen and Mauritania, have nearly the same level of MAFM across all age-cohorts.

The inter-spousal age-gap in the Arab region averages around 4 and 5 years in favour of the husband. Polygyny is not highly prevalent in the region as it is in many Sub-Saharan countries, (Westoff et al., 1994), and is usually around 5 percent or less with the exception of some countries such as Sudan (Northern Sudan only) and some Gulf-countries. Dissolution of first marriage is very low especially for smaller marital duration; also the proportions of women who had remarried are quite low. Only Morocco, Sudan and perhaps Algeria exhibited a higher proportions of remarriage, such observation can be related to the population composition of these countries, where large proportions of non-Arabs live in these three countries.

Most of the Arab countries share similar religion, language and history experiences, however, the picture of marriage patterns in the Arab region is far from unique or consistent. Also, the relation between the countries development of the country and some marriage elements is not straightforward. These observations emphasised the importance of the elaboration of a more detailed framework that attempt to explain

variations in marriage patterns. The next chapter is dedicated to draw such framework in relation to the cultural context of the Arab region.

I.4 APPENDIX

Table i.4.1 Proportion of women never-married for different age groups in some Latin American countries, DHS surveys

	Age in 5 year categories							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Bolivia 1998	87.8	46.6	19.5	9.3	5.7	3.9	3.7	33.4
Brazil 1996	83.2	47.4	21.5	10.2	8.2	6.2	5.2	30.6
Colombia 1995	83.5	41.7	22.4	14.5	10.9	8.0	8.1	32.2
Dominican Republic 1996	71.1	33.9	13.9	5.4	4.5	2.7	1.1	25.6
Ecuador 1987	80.8	40.5	15.2	8.1	7.1	4.8	2.7	31
El Salvador 1985	70.0	27.6	8.3	4.3	3.3	2.8	3.2	24.9
Guatemala 1998/99	73.9	30.5	10.8	7.3	3.6	5.4	4.6	26.2
Haiti 1994/95	83.1	41.3	14.9	5.7	1.9	3.0	1.5	31.8
Mexico 1987	80.1	41.7	17.9	9.7	8.5	4.2	4.7	32.6
Nicaragua 1997/98	65.7	24.9	11.4	5.2	3.2	1.7	2.4	23.6
Paraguay 1990	84.6	43.2	21.5	9.3	9.2	4.5	7.4	32.9
Peru 1996	87.5	47.7	22.9	10.7	7.5	5.3	4.3	34.2
Trinidad & Tobago 1987	75.4	31.8	9.9	4.4	3.4	3.0	1.4	23.1

Source: Demographic and Health Surveys.

Table i.4.2 Median age at first marriage for women 20-49 by age groups, for some Latin American countries, Demographic and Health surveys

Country and year	Age in 5 year categories						Age group 25-49
	20-24	25-29	30-34	35-39	40-44	45-49	
Bolivia 1998	-	20.9	21.0	20.7	20.7	21.3	20.9
Brazil 1996	-	21.0	21.0	21.0	21.0	21.6	21.1
Colombia 1995	-	21.6	21.6	21.2	21.4	21	21.4
Dominican Republic 1996	19.5	19.4	19.7	19.0	18.9	18.8	19.3
Ecuador 1987	-	19.8	20.2	20.2	19.9	20.5	20.1
El Salvador 1985	19.1	18.7	19.3	19.0	19.3	19.1	19.0
Guatemala 1998/99	19.5	19.2	19.4	19.2	18.8	20.1	19.3
Haiti 1994/95	-	20.5	20.7	20.6	21.4	20.9	20.8
Mexico 1987	-	20.2	19.4	20.5	19.7	19.2	19.9
Nicaragua 1997/98	18.0	18.3	18.3	18.4	18.1	18.5	18.3
Paraguay 1990	-	20.8	20.8	21.7	20.6	21	20.9
Peru 1996	-	21.3	20.9	20.8	21.0	20.7	20.9
Trinidad & Tobago 1987	19.7	19.8	19.7	19.7	19.8	18.8	19.6

Source: Demographic and Health Surveys.

Table i.4.3 Proportion of women never-married for different age groups in some Asian developing countries, DHS surveys

Country and year	Age in 5 year categories							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Bangladesh 1996/97	49.8	17.2	3.4	0.5	0.0	0.0	0.0	16.1
India 1999	65.5	22.0	6.4	2.5	1.5	1.0	0.8	19.9
Indonesia 1997	82.1	36.1	14.1	5.3	2.4	2.9	1.7	25.3
Nepal 1996	56.0	14.8	4.6	1.9	1.5	1.1	1.4	16.6
Pakistan 1990/91	75.1	39.4	14.4	4.3	2.4	2.4	2.1	26.2
Philippines 1998	91.5	56.3	25	11.5	7.5	7.4	6.6	36.4
Sri Lanka 1987	93.1	57.7	31.2	15.2	10	6.8	3.6	38.9
Thailand 1987	82.6	48.1	23.8	13.6	8.8	6.4	3.9	33.2
Vietnam 1997	92.3	46.9	21.1	10.9	8.7	8.3	9.9	33.5

Source: Demographic and Health Surveys.

Table i.4.4 Median age at first marriage for women 20-49 by age groups, for some Asian developing countries, Demographic and Health surveys

Country and year	Age in 5 year categories						Age group 25-49
	20-24	25-29	30-34	35-39	40-44	45-49	
Bangladesh 1996/97	15.3	14.5	14.1	13.7	13.4	13.3	13.9
India 1999	18.2	17.4	17	16.8	16.7	16.6	16.9
Indonesia 1997	-	19.9	18.8	18.1	18.1	17.3	18.6
Nepal 1996	17.1	16.5	16.4	16.2	15.8	15.5	16.2
Pakistan 1990/91	-	18.9	18.2	18.6	18.5	18.8	18.6
Philippines 1998	-	22.7	22.2	21.8	21.6	21.8	22.1
Sri Lanka 1987	-	23.2	22.7	23.1	21.4	20.0	22.4
Thailand 1987	-	21.0	20.7	20.4	20.2	19.5	20.5
Vietnam 1997	-	21.0	21.3	21.3	21.4	21.7	21.3

Source: Demographic and Health Surveys.

Table i.4.5 Proportion of women never-married for different age groups in some Sub-Saharan countries, DHS surveys

Country and year	\multicolumn{7}{c}{Age in 5 year categories}	Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Benin 1996	70.9	20.5	5.7	1.6	0.6	0.2	0.3	19.0
Botswana 1988	93.9	69.7	43.3	30.4	25.1	18.5	20.2	52.9
Burkina Faso 1998/99	65.2	9.7	2.1	0.6	0.4	0.2	0.2	16.9
Burundi 1987	93.2	33.3	8.3	3.9	1.7	0.9	1.2	26.4
Cameroon 1998	64.2	26.4	10.9	5.3	3.3	1.1	1.5	23.4
CAR 1994/95	57.7	18.8	9.2	5.8	4.7	1.7	1.9	19.5
Chad 1996/97	51.4	7.8	1.6	0.4	0.3	0.0	0.1	13.7
Comoros 1996	88.5	51.7	23.1	7.2	1.4	0.5	0.0	39.0
Cote d'Ivoire 1994	72.3	30.4	9.2	6.1	2.2	1.6	0.7	26.4
Eritrea 1995	62.4	21.9	7.9	4.3	1.8	2.7	1.9	20.0
Ghana 1998	83.6	29.0	11.2	2.3	0.9	0.2	1.4	23.7
Guinea 1999	53.9	15.4	3.2	1.4	0.3	0.2	0.0	13.9
Kenya 1998	83.3	34.9	12.7	6.1	2.8	2.8	1.7	30.1
Liberia 1986	64.0	24.7	7.9	6.2	1.2	1.7	0.5	21.4
Madagascar 1997	66.3	25.7	12.4	6.1	5.6	2.4	1.3	23.4
Malawi 1992	58.8	10.0	2.2	0.6	1.1	0.6	0.0	15.7
Mali 1996	50.3	12.4	4.2	1.3	0.5	0.1	0.2	12.8
Mozambique 1997	52.9	11.2	5.9	2.5	1.0	2.6	2.9	15.1
Namibia 1992	92.3	68.9	46.9	25.8	19.2	18.9	11.9	51.3
Niger 1998	38.1	11.1	2.6	1.0	0.0	0.3	0.2	11.2
Nigeria 1990	61.4	21.7	7.9	0.9	1.2	0.3	0.1	17.2
Ondo State 1986	88.5	40.1	7.3	0.0	0.0	0.0	0.0	29.6
Rwanda 1992	90.2	44.9	14.9	4.3	1.5	0.6	0.7	32.1
Senegal 1997	71.0	37.2	16.4	4.7	1.5	0.4	0.1	26.9
Tanzania 1996	74.6	24.5	7.4	4.5	1.7	1.4	0.7	23.2
Togo 1998	80.1	36.6	7.7	2.4	1.1	0.5	0.3	24.9
Uganda 1995	50.1	12.3	5.7	1.9	1.4	0.4	1.4	15.6
Zambia 1996	72.7	22.0	9.5	2.8	1.3	1.2	0.7	25.3
Zimbabwe 1994	79.2	28.4	7.5	3.3	1.2	2.3	0.6	26.9

Source: Demographic and Health Surveys.

Table i.4.6 Median age at first marriage for women 20-49 by age groups, for some Sub-Saharan African countries, Demographic and Health surveys

Country and year	Age in 5 year categories						Age group 25-49
	20-24	25-29	30-34	35-39	40-44	45-49	
Benin 1996	18.8	18.7	18.3	18.4	18.3	17.9	18.4
Botswana 1988	-	24.9	23.8	22.6	23.5	25.2	24.0
Burkina Faso 1998/99	17.6	17.7	17.6	17.6	17.6	17.6	17.6
Burundi 1987	-	19.5	19.5	19.6	19.4	19.7	19.5
Cameroon 1998	18.6	18	17.2	17.5	16.9	16.4	17.4
CAR 1994/95	17.4	17.4	17.3	17.7	16.6	17.4	17.3
Chad 1996/97	16.3	15.9	15.9	15.9	15.6	15.6	15.8
Comoros 1996	-	20.4	18.4	18.2	17.5	17.6	18.5
Cote d'Ivoire 1994	18.8	18.2	18.1	18.0	18.2	17.9	18.1
Eritrea 1995	17.6	17.4	17.1	16.6	16.3	15.9	16.7
Ghana 1998	19.3	19.6	18.7	19.4	18.7	18.7	19.1
Guinea 1999	16.6	16.5	16.2	16.9	16.2	16.2	16.4
Kenya 1998	-	20.2	19.2	18.7	18.2	18.4	19.2
Liberia 1986	18.2	17.9	17.2	17.2	16	16.6	17.2
Madagascar 1997	18.8	18.9	19.0	18.2	18.1	17.8	18.5
Malawi 1992	17.7	17.7	17.2	17.9	18.1	18.4	17.8
Mali 1996	16.3	16.1	16.0	16.1	15.9	15.8	16.0
Mozambique 1997	17.4	17.3	17.4	16.7	16.9	17.0	17.1
Namibia 1992	-	-	24.9	24.0	24.3	23.3	24.8
Niger 1998	15.7	15.3	15.1	15.0	15.0	15.1	15.1
Nigeria 1990	17.8	17.2	16.3	17.3	16.8	17.3	16.9
Ondo State 1986	-	20.2	18.9	19.7	19.7	19.9	19.7
Rwanda 1992	-	20.9	20.2	20.0	19.4	18.7	20.0
Senegal 1997	19.9	18.7	17.4	17.1	16.7	16.7	17.4
Tanzania 1996	19.0	18.7	18.5	17.6	17.4	17.7	18.2
Togo 1998	-	18.8	18.8	19.0	18.9	18.8	18.8
Uganda 1995	17.7	17.8	17.3	17.1	17.0	17.3	17.4
Zambia 1996	18.5	18.4	17.9	17.4	17.4	16.8	17.7
Zimbabwe 1994	19.8	19.3	18.7	18.8	18.9	18.9	18.9

Source: Demographic and Health Surveys.

CHAPTER II: CONCEPTUAL FRAMEWORK

II.1 INTRODUCTION

As discussed earlier, marital status is one of the most important social and demographic variables. In addition to the role of marriage in society, demographers have always recognised marriage as one of the principal determinants of fertility (Davis and Blake, 1956 and Bongaarts, 1978). Raising the age at marriage is frequently suggested as an effective avenue for reducing fertility, especially in settings where contraceptive practice is not highly prevalent. Increasing age at marriage has both a mechanical and sociological effect on fertility. The mechanical effect alters the exposure to risk of conception. Sociologically, women who marry late tend to have common characteristics, which may in turn affect their fertility patterns. Women who marry late are usually more educated and have more autonomy and thus the same characteristics will affect their childbearing decisions.

It should be noted that, marriage in the Arab region is more of a process rather than an event. For example, in Egypt the time between the initiation of marriage and the union of the couple may last for years. There is usually considerable period of time between the signing of the marriage contract and the start of the marriage union. In all the demographic studies the date of starting the union is the important date rather than the registered one (date of signing the contract). Thus, dates of different types of events through the marriage process should be dealt with carefully.

II.2 NUPTIALITY ELEMENTS

In order to understand the nuptiality transition it is very important to study changes in all the nuptiality elements. The current framework, presented in Chart ii.1, suggests that nuptiality is usefully studied through four main elements. These elements are timing, prevalence, stability and characteristics. Timing of marriage is a very important element as it determines the time of entering the sexually active status and thus to the risk of conception. Prevalence of marriage indicates to what extent marriage is universal in the population. In fact, prevalence and timing of marriage are usually used to form a picture

of the marriage pattern of a certain society. The United Nations (1990a), documents three distinctive female marriage patterns based on the previous two elements. The first pattern of late marriage and high permanent celibacy, which characterises most of the Western European countries. The second pattern of early and universal marriage, the 'non-European' pattern, which pertains to the less developed regions. And a third with a later marriage timing patterns than the developing countries and high marriage prevalence, the 'Eastern European' pattern. One of the important observations discussed in the UN (1990a) study, is that the movement across time is not unidirectional from early marriage to late ages at marriage. The study showed that Western Europe experienced a trend towards younger ages at marriage before reaching the pattern of late and non-universal marriage pattern.

Stability of marriage is composed of dissolution (divorce and widowhood) rates, duration of marriage and remarriage rates (both following divorce and widowhood). Marital stability and remarriage influence the amount of time women are exposed to the risk of pregnancy. The stability of marriages and the degree of remarriage are also important for the welfare of women and children, generating interest in female-headed households (Ono-Osaki, 1991; Lloyd and Gage-Brandon, 1993).

Marriage characteristics are exemplified by the type of marriage contract, age and educational-gap between spouses, polygyny rates, and consanguinity rates. It is understood that some of the previous elements cannot be completely captured with the available demographic data. However, it is important to include them in the conceptual framework.

II.2.1 Marriage Characteristics

Type of marriage

Regarding the type of marriage contract, many Arab men and women, within their interpretation of Islamic concepts, may accept what is called (*Za'uag Orphy*) or unregistered marriage. Unregistered marriages usually occur in secret and are not formulated on the same grounds as registered marriages. In the case of the registered marriage, the two families of the bride and groom are involved in the arrangement and agreements of the marriage elements while in the other case the marriage happens between the two partners and is not officially registered. The two partners agree to marry each other and write a statement with this meaning and sign it. They also need the signature of two witnesses.

Most of the Arab norms do not accept this type of marriage and this is one of the main reasons why it is usually kept secret. The wife's rights in this type of union are very few, whether in case of inheritance, divorce and separation, or regarding the custody of children. Yet, there are some indications that the prevalence of this type of marriage may be increasing. For example, many newspaper articles reveal a recent public fear of the expected high prevalence of this type of marriage in Egypt. It is suggested that couples seek this type of marriage to avoid the high financial demands of parents and their persuasion to marry different suitors. Thus, this type of marriage may be prevalent when conflicts arise between individuals' views and families' and societies' norms regarding marriage elements and options. With the nature of this type of marriage, it is very hard to capture its prevalence; however, it is very important to acknowledge its existence together with other forms of marriage when explaining different nuptiality phenomenon.

Polygyny

One of the marriage characteristics is polygyny, which concerns the number of wives a man has simultaneously. The term 'monogamy', derived from the Greek words 'mono' (one) and 'gamy' (marriage) describes a marriage pattern in which one man is married to one woman. An alternative to monogamy is a practice whereby an individual has more than one spouse at the same time. This is termed polygamy, again from the Greek 'poly' (many). Polygamy should be strictly kept apart from serial monogamy, a term denoting situations where one spouse remarries after divorce, or widowhood. There are two forms of polygamy, namely polyandry ('andr' is related to the Greek stem for 'man'), and polygyny ('gyn' being the Greek stem for 'woman'). Polyandry refers to marriage customs that allow one women to be simultaneously married to two or more men. Polygyny, on the other hand refers to situations where one man is married simultaneously with more than one wife (Bretschneider, 1995).

Polyandry does not exist in the Arab region; however, polygyny is allowed but restricted to a maximum of four wives at one time. Polygyny in the Islamic religious is based on strict roles in the Koran. For example, the number of wives is limited to a maximum of four with equal economic support and equal treatment for each wife. If the husband agrees, a woman can secure a marriage contract that ensures that she remains the only wife.

Demographers have traditionally been interested in polygyny because of its possible effects on fertility. There is little consensus as to the direction or magnitude of the polygyny-fertility relationship or about the mechanisms through which polygyny works to influence fertility. When examining this relationship, a distinction is usually made between effects on individual fertility versus aggregate-level fertility. At the individual level, it is suggested that fertility may be lower among women in polygynous unions due to less frequent sexual intercourse and/or to lower male fertility related to the typically large age differentials between spouses. At the aggregate level, fertility may be maximised as the polygynous social structure ensures that most women will be in union continuously during their childbearing years (Westoff et al, 1994). Interest in polygyny has also focused on its relationship to marital stability (Gage-Brandon, 1992), the spread of sexually transmitted diseases (Dyson, 1992), and sexual networking (Orubuloye et al., 1991).

The prevalence of polygyny in the Arab region is much lower than that in sub-Saharan Africa. Moreover, most polygynous men have only two wives, whereas in sub-Saharan Africa having three or more wives is relatively common. Moreover, polygyny in the Arab world almost always shows a downward trend, whereas in Africa a decline is difficult to ascertain and the overall level remains high (UN, 1990a). Moreover, polygyny does not exist in some of the Arab countries; for example, Tunisia had made polygyny illegal since 1956 (Ammar N., 1980).

According to Islamic law, polygyny is permissible under the following conditions:

(1) No man may have more than four wives at any one time,

(2) He must possess the financial means to support more than one wife;

(3) Treatment and attention given to each wife must be equal.

Laws relating to polygyny in different Middle Eastern Arab countries may be classified into one of three categories, depending on different interpretations of these three conditions, and other aspects of the Islamic law relating to marriage. In the first category, the practice of polygyny 'is strictly prohibited by law'. Currently the only Arab country where this applies is Tunisia. In the second category, which contains Iraq, Morocco and Syria, polygyny is permitted subject to specific judicial restrictions. For example, in Morocco the wife has the right to insert into her marriage contract a stipulation that forbids the husband to marry another wife; violation of this agreement gives the wife cause for divorce. If there is no such clause in the marriage contract, the wife is entitled to receive compensation for the second marriage. In the

third category, which contains most of the Arab countries, polygyny is permitted according to Islamic (Sharia) law, under which few, if any, governmental judicial restrictions apply to those who wish to marry more than one wife.

Consanguinity

Another marriage characteristic is consanguinity. Especially among medical geneticists, there has been a tendency to concentrate on the adverse biological consequences of consanguineous marriage, usually described in terms of 'inbreeding depression'. This is defined as the unfavourable effects caused in the progeny of inbred marriages by the expression of deleterious, recessive genes inherited from both parents, who in turn had inherited them from a common ancestor. In the Arab region marriage to parallel first-cousin is usually preferable, most commonly of the father's brother's daughter (FBD) type, with the partners having one set of grandparents in common. Medically, this is equivalent to a coefficient of inbreeding (F) of 0.0625 in the progeny, i.e., at 6.25 per cent of all autosomal loci the offspring would have inherited identical copies of a gene from both parents. To a lesser extent cross first-cousin marriages of the mother's brother's daughter (MBD) type was observed. Occasionally double first-cousin marriages also are arranged, in which the couple share two sets of grandparents (F = 0.125). These marriages are often arranged while the future husband and wife are still children (Rugh, 1984). From a genetic viewpoint, although parallel and cross first-cousin progeny are predicted to have identical coefficients of inbreeding at autosomal loci, they may differ with respect to levels of homozygosity at X chromosome loci (Fx), dependent on the precise pattern of cousin marriage contracted (Freire-Maia and Freire-Maia, 1961). By comparison, other societies, such as South Indian Hindus and Jews, favour uncle-niece marriage mother's brother with sister's daughter, F = 0.125, (Good, 1980, 1981).

A number of studies in India into the consequences of consanguinity have focused on reproductive behaviour in inbred unions. Virtually without exception, the results of these investigations have indicated that marriages between close relatives exhibit reduced primary infertility and larger family sizes than their non-consanguineous counterparts (Rao and Inbaraj, 1979), in agreement with surveys previously conducted in Japan (Schull, et al., 1962; Schull et al., 1970). No effect has been reported either on the sex ratio at birth or multiple birth rates (Bittles, et al, 1988).

On the other hand, socially many positive reasons for consanguineous marriages are usually reported. Some of the reasons given for marriage to a close relative are predominantly social, cultural and economic in nature. Bittles et al (1990) summarised them under five main headings:

(1) Simplified marriage contracts and arrangements;

(2) Greater compatibility of the bride with her husband's family;

(3) The maintenance of family property, including land holdings;

(4) Reduced dowry or bride-wealth payments;

(5) The reassurance of marrying within the family.

In the Middle East, the initial advantage offered by intra-familial unions is that marriage arrangements and contracts are considerably simplified. Consanguineous marriages preclude the requirement to search for a suitable spouse, assuming that a partner of acceptable age and marriage distance/type is indeed available within the family (Holy, 1989). Once married, it is believed that there is a better prospect for social compatibility between the bride and her husband's family, to whom she is already related (Dronamraju and Meera Khan, 1963). In this respect, the assumed premarital contact between a bride and her mother-in-law is held to be particularly significant (Holy, 1989). There also is the economic benefit of greatly reduced or even no dowry or bride-wealth payments (Govinda Reddy, 1988; Caldwell et al., 1988), with the further incentive for landowners of safeguarding family landholdings from the threat of subdivision, a possibility if the spouse originates from outside the family. Finally, and of most importance in communities where households are highly self-contained, there is the belief that marriage to a close relative offers the optimal choice, by avoiding health or other family problems which may be concealed prior to marriage to a non-relative.

One should bear in mind that in much of the Arab world, the traditional and formal way to refer to a related spouse is as "my cousin," regardless of the exact kin relationship.' Since an exact definition of degrees of kinship was not part of the DHS or PAPCHILD questionnaires, statements by informants that they are married to a relative are, for some, a factual description of the degree of relatedness, while for others, they merely reflect the use of traditional terminology (Obermeyer, 1993). Consequently, the data used in this study are not suited for systematic measures of endogamy in Arab countries. They do, however, provide an indication of a traditional orientation toward family relations.

Inter-Spousal Age-Gap

Inter-spousal age difference is an important marriage element that can reflect a part of the marriage norms in a society and can also influence fertility. Casterline et al (1986) observe that inter-spousal age difference can influence fertility through at least three mechanisms. Several explanations of the variation in inter-spousal age gap, between and among societies, can be provided. One suggestion is that any observed patterns of age-differences are expressions of explicit preferences regarding inter-spousal age differences. These may in themselves be determined by the same set of macro and cultural variables that determine other marriage elements. A different explanation stresses the importance of age structure constraints on eligible mates in the marriage market. This simply means that the pattern of age difference is mainly determined by the age distribution of eligible partners. A third explanation relies on the assumption that any observed patterns in age-differences are only a by-product of independently determined ages at marriage of women and men. In reality some of these explanations may co-exist with each others depending on the relationship between inter-spousal age-gap preferences and marriage market opportunities.

II.3 PRIOR VARIABLES

The proposed framework includes two prior sets of variables, one on the macro and the other on the micro level, which can affect nuptiality through a set of intermediate variables (see Chart ii.1). The macro-level set includes the following variables: laws governing marriage and relations, kinship and gender structure, religious structure of the country, development level of the country, political disruption, migration and type of residence. The development level reflects the country's economic levels, mortality levels and other development indices. The micro-level set includes the following variables: family type, individual's characteristics, and social background. Individual characteristics include religion, sex, race, education, employment, physical attraction, and previous marital status. The intermediate variables set includes cost of marriage, norms of acceptable marriage elements, and partner selectivity and availability of mates.

II.3.1 MACRO LEVEL VARIABLES
Laws Governing Relations

There is no doubt that the constitutions governing marriage and relations have direct effects on the marriage patterns governed by such laws. Also, such laws play important

roles in formulating people's acceptance or rejecting of some forms of marriage, divorce or polygyny. Family laws and personal status legislation, in the Arab region, are mostly drawn from the Islamic law (*Sharia*), which gives men and women different rights. Men are responsible completely for the financial support of their families. In return a husband is assumed to have the right to end his marriage and, in many countries, without the consent of his wife. He also, with the exception of Tunisia, has the right to have up to four wives on the condition that he can provide adequately and equally for all of them and treat them equally. However, such equality is left to the husband's judgement. Also, in the Islamic context, a husband has the right to restrict his wife's physical mobility.

Although the Arab region's family laws are drawn mostly from Islamic law, they are applied differently among the Arab countries. These differentials can be crucial in determining differentials in divorce and polygyny rates. Some examples of the differences in laws governing marriage and relations among different countries in the region are given below.

In Morocco, the personal law stresses the wife's right to divorce her husband on her own initiative provided this is stipulated in the marriage contract. However, a woman taking advantage of this right could be exiled by her family (Mir-Hosseini, 1993). Polygyny is restricted and could be grounds for divorce; a second wife has to be informed of the previous marriage (Hijab, 1988).

Algerian law gives the wife the right to divorce in the case of infirmity, imprisonment, and absence of physical union for over four months, and prejudice. Polygyny is restricted and the wife's permission is required.

In Tunisia, divorce can only be granted in court. A divorced wife is housed until remarriage (in all other Arab countries she may be housed only if she is raising children and during the custody period). Polygyny is prohibited. Bigamous men and women are liable to imprisonment. Custody is determined by the best interests of the child (Hijab, 1988).

The Yemen Personal Law gives women no protection against polygyny and vests all authority with the husband within the nuclear family and the father in the extended family. The law also does not put an end to repudiation of a wife, though all divorces have to be brought before the court for registration.

In Egypt, the 1979 personal-status laws permits polygyny, up to four wives, with the written statement of the husband's marital status. The registrar has to inform any current

wives of the new marriage. As for divorce, the husband has the right to end his marriage without the consent of his wife (Hoodfar, 1997).

Kinship and Gender Structure

Arab kinship structure is mostly described with its patrilineal endogamy and the wide existence of parallel cousin marriage. Marriage and family constitution is an essential part in the lives of the Arab men and women. It is through marriage and having children that adulthood and self-satisfaction are achieved, for both men and women (Rugh, 1984 and 1997, Hoodfar, 1997). This region is characterised by the centrality of marriage and childbearing. Marriage is usually not viewed as a partnership between individuals but rather as an association between two families. Abdelrahman and Morgan (1987) show that the institutional context plays a very important role in marriage formation. They also point out that norms in many countries of the region recommend early marriage and strongly control premarital interaction between partners. In such a context, it is more likely that the families of potential partners are the ones who make marriage decisions and offer the choices of suitable partners. In some regions parallel marriages are so common so that a male cousin has the 'right' to marry his father's brother's daughter (Abdelrahman and Morgan, 1987). However, the extent of such structure varies widely between and within countries in the region.

Individuals in this region may not consider all alternatives, nor choose the one that might be most advantageous. The institutional context can determine the range of alternatives considered and influence the ultimate choices of the couple (McNicoll, 1980; Ryder, 1983; and Cain, 1985). It worth noting that due to the existent laws that govern marriage, which give men and women different rights, kin and in-group marriages can be regarded as common strategies for protecting women in case their husbands abuse their rights (Rugh, 1984).

Having children is a major determinant of a successful marriage in the Arab region. The Arab societies emphasise the importance for new couples to have children as soon as possible after marriage. Couples who do not have children quickly after marriage, for whatever reason, are prone to criticism and interference from their kin group. Although infertility can affect males and females equally, women are usually the only partners to be blamed. Infertility is often regarded as a woman's problem rather than a couple's concern. The family of the husband usually motivates him to take a new wife in order to prove his manhood by having children. The inability of a couple to conceive puts the

wife in legitimate ground of divorce, polygyny and social stigma (Inhorn and Buss, 1994). Moreover, the norms in the region value highly the birth of a son over a daughter. The son is the one who can carry his fathers' name while the daughter's children will carry her husband's name. Thus, women who do not have sons may suffer the same threats as women with no children, but to a lesser extent.

It is argued that marriage centrality as well as kin marriage decreases with modernisation (Haj, 1988; and Goode, 1982). This argument is based on the assumption that during the modernisation process, family-oriented and traditional values are confronted with different values that arose in the modernisation process. Modernisation forces the need for social and geographical mobility that necessitates the creation of a conjugal family independent of kinship ties. Inkeles and Smith (1974) argue that modernisation and the kinship system contradict each other. Therefore, the kinship system is either a victim or a barrier to modernisation.

A literature review of the effect of development and modernisation on kinship structure shows that the relationship is not uniform but rather controversial. In some societies the kinship system reconstructs and adapts to the changing process of modernisation (Ekong, 1986). For example, in South India, Caldwell et al. (1983) have found the movement away from marrying relatives to be one cause of the rising age at marriage. On the other hand, in other societies, modernisation strengthens, rather than weakens, the traditional kinship and gender structure. The strength of the kinship structure as a strategy to deal with political and development changes is quite evident in many studies (for example, Abu-Lughod, 1961 and Atran, 1985). Holy (1989) indicates that cousin marriage is highly evident in Morocco, and Moroccan families are closely tied in large networks despite the process of modernisation. But it should be noted that the continuity of the kinship system does not imply that no change has occurred in the system. In a study of the Arab population in Israel, Haj (1995) finds that although the kinship system carries on many of its traditional elements yet the dynamics and the interactions between kinship members have changed.

Development Level of the Country

This variable actually reflects several aspects concerning economic level of the country, health and mortality levels. As seen from the previous section the development process can affect the kinship structure of the country in a way or another. Thus the development process can indirectly change some of the acceptable and desirable norms of different

marriage elements. Moreover, the development process itself can introduce not only new conditions but also new opinions and views that can directly affect norms of marriage. In another direction the development level change people's perceptions of marriage requirement through several avenues. The development level of the country can be studied using several indicators; for example, the economic level of the country, the distribution of income within the country, and health and mortality indicators.

Birks, Seccombe, and Sinclair (1988) divide the Arab region into capital-rich and capital-poor countries. They point out that economic activity rates of men are higher in the capital-poor countries (Egypt, Jordan, Lebanon, Morocco, Sudan, Syria, Tunisia and Yemen) than in capital-rich countries (Algeria, Bahrain, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, UAE).

Moghadam (1995), argues that the economic level of the setting can affect women's participation in labour force which in turn can influence, as will be discussed later, marriage in different ways. He finds that, in the Arab region, as the economic level of the country decreases women's participation in economic activity increases.

The economic level of the country can explain some of the differentials in age at marriage. It is often thought that in higher income countries the cost of marriage and individual economic barriers may not be such important factors in delaying marriage. On the other hand, as the economic level of the setting gets relatively higher the minimum requirements for average marriage process also gets higher. This may not be a problem if all the individuals have such minimum requirements. However, if the distribution of income is not uniform some individuals will not have the means to get married.

Mortality levels are often linked with other demographic elements, such as fertility and nuptiality. They are also used here as a development indicator, which can measure the degree of modernisation. In general, countries with low mortality rates are expected to be both in a higher stage of their demographic transition and at a higher level of development than other countries. Also, when under five mortality and morbidity rates are low the chances of children survival are high. This is, theoretically, linked with the number of children couples need to produce in order to achieve their ideal number of surviving children. In another direction, if the life expectancy is high people will have longer periods of time to catch up their demographic events, such as marriage and parenthood, at older ages. However, even if female life expectancy increases the fecundity period usually remains constant, thus the effect is expected to be different for males and females, especially if polygyny is prevalent.

Religious and Ethnic Structure of the Country

Although all the populations of Arab countries are mainly Muslims, yet the religious structure of the countries varies widely across the region. The proportion of the population that is Muslim is 90 to 94 percent in Egypt, and Jordan; 87 percent in Syria; 72 percent in Sudan; 60 percent in Lebanon; and around 95 percent in the rest of the countries (Weeks, 1988). The religious structure of the country plays an important role in shaping the laws governing marriages and relationships. Moreover, such structure directly affects the norms and attitudes towards different marriage elements. On the individual level, Christians', or Muslims', preferences of different marriage elements are influenced by the heterogeneity, or homogeneity, of the religious structure of the country they are living in. Therefore it may be expected that each group will act differently when compared across countries depending on the religious structure of the country.

The religious structure of the country cannot be determined only by examining the distribution of the population by religion, but also require the study of the political and social representations of each religious group and the freedom given to different groups to express their preferences. It is also important to pay attention to the distribution of religious or ethnic minorities within the country. For example, although Christians are only 5 percent of the Egyptian population at the national level, in some regions, especially in Upper Egypt, the proportion of Christians can reach 30 percent of the population.

Political Disruption

There is doubt that difficult political situations can affect marriage, as well as other demographic events, in different ways. A period of hardship and vulnerability can strengthen and emphasis the importance of the existing kinship structure and therefore the importance of the family and marriage. The emphasis and continuation on kinship group seem to be one of the main adjustments that occur in case of political disruptions (Barakat, 1973 and Ghabra, 1987).

On the other hand, wars, civil or with other countries, influence the marriage market directly and the availability of males in different age groups and with different characteristics. Such lack of men, in certain age groups, affects the marriage process in several directions and may lead to higher ages at marriage, higher rates of polygyny, and a larger age gap between spouses. Political disruptions lead to economic hardship, which

can be an obstacle in the marriage process. Also, such economic hardship may increase women's participation in economic activities, which in turn can delay marriage.

Migration

Internal migration

In most of the developing world, rural-urban migration occurs at high rates. This results in the growth of shantytowns, informal housing areas including using tombs as shelters (Watson, 1992). A peasant migrant to the big city has the lowest chances of finding a shelter or a place in the labour market. A migrant with an unsecured income and a different background from the city may have much lower chances in the marriage market. However, the case can be totally different if the migrant is still in contact with his kin in the village and can marry there, but still works at the city. A similar situation arises when even considering international migration, which makes the relationship between migration and marriage not uniform (Atran, 1985).

International migration

Until the beginning of the 1970's, most of the migration from Arab countries was to areas outside the Middle East. There was large-scale migration from Algeria, Tunisia and Morocco to Western Europe (mainly France). In addition (since the 1860s), large numbers of Lebanese and Syrians emigrated to North and South America and Australia. Migration from area to area within the boundaries of the Middle East has started in the late 1940s and reached its peak at the beginning of the 1980s. However, Birks et al. (1988) estimated that the flow of labour from Arab countries to the Middle East slowed after the early 1980s.

During the last 25 years, labour migration has been an important contribution to economic growth, demographic structure, and the overall development patterns of receiving countries. The migration usually occurs from the capital-poor countries to the oil-producing countries. However, some countries like Oman and Jordan have served as both sending and receiving countries.

Theoretically, international migration can affect marriage through at least three dimensions. First, the process of migration can delay marriage until the person (usually male) can save sufficient savings to return to his country and form a family. Second, if large-scale out- migration occurs, the balance between available mates in the marriage market can be highly affected in favour of resident males. Third, in the case that

marriage occurs before or during migration, the fact that most male migrants leave their families behind, due to restricted migration roles and economic values, may cause family disruption and dissolution. However, Brink (1991) showed that in Egypt the migration decision among semi-skilled migrants is usually delayed not only after marriage but also after the birth of one or more children to secure the ties between the spouses when migration occurs. Thus the timing of migration, with regard to the timing of other demographic events, is crucial in determining its impact on marriage.

Type of Residence

Type of residence, urban versus rural, has significant effect on many demographic phenomena. The differentials in marriage patterns are expected to be large between urban and rural settings. This is mainly due to the different kinship structures, including the prevalence and value of the extended family, in the two settings. However, rural-urban migration can diffuse many of the rural norms into the city; in fact, rural migrants usually carry with them their kinship values (Abu-Lughod, 1961 and Atran, 1985). Thus, it is quite important to consider the families' original place of residence as well as the current place of residence in order to measure the real effect of place of residence on marriage. The family type is very much associated with the place of residence (urban versus rural). However, extended families, which are characteristic in rural areas, may exist in urban settings especially if rural-urban migration rates are high. Extended families have long been thought to promote early marriage and a rapid tempo of child bearing. This can be due to the assistance of the family in the arrangement of marriage and by incorporating the new couple within the same household. Rural areas usually have lower age at marriage and higher rates of remarriage. This is mainly due to the strong kin ties in rural settings. However, marriage dissolution is more common among women living in rural areas (Egypt WFS, 1980, Syrian WFS, 1979 and Yemen WFS, 1979, Jordan WFS, 1976). The later finding can be due to higher male adult mortality in rural areas as dissolution includes widowhood and divorce.

II.3.2 MICRO LEVEL VARIABLES

Individual Characteristics

Religion, Race and Sex

Religion is an important and a pervasive element in Arab men's and women's lives. The majority of Arabs are Muslims; nevertheless, large populations of many countries are

Christians. Due to the fact that the majority of the Arab population are Muslims, Christians usually try to live geographically clustered and in close kin-groups (Rugh, 1984). The fact that Christians are a minority in itself affects the marriage market of Christians largely and can cause delays in marriage. However, the strong ties and kin structure observed among them can play the opposite role and facilitate Christian marriages. The individuals' religion is highly linked with the kinship structure of the group and both formulate their norms of acceptable marriage elements.

Individuals' race can affect the pool of eligible persons if the norms insist on marrying from the same race. Most of the Arab countries are more or less homogenous with regard to race. However, some countries include within its population reasonable proportions of different races, such as the Maghreb countries where the proportion of Berber varies from 3 percent in Tunisia to 40 percent in Morocco.

A significant difference in family structure of Christian's and Muslim's households results from the implications of their separate personal-status codes and their separate views of family life. For Christians, the marriage is strengthened by the practical difficulty of obtaining a divorce. The same fact, that divorce is hard to obtain, can prolong the search process for a suitable mate among Christians. On the other hand, the ability of Muslim men to divorce their wives easily and to take custody of children persuade Muslim women to keep up their connections with their own natal families and to build strong ties with their husbands and children (Rugh, 1984).

Looking at the different patterns of investment in marriage can indicate the difference between the two structures. In Egypt, Rugh (1984) finds that among lower classes the costs of Muslim marriages are much higher than that of Christians. This is because Muslims invest highly in furniture and household assets as a security system for the wife in case dissolution of marriage occurs. On the other hand, Christians do not invest the same amounts of money but rather buy only the essential parts of the furniture. However, differentials in cost of marriage according to religion among other social classes have not been studied.

Differentials in marriage age, and most of the other nuptiality elements, are very remarkable according to sex. The norms of marriage are also subdivided according to sex. Sometimes, males and females have completely two different sets of desirable marriage elements. These gender differentials are quite evident in many Arab countries following the existing kinship and gender structures. Cost of male and female marriages are quite different too, where, in most cases, the male is responsible for almost all the

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financial burdens. Following from this one can expect not only different nuptiality patterns for males and females but also different nuptiality trends.

Education

Education may expand the number of marriage options seriously considered. Schooling facilitates cultural change and creates new cultures, education is also an important factor in improving women's autonomy (Caldwell, 1982, Kishor 2000). However, it should be kept in mind that most women in the region do not stay in school long enough so that schooling competes with marriage. Instead, education may disrupt traditional power relations and identify new options. The effect of education on marriage elements can be significant because of the new values and autonomy it provides for women. Type of education is quite important: the effect of Islamic education is expected to be very different from Western education.

However, the effect of education on marriage decisions is rather complex in the region. The persistence of the kinship system which benefits arranged marriage can well under play the role of education. In Egypt, Hoodfar (1997) and Rugh (1984) find that almost all educated women in their samples prefer arranged marriage over love marriage mainly due to the importance of the need for family support in case divorce or polygyny occurs.

Employment

Type and patterns of women's activities are very important elements when considering the relationships with nuptiality. Selected education, and employment, experiences can enhance autonomy and self-recognition, which in turn change people's expectations and prospective gains from marriage. Moreover, type and length of both education and employment are crucial elements in building new individual decisions that can be in contrast with the societies norms and views. However, the economic activity rates of women in the Arab countries are relatively low (Zurayk, 1985, Abu Nasr et al, 1985, and Moghadam. 1995). Also, Arab women usually join the government sectors, which do not require selected skills and mentalities, but have flexible working hours and generous maternity schemes.

Another element is the financial return of employment and the cost of lost opportunities. If the employment is well paid, this may tempt the family to delay their daughter's marriage so they can benefit more from her income. This is more likely to happen if the family is headed by the mother, in case of divorce or widowhood, who needs this income

to raise younger children. On the other hand, an employed woman with a decent stable income can have a better situation in the marriage market. The last point largely depends on men's views of the characteristics of a better wife. From the literature review, it does not seem to be a major advantage in Egypt, Syria and Sudan (Rugh, 1984, Hoodfar, 1997, and Abdelrahman and Morgan, 1987).

Woman's employment can make her more prone to marital dissolution. This may be because employment may compete with the traditional duties of a wife. In some cases, such conflicts between her employment and her main duties as regarded and valued by the society's norms can lead to polygyny or dissolution. The Egyptian WFS in 1980 shows a striking association between women's employment and dissolution rates. However, the causal nature of this relationship cannot be detected because work status and marital status are collected at the same point of time. This means that women who work may be at higher risk of marital dissolution, however, women who lose their husbands may be forced to start work.

Previous marital status

Previous marital status directly affects the eligible pool of potential mates for a person. The norms in the Arab region usually do not encourage marriages between never married and divorced or widowed persons, especially in case of never married males. This puts divorced and widowed persons, and in particular females, in an undesirable position in the marriage market. In some areas of the region a previously married woman can only be married in a polygynous union.

Family Characteristics and Social Background

This factor should reflect the families' social class and socio-economic status. It may include father's occupation, income, social class, original place of residence (rural migrant) and others. Such factors can influence timing of marriage in several ways. Parents' places of residence, or individuals' childhood place of residence, may affect kinship values as well as their daughters' position in the marriage-market. Marriage may be more difficult to arrange among higher-status families, Caldwell et al (1983) observe, 'a more heterogeneous society in terms of both education and wealth means that it is necessary to search through a larger population'.

Fathers with higher socio-economic status feel less financial pressure to marry their daughters early. Also, the availability of males of certain statuses, with similar or

higher status than the father, will require more time for higher status families (Sokona and Casterline, 1988). Goode (1982) argues that upper-class families are both more motivated and better equipped to control the mate selection of their offspring than other social strata. He observes that socio-economic status is positively related to the influence of kin in mate selection, but such effect can be different on males and females. However, his study was conducted on developed countries with different kinship structures than the Arab region. It is expected, in the Arab region, that the influence of family on mate selection will be high among all social classes and can be even higher among lower classes. Most of the studies show that low social position is usually positively associated with earlier age at marriage for both males and females; however, such relation is not expected to be linear. One also should take into account the interaction between social class and place of residence, network, and kin group ties, which can be a major factor in determining the relation between social class and the intermediate variables.

II.4 INTERMEDIATE VARIABLES

II.4.1 Cost of Marriage

What is meant by cost of marriage here is not only the direct costs that are spent in preparing and accomplishing marriage but also the cost of the lost opportunities by marriage. An employed woman with relatively high salary and high prospective may find the direct costs of getting married are affordable while the cost of loosing her job and future perceptions are quite high. Suspending, or even terminating, females' employment after marriage can be expected in the Arab region where the woman's main and most important job is regarded to be marriage and procreation.

Direct cost of marriage is usually regarded as one of the major obstacles that inhibit young men in the region from getting married. This is mainly due to the large demands made by the brides' families that may be justified as a way to secure their daughters marriages against potential disruptions of divorce or polygyny. One can expect the cost of marriage to increase with women's education, employment and social background as her value as a trophy for husband and her expectations from marriage becomes higher.

Migration can play a role in formulating the requirements for marriage. International migrants, as well as internal ones, can bring back different requirements and standards of a desirable marriage. The importance of the type and amount of furniture, household equipment, type of celebration and other elements can be affected when people see examples of household set up by returned migrants.

On the other hand, if the country is in a phase of political disruption due to war or other reasons, some of the material aspects of marriage can be devalued. For example, the cost of marriage in Palestine is quite low when compared to that in the Gulf area and that is mainly due to the importance of marriage and procreation of the Palestinian to face the formation of Israel (Haj, 1995).Cost of marriage usually varies according to type of residence. Both the direct cost of setting a new couple's life and cost of lost opportunities are expected to be lower in rural residence. This can be due to the assistance given by the families to the new couple, the lower demands from the bride's side and the lower female education and employment rates in rural areas.

As mentioned before the development level of the country and especially the distribution of income across the country can change the cost of marriage and its impact on different marriage elements. In countries with higher economic levels the average requirements of marriage can be higher but the effect of this on marriage age, for example, depends on the shape of income distribution within the country. For example, if the income distribution of the country is far from uniform, where the proportion of the population with high income is small, the standards of desirable marriage elements can be higher than what most of the population can afford. Such standards are formulated not only by the small proportion of the population with higher incomes but also by the media, which usually addresses this specific category but influences the whole population.

Individuals' social background is directly linked to the expected cost of marriage. A family with a higher socio-economic status may have higher requirements and expectations for their children's partners.

II.4.2 Norms of Marriage

What is meant by norms of marriage, in this framework, is a set of acceptable and desirable marriage elements that is supported by a group of people. According to the previous definition, different groups can have different set of norms. A group can be linked by some sort of kin ties or by specific characteristics, such as religious, race or any other background variables. Thus, it is possible to detect different sets of norms even at the same geographical area. However, living in the same geographical area is an important factor of homogeneity, which can dominate other factors or at least reduce the differences between different groups.

Norms of marriage are results of the effect of many macro and micro level variables. Laws governing marriage and relations, the religious structure of the country, type of

residence and individual's religion have major effects on formulating such norms. All these factors formulate what is acceptable and desirable for marriage elements among different groups. Age at marriage, age gap between spouses, the position of a divorced or separated woman, and the acceptance of different types of marriage are some of the important elements that are governed by such norms.

These norms and values do not easily vary with individuals' characteristics as societies usually employ a variety of mechanisms for regulating pre- and post-marital behaviours. Such mechanisms interact in complex ways with individuals' decisions. People who challenge such norms usually have selected characteristics. Education and employment are viewed as some of the main variables that can be in conflict with the existent norms.

II.4.3 Partner Selectivity and Availability of Mates

Two complementary theories can be used in examining socio-demographic determinants of partner selectivity. Exchange theory stresses the resources that individuals are able to trade in order to maximise their rewards (Edwards, 1969; Scheon and Wooldredge, 1989). Men are seen as exchanging their socio-economic resources for women's sexual, domestic and childbearing services. Therefore, women are thought to be more concerned with the socio-economic status of potential spouses, and men more concerned with physical attractiveness and age.

A second theoretical approach emphasises the characteristics of the marriage market, with the quantity and quality of potential mates (Guttentag and Secord, 1983; Wilson, 1987). Persons who are in an advantageous position in the marriage market by having a surplus of available mates may not expand their field of eligible to those with undesirable characteristics. On the other hand, those with relatively few marital alternatives may respond not only by remaining unmarried but also by enlarging their pool of eligible partners. Other variables may also shape mate selection preference. Previously married individuals may enlarge their acceptable field of eligible partners to compensate for their marital history. It is argued that, for both men and women, socio-economic resources such as high earnings and education may lead to a more restricted preference set (South, 1991). Following this, persons with better traits may need a longer time to search for suitable mates. Social background can affect partner selectivity in a similar mechanism. The only difference can be that the parents are the ones who are influencing the decisions more.

Partner selection criteria are usually differentiated on the basis of sex. With men less willing than women to marry older, less attractive mates, and women less willing than men to marry persons without high incomes, or advanced education. However, despite the evolutionary importance of resource holding capacity to females and physical attractiveness to males, Buss (1989) and Buss et al (1990) discovered that personality factors such as kindness, intelligence, dependability, and emotional stability were always rated ahead of either physical attractiveness or resource holding capacity, and that there were no significant sex-differences in regard to any of them. Moreover, a study by Walter (1997) showed that in Morocco, the best predictors of marriage desirability for males rating females appear to be physical attraction, intelligence, responsibility, and kindness, in that order. Females, on the other hand, appear to evaluate males, in descending order of importance, in terms of responsibility, physical attraction, kindness, and intelligence. Hence, males and females appear to use the same four criteria in assessing the marriage desirability of a potential marriage candidate but the relative importance of these criteria for the two sexes differs.

An important aspect that should not be neglected is the effect of the kinship structure of the country on the marriage market and partner selectivity. In settings where cousin marriage is predominant, a woman may marry her cousin even if she has better traits than he does simply because there are no other options. Thus, even if certain partners with certain personal criteria are more desirable he/she might not be selected if the family insists on a blood related marriage. Buss et al (1990) found that most of the variance in mate selection criteria in their international sample was attributable to cultural differences (14 percent); sex differences accounted for only 2.5 percent but were robust cross-culturally.

II.5 CONCLUSION

The current framework suggests that both macro and micro level variables interact and influence three major intermediate variables, which in turn shape the nuptiality patterns. The interactions between different variables are suggested to be crucial in explaining their net effects on the intermediate variables. A major factor in determining changes in marriage patterns in the Arab region can be the existent kinship structure and laws governing marriage. These two may play an important role in shaping the norms of desirable marriage elements. Most of the Arab norms regard kin marriages, younger ages at marriage for females and arranged marriages as desirable elements, and usually accept

polygyny if the woman doesn't have children or sons, or even if the husband provides adequately for her. Within the context of strong ties and kin groups it is very difficult for individuals to change these norms. However, there are many variables that compete with such norms. Selected education and employment on the micro level and the development process in the macro level are main factors in shaping new values favouring different nuptiality elements.

Chart ii.1: Analytical Framework

| PRIOR VARIABLES | INTERMEDIATE VARIABLES | NUPTIALITY ELEMENTS |

Macro level

| Laws governing marriage |
| Kinship and gender structure |
| Religious structure of the country or region |
| Development level of the region |
| Political disruption |
| Migration |

Norms of Marriage

Cost of Marriage

Micro level

| Type of residence |
| Personal characteristics |
| Social background |

Partner Selectivity and Availability of Mates

Marriage Timing

Marriage Prevalence

Marriage Stability
Dissolution rates
Remarriage rates

Marriage Characteristics
Type of contract
Inter-spousal age gap
Polygyny
Consanguinity

Chart ii.2: Analytical Framework Summarised

| PRIOR VARIABLES | INTERMEDIATE VARIABLES | OUTPUT |

SOCIETY

FAMILY

PERSONAL CHARACTERISTICS

NORMS OF MARRIAGE

PARTNER AVAILABILITY

COST OF MARRIAGE

MARRIAGE ELEMENTS:
Prevalence
Timing
Stability
Characteristics

63
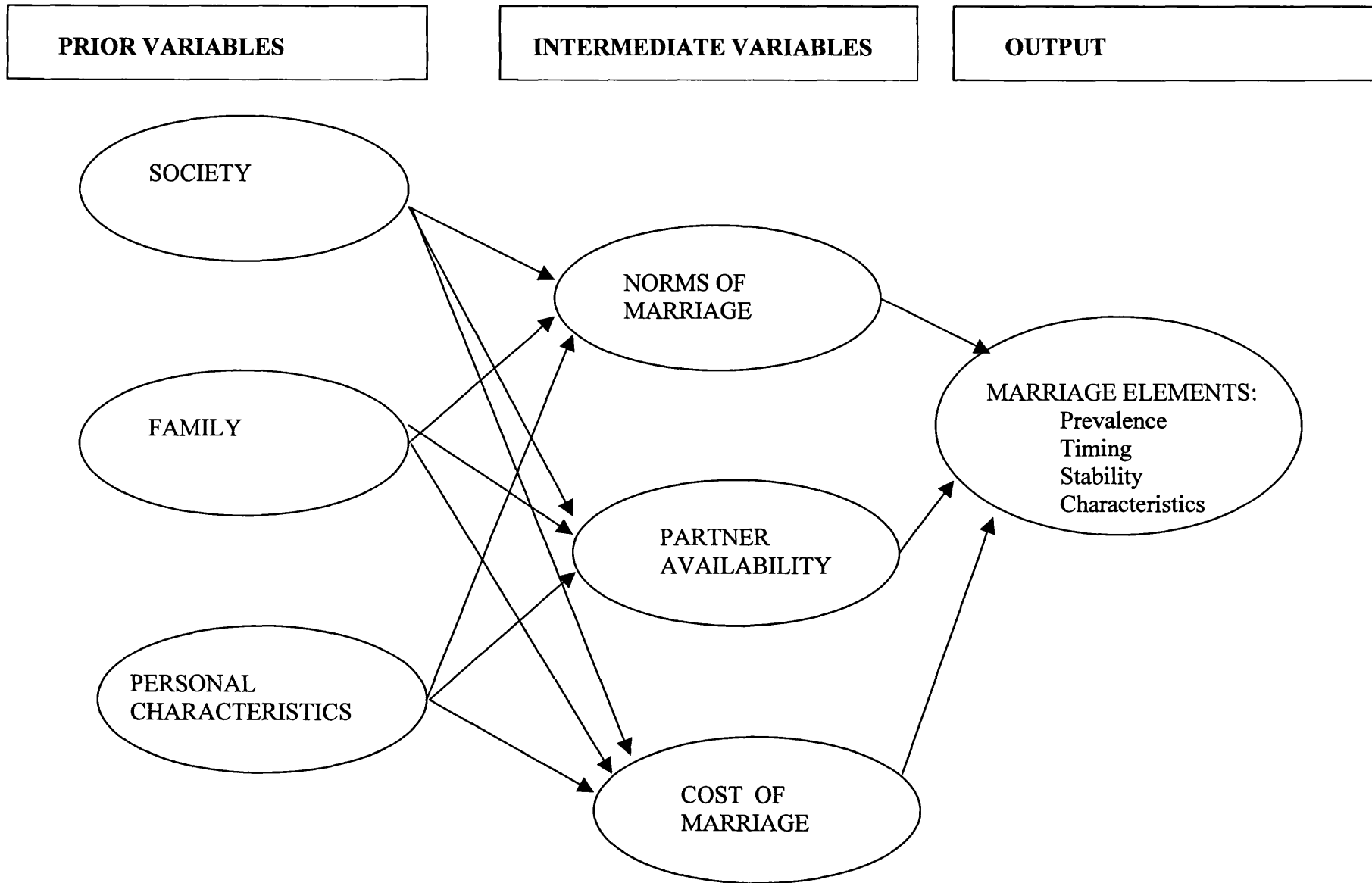
CHAPTER III: METHODOLOGY REVIEW

III.1 MEASURES OF LOCATION OF MARRIAGE

The timing of marriage can be studied using several tools. One of these tools is the calculation of a summary measure of location of age at marriage. Several statistics have been used to measure the age at first marriage. Some of these statistics are: the mean and median age at marriage of a cohort, the mean and median age at marriage of a population, and the singulate mean age at marriage (SMAM). SMAM, unlike the other mentioned methods, abstracts from mortality and migration; however, it has the advantage of being readily calculated from tabulated data. All of these statistics are generated from reported data grouped by age and are subject to bias of unknown extent and sign if there is substantial age misstatement. In addition to the previous methods, Van De Walle (1968) suggested an alternative method that is largely free of bias due to age misstatement.

It is very important to realise that most available demographic data, from surveys or censuses, are censored data. Censoring means that all individuals who are not married at the cross-sectional point may marry at later ages. The data on age at first marriage from the ever-married group may give a downward by biased picture depending on the measure used to capture this age. The effect may be greatest in the youngest age groups where a significant proportion of women have never married. Thus, it is very important to choose the right measure when dealing with censored data.

III.1.1 Mean Age at Marriage

The mean age at marriage is calculated from the number of marriages broken down by age. It is a weighted average of the ages, where the weights are the number of married population at each age group. When using five-year rather than single-year age groups the mean age at marriage will often give imprecise results because the grouping is too rough. Generally, it is better to use single-year age groups, up to at least age 25 (Newell, 1994). The mean age at marriage is influenced by censoring; also small numbers of marriages that occur at older ages may cause the resultant measure to over estimate the real age at marriage.

III.1.2 Median Age at First Marriage

Median age at first marriage is defined as the age by which 50 percent of a group have entered their first marriage. By definition the median age at marriage is not affected by censoring and will not increase as never-married women in the group continue to marry. Also, the small numbers of late marriages in the 30's and 40's will not carry the same weight as in the mean.

III.1.3 The Singulate Mean Age at Marriage SMAM

The singulate mean age at marriage, SMAM, had been developed by Hajnal in 1953, and is formulated to use current status data. SMAM is the average number of years spent in the single state by those who marry before age 50, which is equivalent to the average age at marriage. It is a measure that logically should refer to the nuptiality experience of a birth cohort. However, in practical, it assumes a hypothetical cohort that is subject at each age to the marriage rates in question. It also assumes no differences in mortality and migration rates between single and ever married populations. Following this, it is conceivable that if nuptiality patterns have been changing, the proportion single at age x may be smaller than observed at age $x+10$, a situation that would never arise in members of the same birth cohort. Van de Walle (1968) suggests that SMAM should only be computed from the proportion single persons at successive ages if differential mortality and net migration rates by marital status might be considered negligible.

It is usually suggested to use SMAM if it is not applicable to calculate the mean or median age at marriage due to non-existent or incomplete data on marriages by age. When marriage patterns are changing rapidly, the singulate mean age at marriage may not reflect such changes. If SMAM is calculated for several points of time and a declining trend is observed, it is difficult to obtain meaningful explanation of that decline. The proportion single at the recent dates can be affected by rapid changes in marriage rates. Proportions singles at younger ages, thus, may decrease rapidly while little change at the older ages occurs. In such situation, the proportions single in a hypothetical cohort exposed to marriage rates between two surveys or censuses need to be calculated before the value of SMAM is computed (UN, 1983).

SMAM can be calculated using the following formula where s_x is the proportion single at age x, and if all first marriages are assumed to have taken place by age 50,

$$SMAM = \sum_{0}^{50} \frac{(S_X - S_{50})}{(1 - S_{50})}$$

(iii.1.1)

This formula yields good results with European populations. However, in case of population where age reporting is unreliable, SMAM must be carefully evaluated. SMAM is sensitive to biases in age reporting that one may expect in illiterate societies. Moreover, the method can only be used in a population in which the proportions married at specific ages have not been appreciably affected by migration. For this reason, it cannot adequately measure urban-rural differentials in age at marriage (Van De Walle, 1968).

Two types of data errors can cause unreal differences in SMAM. These are errors in classification according marital status and errors in age reporting. The first type of error is limited to the classification between single and ever married. This can arise in marriages of very young women especially if ages at marriages were less than the legal age at marriage. However, a study on several African populations shows that errors in reporting of marital status are probably not sufficiently important to affect the SMAM (Brass et al, 1968).

The second type of error deals with age misstatement. The main difficulty stems from the unreliability of age reporting in populations with low literacy rates. In many cases, ages are estimated by interviewers, and such estimates are usually subject to special biases. Interviewers usually tend to be influenced by their assumptions about usual ages at marriage and maternity. Furthermore, most countries have legal minimum ages of marriage, and census or surveys do not consider earlier marriages. Under these circumstances, it may be expected that married women who are younger than the legal age at marriage will be reported as older. Conversely, ages of older single women may be under estimated. Also, estimates of ages may be influenced by the number of births. Thus, it is very important to assess data quality and age reporting before interpreting the SMAM results.

The SMAM tend to over-estimate age at marriage when compared to other measures. Empirically, the values of SMAM tend to be higher than the values of the median age at marriage and the Van de Walle estimator (Van de Walle, 1968).

III.1.4 Van de Walle Estimator

This method calculates a statistic, $\hat{a}$, which is roughly the mean age at marriage. Trussell (1976) has tested the performance of the Van de Walle estimate and has shown that the statistic $\hat{a}$ is really an estimator of the mean age at marriage of a cohort. The same statistic also estimates the SMAM, the mean age at marriage in the stable population, and the median age at marriage quite well.

The Van de Walle estimator can be calculated when a population has had constant age-specific fertility and mortality rates for a long enough period of time so that it may be regarded as approximately stable. The simple overall dichotomy single-non-single can be translated into an age at marriage using an estimate of the age distribution in the population.

Using some information, such as estimates of $_2q_0$, the exponential growth rate over the past decade and a mortality pattern assumption, one can choose an appropriate model stable population. The method relies on finding an age $\hat{a}$ such that the proportion over age $\hat{a}$ in the stable population is used as an estimate of the proportion ever married. This method assumes that all the population will eventually marry.

III.2 MEASURING TRENDS IN NUPTIALITY

In order to estimate the time trend in age at marriage using surveys data, one can construct cumulative proportions ever married by age for five-year birth cohorts. Five-year cohorts are usually used rather than single-year to reduce the effect of sampling error (Goldman et al, 1984b). Because a cohort cannot have experienced a first marriage at an age greater than its current age, the first marriage experience should be truncated at the lowest age of a five-year age cohort. Then one can estimate the mean age at marriage for those marriages occurring before age 25, for each cohort, as an indication of the trend in age at marriage over time. Alternatively, one can fit model first marriage schedules (Coale and Trussell, 1974) to the actual first marriage experience up to current age, and thereby obtaining estimates of first marriage rates for the remaining ages for each cohort. The mean of the fitted model schedule provides an estimate of the mean age at first marriage for each cohort at the end of its lifetime. However, estimates for younger cohorts should be treated carefully as they involve more assumptions about the cohorts' future nuptiality experience.

Trends in age at marriage can also be analysed by an examination of changes in proportions ever married by time period. For example, by examining proportions ever married in each five-year age group from 15-19 to 35-39.

III.3 LIFE TABLE ANALYSIS

Life Tables are usually viewed as the logical, and most powerful, device for analysing demographic phenomena that can be viewed in cohort terms. In general, life tables are appropriate when duration of exposure is central to whether the events being studied have occurred, when the duration is measurable, and when the events themselves are simple and unambiguous (Smith, 1980). The technique is simply to show the numbers remaining in a defined status at any stage, and some related functions. The usual stages in the life table process are successive ages, expressed in years. However, other stages such as the period of time elapsed since some event, or the number of children borne by a woman can be used. The nature of entering or leaving the status may be single or multiple. The basic information required to construct a life table is a cross-tabulation of all individuals with an event of interest by duration of exposure. Duration of exposure means the interval from the previous event to either the entrance to a different status or interview.

Life table techniques have been applied to the analysis of marital patterns by many demographers and since a long time ago (for example Grabill, 1945, Schoen and Nelson, 1974, and Espenshade and Braun, 1982). When life tables are used to study nuptiality, they are called 'Nuptiality Tables'. The term 'Gross Nuptiality Table' is used when there is no allowance for mortality in the analysis, while 'Net Nuptiality table' is used when mortality rates are included.

The simplest of life tables' techniques are the single decrement life tables. These models allow the studied population to decrease due to one event, usually mortality. In other words, they follow a closed group, or cohort, from birth to the death of its last member. Multiple decrement life tables consider exits from different causes of death or from other reasons such as marriage or disability. The single, or never married, table is the usual nuptiality-mortality double decrement table, which starts with a cohort and subjects them to attrition from death and marriage.

More complicated models recognise exits, or decrements, due to different events, as well as entrants, or increments. These models are called increment-decrement life tables. Nuptiality patterns can be best studied by the increment-decrement life tables'

technique. Using an increment-decrement model one can follow a cohort of married members. This cohort has increments from marriages in the 'never married' table and remarriages in the 'widowed' and 'divorced' tables, as well as decrements from death, widowhood, and divorce. Of the transitions just mentioned, death is the only absorbing state, which once entered cannot be left. This model is usually called 'the Marital Life Status Table Model'.

Since the proportion ultimately marrying tends to be high in the Arab region, the principal function of nuptiality tables is to reveal changes in the distribution of marriage by age. Although such changes are usually the main object of study, it should be borne in mind that some of them at least are temporary in character and may be of limited significance from a long-term point of view. A nuptiality table has a superficial appearance of continuity, but this may be misleading (Cox, 1976).

All increment-decrement life tables are formulated as simple semi-Markov-chain models, which assumes that the population is homogeneous. Such assumption means that all the individuals of a given age, present at the same time in a given state, have identical tendencies for leaving that state and that such tendencies are independent of the past history of the individuals concerned (Ledent, 1981). A less restricted formulation of the model incorporates duration dependency where both age and duration of being in a specific state would be controlled in the transition probabilities.

Problems of producing increment-decrement life tables are in finding series of age-specific rates $(_nm_x)$ and converting them into life table probabilities $(_nq_x)$. For example, all age-specific death rates for each of the four marital statuses need to be calculated. In addition, age-specific rates are needed for transitions between different marital statuses. Occurrence-exposure rates of possible transitions are usually used as a starting point. These rates are defined as the number of occurrences of an event during a specific period of time to the population at risk divided by the number of person-years lived by the population at risk during the same period.

If we assume that the risks of death and of moving to another marital status are independent, then the age-specific rates are additive across outcomes (Keyftiz, 1977, and Preston et al, 1972). Following these conditions, the matrix of survival probabilities can be computed using the formula given by Willekens and Rogers (1978).

$$P(x) = [I + n/2\, M(x)]^{-1}\, [I - n/2\, M(x)]$$

<div align="right">(iii.3.1)</div>

where:

P(x)   is the matrix of transition probabilities,

M(x)   is the matrix of age-specific mortality and marital-status transition rates,

I   is the identity matrix.

Theoretically, one can study marriage functions depending on sex, socio-economic status, place of residence, etc., by building different life tables consisting of each subgroup. However, this method is only plausible for a few categories since sample size becomes quite small as the number of subgroups increases. Usually, each effect is analysed separately. One way of overcoming this problem is the use of the 'proportional hazards life table models'.

III.4 PROPORTIONAL HAZARDS LIFE TABLE

As seen from Section III.3, ordinary life table techniques assume that the force of mortality, or divorcing etc., is constant specific to each age group for all individuals in this group. The proportional hazard model, on the other hand, assumes that at a given age the force of mortality is derived both from the age and the characteristics of the individuals. It is a method to analyse the effect of covariates on the life table simultaneously without the necessity for dividing the sample into subgroups. The analytic tool is a life table but it is assumed that the duration-specific rates or risks, for giving individual characteristics, are proportional with proportionality factors that are constant at every duration (Menken et al, 1981).

The proportional hazard model was first proposed by Cox in 1972 and has been developed further by others such as Breslow (1972; 1974), Holford (1976), and Prentice and Kalbfleisch (1979; 1980). As in the ordinary life table, it is assumed that there is a hazard, or risk, at each time, *t*, of the occurrence of the end point event (such as, death, marriage, marriage dissolution, etc.). As mentioned before, in ordinary life tables the same risk applies to all individual while in the proportional hazard model the risk depends on personal characteristics. The core assumptions are that population heterogeneity is captured by the set of covariates included in the analysis, and relative risks remain constant over time.

It is assumed for an individual *i* with a known set of characteristics represented by a vector of covariates Z_i, that the hazard function $\mu(t)$ is given by

$$\mu_i(t) = \lambda_0(t) e^{\beta' Z_i}$$

where β' is a vector of unknown parameters corresponding to the vector of explanatory variables. Hence, the hazard function is the product of an unknown function $\lambda_0(t)$, which provide the hazard function for the standard set of conditions $Z=0$, and another vector $e^{\beta' Z_i}$ that depends on a set of unknown parameters at time t. For example, if Z_{i1} is education and Z_{i2} is age at the start of the life table for individual i, and these are the only covariates, then $\beta' = (\beta_1, \beta_2)$, $Z'_i = (Z_{i1}, Z_{i2})$, and $\mu_i(t) = \lambda_0(t) e^{\beta_1 Z_{i1} + \beta_2 Z_{i2}}$. The factor $e^{\beta' Z_i}$ is the relative risk associated with having the characteristics Z_i. When a variable has n categories, $n-1$ parameters must be included in the model.

Given knowledge of the hazard function, other life table values can be computed. For example, the proportion surviving from time 0 to time t, $P_i(t)$, is given by

$$P_i(t) = \exp\left(-\int_0^t \mu_i(a)da\right)$$

For other life table functions please refer to Menken et al (1981).

There are several approaches to the analysis of the above model. The simplest is to assume $\lambda_0(t)$ constant, i.e. to assume an underlying exponential distribution. Another solution is to take a two-parameter family of hazard functions, such as the power law associated with the Weibull distribution or the exponential of a linear function of t. Alternatively, $\lambda_0(t)$ may be qualitatively restricted, for example by assuming it to be monotonic or to be a step function (Cox, 1972).

One approach to estimate β' employs the maximum likelihood method. Maximum likelihood estimators (MLE) are those values of the parameters that maximise the likelihood of observing the actual outcome. Once MLE of β' are obtained, the hazard function can be estimated for any given value of Z_i. The efficiency of MLE depends largely on the estimate of $\lambda_0(t)$.

Another way of estimating β' is by applying the partial likelihood method which was proposed by Cox in 1975. The partial likelihood has as its purpose the development of techniques to make useful inference in the presence of many nuisance parameters.

It assumes that the risk sets are themselves uninformative for β'. It is allowable for the risk sets to depend on all data observed before time t, plus random elements whose distributions do not depend on β'. Subject to these restrictions, censoring cannot affect the likelihood function or any Bayesian/likelihood based inference, though it can affect expectations connected with the likelihood such as the Fisher information. Efron in 1977 proved that censoring have little effect on the efficiency of the partial likelihood estimators produced by the non-parametric Cox-regression models, under any reasonably realistic assumptions on the class of possible hazard rates.

Cox-regression model is used in the analysis to study the association between different explanatory variables and the probability of getting married at certain ages. The information on age at marriage and values of different explanatory variables are available from retrospective surveys, which is of a survival nature that is not symmetrically distributed. For each individual we observe either time to 'failure', marriage in this case, or the time of 'loss', or censoring. That is, for the censored individuals we know only that the time of failure is greater than the censoring time. For each individual, one or more further measurements are available, say on the explanatory variables $z_1,.....,z_p$. The hazard function will be that described in equation iii.4.1, and β', which is a vector of unknown parameters corresponding to the vector of explanatory variables, is estimated using the partial likelihood method yielding estimates of relative risks of occurrence of marriage among each sub-group with certain characteristics.

III.5 PROPORTIONAL HAZARDS MODELS FOR CURRENT-STATUS DATA

One common variable of interest in many areas of demography is the age at which a certain event or 'milestone' occurs, for example, age at divorce, and age at first marriage. In many cases the age at milestone is missing from the data, such data are called current-status data. As seen from Section III.1.3, SMAM is a method to calculate age at first marriage from current-status data that is missing the exact date of marriage. One method of studying the relationship between the age at a particular milestone and some explanatory variables is to use proportional hazards models for current-status data. These data comprise information on whether the milestone, such as marital dissolution, has or has not occurred at the time of the survey and

information on age at time of the survey. If the milestone has been reached, we have incomplete information on when this occurred. If the milestone has not been reached, we do not know when it will be reached, if ever. Current-status data thus correspond to the extreme situation where all the survival time data are either right-censored or left-censored. When age at dissolution is less than age at survey then the data is left-censored, and when age at dissolution is greater than age at survey then the data is right-censored, and age at dissolution is never provided. While these data constraints are restrictive, it is still possible to estimate the distribution using parametric models (Nelson 1978 and 1982), to fit parametric models that include explanatory variables, and to estimate some non-parametric models (Diamond and McDonald, 1992).

III.5.1 Parametric Regression Models for Continuous-Survival Data Adopted to Current-Status Data

For the ith individual, we observe whether or not the milestone has occurred before known age a_i, which, in general, differs between individuals. Current-status data often involve a large number of haphazardly determined censoring points (the a_i s) with the possibility of a large number of repeated censoring points (e.g. if age at survey is measured in completed months or years). Most parametric survival models can be specialized to current-status data. For example, log-logistic and log-normal accelerated life, AL, models when specialised yield logit and probit binary regression models. By including the logarithm of a_i as an explanatory variable in a binary regression model, one can fit parametric AL models to right- and left-censored survival data where the right- and left-censored indicator is taken as the response variable.

Binary regression models are of the general form of

$$\text{Link}\{p(\text{z})\} = \beta_0 + \text{z}`\ \beta_1 \tag{iii.6.1}$$

Where some 'link' function of the probability, $p(\text{z})$, of 'success' has a linear regression on the explanatory variable z. the link can be any continuous monotone increasing function from the unit interval (0,1) to the real line. The 'natural type' of link for the statistician to use is the inverse of a cumulative distribution function (CDF) of a continuous random variable:

$$\text{link } F^{-1}\{p(\text{z})\} \text{ where } F(\cdot) \text{ is a CDF.}$$

III.5.2 Likelihood for Current-Status Data

For individual i with vector of explanatory variables x_i, instead of observing age at milestone T_i, we observe at a known age a_i only

$$Y_i = \begin{cases} 1 \text{ if } T_i < a_i & \text{(left-censored age at milestone)} \\ 0 \text{ if } T_i > a_i & \text{(right-censored age at milestone)} \end{cases} \quad \text{(iii.6.2)}$$

The information contained in a current-status sample of size n is described by the n triples (Y_i, a_i, x_i), where i=1, ... , n. the likelihood is the usual Bernoli likelihood

$$\prod_{i=1}^{n} P_i^{y}i(1-P_i)^{1-Y_i} \quad \text{(iii.6.3)}$$

where $P_i = \Pr(Y_i = 1; a_i, x_i)$ is the probability that the age at milestone T_i is less than a_i. The likelihood equations and Fisher information matrix for distributions having a location and scale parameter are given in Nelson (1978), so that the Newton-Raphson algorithm may be used to find maximum-likelihood estimates and their covariance matrix.

III.6 NUPTIALITY MODELS

In general, demographic models are attempts to represent demographic processes in the form of a mathematical function or set of functions relating two or more measurable demographic variables. They are used for several different purposes. First, they can be used to smooth data, For example, a set of age specific death rates (ASDRs) may be very irregular due to some problem in age reporting, or because of small sample size. Smoothing by fitting models can produce better estimates. Second, one can assess data quality using demographic models. A set of data that cannot be fitted well should be treated cautiously during analysis. Third, models can use some partial data and complete them in a plausible way to produce single-year specificity. Fourth, models can be used to estimate data that are not available for dates between censuses or surveys as well as for projection. Fifth, a model may be used to gain insight into the mechanisms underlying the data. Finally, models can be used for research into the effect of changes in determinant of mortality, nuptiality, or fertility.

There are two ways to derive demographic models, exploratory or theoretical. The exploratory approach begins by examining available data then trying to express existent relationships in a mathematical model. Theoretical approaches, on the other hand, begin with assumptions of possible interactions.

Some of the main nuptiality models are Coale's (1971) and Hernes' (1972) models and are described below. It worth noting that, Coale's (1971) model is derived from an exploratory approach, while Hernes' (1972) model is derived from a theoretical approach.

III.7 THE MARRIAGE-MARKET APPROACH

The quantity and quality of available partners to men or women has profound effects on the basic family structure. Imbalance in the relative availability of males and females has significant effects on their comparative status and power and on marriage rates and stability. A shortage of males or females at the appropriate ages would be likely to alter marriage patterns that exist under normal conditions. However, it should be kept in mind that, in societies where cross-cousin marriage is dominant the marriage market could be very small (Goldman et al, 1984a).

Ideally, an analysis of the marriage market should include all unmarried persons classified by sex, age, and social characteristics such as education, residence, and previous marital history. The most frequently cited measure, the population sex ratio, is a too crude measure of availability since it includes those too young and too old to be exposed to the risk of marriage. Other ratios have been defined to reflect the number of females in the age group relative to the number of males in the age groups from which the women are most likely to select men. Goldberg (1965) defines the ratio as the number of females 18 to 21 relative to the number of males 21 to 24, and Akers (1967) uses the ratio of females 18 to 22 relative to males 20.25 to 25.25. However, both of these measures are based on total numbers including married and non-married population while the interest is usually in the non-married population. In an attempt to predict marriage rates, Hirschman and Matras (1971) define the following index; the number of single females in an age interval relative to the number of single males in the three or four age groups among which those women are most likely to select men. All previous ratios have in common an implied and fixed age difference between men and women that ranges between two or three years.

The sex ratio at marriageable ages is very sensitive to the assumed fixed age difference between spouses. Even if one calculates different age ratios with different fixed age difference between spouses, they will not offer realistic descriptions of the availability of mates because of several limitations. First, the selected age differences are very limited, which means that women are paired with men of x years older than themselves without the allowance of any available males from different age groups. These fixed age differences do not take into account the distributions of age differences, which are usually quite wide. Second, These measures exclude factors other than age difference between spouses, which are crucial in defining the marriage market. It is obvious that many other social, economic, culture and personal factors enter the definition of availability. Some of these, such as physical attraction and personal attributes are very hard to measure. On the other hand, many other variables that determine availability, such as religion, income, education, are measurable. Third, most of the previous ratios ignore the question of availability of mates for older unmarried cohorts, who are becoming an increasingly large percentage of the small unmarried pool.

III.8 ASSESSMENT OF DATA QUALITY

The evaluation of data is an essential step before analysing nuptiality, or any other demographic event, and interpreting the results. There are various types of response errors that can distort the estimates of demographic measures. The first type of error is omission of events. The second important type of error is misstatement of dates of events, for example, dates of starting and ending marriages. If such misreport is not random, but is systematic, it will produce biases. Thus, while omission is a fundamental problem, misstatement of dates will only become a serious issue when it produce biases, or displaces events in particular directions (Goldman et al, 1984b).

III.8.1 Age Misstatement

The correct determination of age is crucial for the analysis and understanding all demographic phenomena. Age is used in almost all calculations of levels, trend, effects and correlation. In order to detect errors in data, comparisons must be made. The standard against which the data is compared for internal consistency can be other individual items of the same data set and a priori notations of distributions and their smoothness. For external checks, one can compare distributions of independent data

sets, such as other surveys, censuses and/or registration statistics. Also one can apply quasi-independent checks between the individual survey data and the household schedule data and comparisons with models.

In the reporting of age, a tendency to prefer certain digits, commonly zero and five, is indicative of uncertainty of age. The greater the amounts of this age heaping the lower the confidence in the quality of the age data. The prevalence of age heaping in a single-year age distribution can be summarised by an index of preference for terminal digits. Such indices, include for example, Myers' blended index, measure the preference for, or avoidance of the ten possible terminal digits in the reporting of a single-year age distribution (Myers, 1940). These values would be close to zero in the hypothetical case of no age heaping. The theoretical range of Myers' index is 0, representing no heaping, to 90, which would result if all ages were reported at a single digit.

Very small variations from 0 are not necessarily indicative of heaping and should be disregarded. The 'true' population in any single year of age is by no means equal to exactly one-fifth of the 5–year age group centring the age. Nor is there necessarily a gradual decline in the number of persons from the youngest to the oldest age in a broad group, as it is assumed in the equation. The age distribution may have small irregular fluctuations, depending largely on the past trend of births, deaths, and migration. In short, it is not possible to measure digit preference precisely, because a precise distinction between the error due to digit preference, other errors, and real fluctuation cannot be made. Moreover, the Myers index is affected by sampling error, so random fluctuating will increase the value of the index. However, values for the index calculated at the national level should not be seriously affected.

While age heaping is presumed to arise from equal transfers of persons whose true ages fall on either side of rounded age or 'heap', reports of age can also be more grossly inaccurate. For example, an interviewer having no information about a 34-year-old woman other than that she has seven children, estimates her age as 45 years old. Or, an interviewer may systematically estimate an age of twenty or above if childbearing has begun. This type of directional transfer of person from true to reported ages is termed gross age misstatement and may introduce serious biases in estimating rates and proportions based on age groups.

Gross misstatement of age can be detected by internal comparison. This is done by distributing respondents by five-year age group, then comparing age ratios between

groups. However, there are some difficulties using this procedure. The scarcity of women at the boundaries of the eligible age range, especially at the upper boundary, makes it hard to detect if women have been transferred into the neighbouring age group, especially the 40-44 group, since the number of women in the 45-49 group will be too low.

Moreover, nuptiality data could be affected by transference that is selective of marital status. For example, a married woman age 14 at the time of survey could be recorded as being age 15-19, while a single woman age 15-19 could be reported as age less than 15.

The pattern of reported sex ratios by age could suggest some age misstatement problems. For example, if a deficit of males in the age range 15-30 is pronounced it can suggest either an under-enumeration of males in the younger adult ages or a tendency for too many females to report themselves in that age range. Given that age is used as a criterion for eligibility in all demographic surveys, the faulty report of age on the household schedule of women near the boundaries can lead to biases due to the exclusion of potentially eligible women. In order to get an idea of the amount of exclusion, age and sex ratios can be calculated for the five-year age groups forming and around the boundary ages. If women have been displaced in the age distribution to the age groups immediately outside the age boundaries, the age ratio for these groups will be high and the sex ratio will be low. If they have come from the neighbouring groups, then the age and sex ratios just inside the boundaries will be low and high, respectively. If there is no 'boundary effect' then the age-sex ratios will be similar across the boundaries (Florez and Goldman, 1980).

III.8.2 Displacement and Omission of Vital Data

A classic problem in the reporting of current marital status is that formerly married women are often classified as 'single' or never married. This is important in case of surveys that cover ever-married women only, since omission of these women can bias overall fertility estimates. Another important aspect when dealing with nuptiality is displacement of the dates of marriages, most important the date of first marriage with the date of last/current marriage.

Some insight into the quality of data can be obtained by calculating the median age at marriage by age group and comparing observed and expected patterns. The median age at first marriage is expected to either remain constant across age groups or

increase from the older to the younger age groups. A pattern of declining values or a U-shaped pattern would suggest problems with the data. An increase in the median age at first marriage with increasing age could suggest either the omission of early unions by older women due to problems of recall or errors in dating first marriage or respondent's birth.

Evaluation reports typically compare both the proportion ever married and distribution by marital status with an external source. Comparisons are usually made using survey proportions reconstructed to the date of the external source.

Fitting nuptiality models to different data sources allows comparisons of trends in age at marriage as predicted from different sources and assessing data quality.

CHAPTER IV : ASSESSMENT OF QUALITY OF NUPTIALITY DATA

The four North African countries were chosen to be included in this study in an attempt to have a homogenous and comparable set of countries. The data sets that include essential information on marriage and are available for these countries are Algeria PAPCHILD 1993, Egypt PAPCHILD 1991, Egypt DHS 1992, Egypt DHS 1995, Morocco DHS 1992, and Tunisia DHS 1988. It is important to assess the marriage data quality in order to be able to draw confident conclusions. In the case of Egypt it is also important to compare between the data sets in terms of data quality and choose the one with the best data quality profile.

IV.1 AGE REPORTING IN THE INDIVIDUAL INTERVIEW

In both the Demographic and Health Surveys (DHS) and Maternal and Child Health Surveys (PAPCHILD), respondents' ages are obtained in the individual questionnaires by asking for both date (year and month) of birth and age in completed years at the time of the survey. According to the DHS documents the interviewer was instructed to 'make a serious effort' to reconcile the two answers if inconsistent. If the respondent could not give either her date of birth or her age, the interviewer was instructed to request a document indicating the respondent's age or to probe by estimating the respondent's age in relation to the ages of other members in the household, or in relation to the dates of her first marriage or first birth. If all else failed, the interviewer was instructed to guess the respondent's age (Institute for Resource and Development, 1990). In the Arab region societies where age and dates are not required in daily life, individuals often lack documents indicating age. For women, this situation is likely to be compound by a low level of education, which leaves the survey interviewer forced to estimate current age on the basis of physical appearance or on the number of children. This process, if used for large number of cases, may lead to an unreal distribution of women by age as the interviewer in many cases can mistake the real age of the woman, especially if the woman has many

children and appears older than her real age. For a full discussion on errors in age reporting refer to Chapter III.

IV.1.1 Reported Age vs. Imputed Age

It is expected that the very young age group (15-19) of ever-married women may reflect a selected group of women who tend to marry very early and who are usually different in characteristics than the average never-married women in the same age group. Thus, even though one can expect that the younger the woman the more likely that she would remember her complete date of birth, yet the very young ever-married women may represent a group of women who are more likely not to remember or know their exact date of birth. This conclusion can explain the lower proportion of ever-married women age 15-19 who knows both the year and month of their date of birth when compared to that among ever-married women age 20-29 for all the surveys included. Table iv.1.1 shows the percent distribution of ever-married women according to whether information on date of birth was reported (by the respondent or estimated by the interviewer) or imputed.

The table shows that the highest level of reported birth dates was in Tunisia DHS 88 followed by Algeria PAPCHILD 1993. Around 94 percent and 83 percent of ever-married women in Tunisia and Algeria respectively, were able to report both the year and month of their date of birth. On the other hand, Egypt PAPCHILD 1991 has the highest proportion of ever-married women who reported only their age and could not report either the year or the month of their date of birth, 31 percent. The proportion of ever-married women who could only report their age is negligible in Egypt's two DHS surveys. Morocco DHS 1992, had the highest proportion of women not reporting the month of birth but the age and year, but a negligible proportion of women who only reported their age. Since the unavailability of the month of birth will not reduce the quality of estimated age as much as the unavailability of the year of birth, overall the Moroccan DHS 1992 age reporting can be considered of adequate quality.

Table iv.1.1 Percent distribution of ever-married women by completeness of information on date of birth by age groups for some Arab countries and different surveys

Country and survey	Year and month reported, no imputation	Year and age reported, month imputed	Age reported, year and month imputed	No information, age imputed	Number of women
Algeria PAPCHILD 93					
15-19	85.0	15.0	0.0	0.0	80
20-29	88.7	11.3	0.0	0.0	1521
30-39	79.5	20.5	0.0	0.0	1923
40-49	82.9	17.1	0.0	0.0	1307
Total	83.4	16.6	0.0	0.0	4831
Morocco DHS 92					
15-19	56.1	43.5	0.4	0.0	269
20-29	47.8	52.2	0.0	0.0	1705
30-39	37.4	62.6	0.0	0.0	2275
40-49	22.9	76.9	0.1	0.0	1390
Total	37.9	62.1	0.1	0.0	5639
Tunisia DHS 88					
15-19	87.7	9.2	3.1	0.0	65
20-29	93.1	4.1	2.7	0.0	1400
30-39	95.6	2.5	1.9	0.0	1708
40-49	93.9	3.3	2.9	0.0	1011
Total	94.2	3.4	2.4	0.0	4184
Egypt PAPCHILD 91					
15-19	34.8	18.4	46.8	0.0	385
20-29	49.3	20.5	30.0	0.2	3080
30-39	50.3	20.3	29.3	0.1	3217
40-49	45.8	21.2	32.9	0.1	2391
Total	48.1	20.5	31.2	0.1	9073
Egypt DHS 92					
15-19	54.5	44.8	0.7	0.0	437
20-29	64.1	35.9	0.0	0.0	3377
30-39	61.3	38.6	0.0	0.0	3540
40-49	56.4	43.4	0.2	0.0	2510
Total	60.7	39.2	0.1	0.0	9864
Egypt DHS 95					
15-19	47.9	50.2	1.4	0.0	704
20-29	58.5	40.3	1.2	0.0	4937
30-39	51.2	45.9	2.9	0.0	4180
40-49	46.1	50.2	3.6	0.0	3978
Total	52.1	45.4	2.5	0.0	14779

IV.1.2 Digit Preference

The Myers' index is used to study digit preference, the age range over which the index is calculated is restricted to 20-49 years so that each digit will have approximately the same chance (around 10 percent) of occurring in a true distribution. The extent of digit preference is considered low if Myers' index is less than 10, moderate if the index is between 10 and 19, and high if the index is 20 or more (Institute for Resource Development, 1990), for full discussion of Myers' index refer to Section III.8.1. Table iv.1.2 presents an example of how the Myers index is calculated for Egypt DHS 1995.

Table iv.1.2 An example Myers' index calculation for Egypt DHS 1995

Terminal Digit	Number of ever-married women		(3)	(4)	(5) (1)*(3)+ (2)*(4)	Percent Distributio n of (5)	Deviation of percent (5) from 10
	(1) 20-49	(2) 30-49					
0	2093	1626	1	9	16728	13.9	3.9
1	1002	698	2	8	7590	6.3	3.7
2	1388	912	3	7	10545	8.8	1.2
3	1293	846	4	6	10249	8.5	1.5
4	1024	582	5	5	8028	6.7	3.3
5	2444	1666	6	4	21329	17.7	7.7
6	1093	684	7	3	9701	8.1	1.9
7	1312	758	8	2	12008	10.0	0.0
8	1333	802	9	1	12797	10.6	0.6
9	1125	647	10	0	11254	9.4	0.6
Total	14106	9221			120229	100.0	34.6
					Index= Total/2		17.3

Table iv.1.3 Percent distribution of women 20-49 by reported terminal digit of age and Myers index

Terminal digit	Country and year					
	Algeria 1993	Egypt 1991	Egypt 1992	Egypt 1995	Tunisia 1988	Morocco 1992
0	*8.8*	*14.3*	*13.9*	*14.8*	*9.9*	*9.7*
1	9.6	7.6	7.8	7.1	9.0	10.1
2	9.6	9.7	10.1	9.8	10.2	10.5
3	9.5	8.0	8.8	9.1	10.4	9.4
4	11.0	8.0	8.2	7.3	10.6	9.5
5	*10.0*	*18.7*	*15.5*	*17.3*	*10.9*	*10.3*
6	10.0	8.3	8.4	7.7	10.1	10.6
7	10.9	8.8	9.9	9.3	9.4	10.0
8	9.8	9.7	10.0	9.4	10.7	9.8
9	10.9	6.9	7.3	8.0	9.0	10.1
Myers' index	**9.4**	**18.6**	**15.4**	**17.3**	**5.6**	**4.6**

Table iv.1.3 presents the percent distribution of women 20-49 by reported terminal digit of age and Myers index.

Table iv.1.3 shows that, reported ages on the three Egyptian surveys can be classified as having a moderate digit preference rate while Algeria 1993, Morocco 1992 and Tunisia 1988 have low digit preference when reporting age.

IV.1.3 Five-Year Age Group Distortions

The detection of age-group transference for an ever married sample is problematic because the age distribution for ever-married women under the age 24 does not follow an established pattern. To avoid this problem, the age distribution of all marital statuses has been estimated, based on the total number of respondent. This is done by dividing the number of respondents by the proportion ever-married by age, obtained from the household survey. This is not a true evaluation of the respondents' reports from the individual surveys because it incorporates element of age and marital status from the household survey. Since most of the estimates calculated for data from the individual survey are based on all women, evaluating these estimates should be done in any case (refer to Section III.8.1). Table iv.1.4 presents the age distributions for all women according to five-year age group. The data would be expected to show a rough monotonic decrease in the percentages with increasing age.

Table iv.1.4 Percent distribution of women by five-year age group reconstructed from the individual questionnaires

Country and year	Age-groups							Number of women
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Algeria 93	24.6	20.2	16.7	12.5	11.2	8.9	5.8	4831
Morocco 92	23.4	18.6	14.7	15.7	14.7	7.9	7.2	5639
Tunisia 88	20.5	21.2	17.1	15.0	11.0	8.3	6.2	4184
Egypt 91	23.9	16.9	15.9	12.5	12.6	9.8	8.4	9073
Egypt 92	21.6	17.2	16.6	13.8	12.5	10.3	8.0	9864
Egypt 95	22.4	17.5	15.1	13.0	12.5	10.0	9.5	14779

Figures iv.1.1 to iv.1.6 present the age distribution of women based on data from the individual questionnaire for the countries included in the study.

Figures iv.1.1 to iv.1.6 Distribution of women by five-year age groups reconstructed using the distribution of ever-married women and proportions of women married at different age-groups

Figure iv.1.1 Algeria 1992

Figure iv.1.2 Egypt 1991

Figure iv.1.3 Egypt 1992

Figure iv.1.4 Egypt 1995

Figure iv.1.5 Tunisia 1988

Figure iv.1.6 Morocco 1992
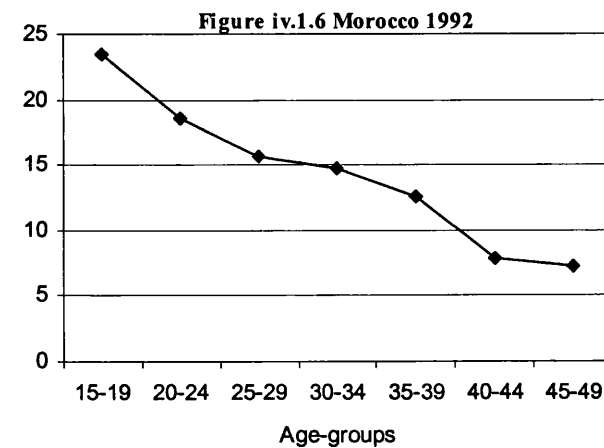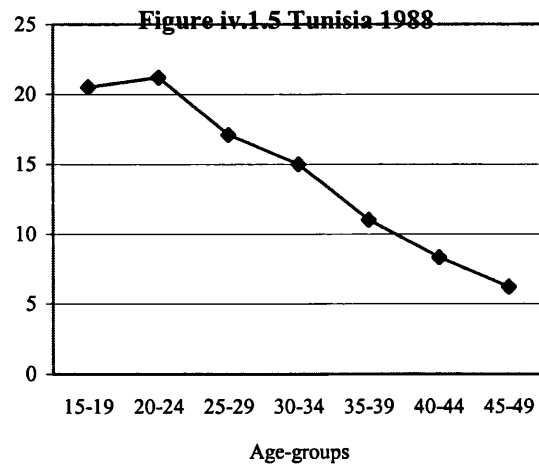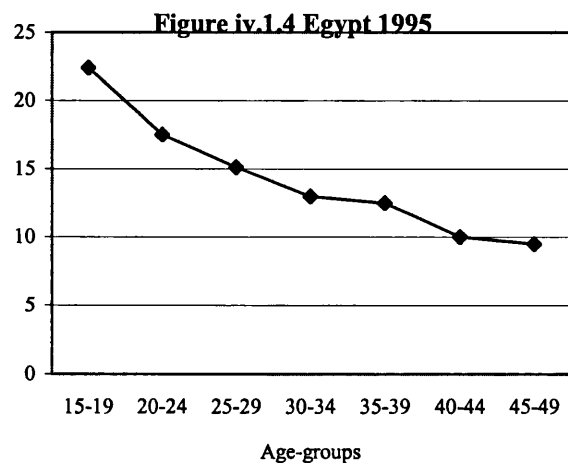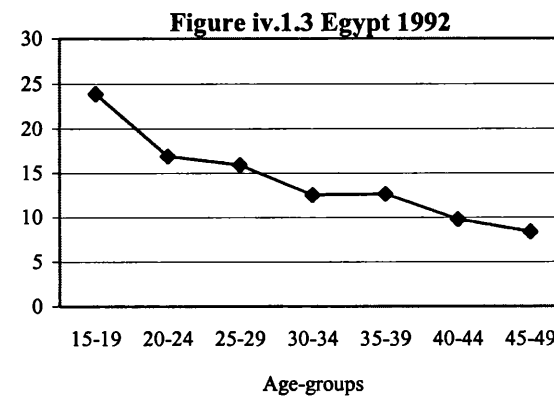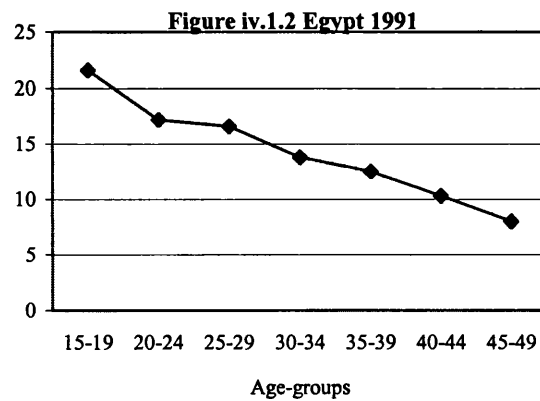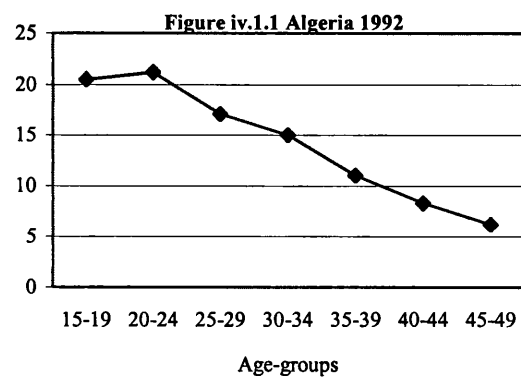
Figure iv.1.1 shows that Algeria PAPCHILD 1993 survey appears to have a surplus number of women in the age group 35-39 and too few women in the age group 30.34. Figure iv.1.2 shows that the distribution of women in Egypt PAPCHILD 1991 deviates from the expected pattern, with surplus of women in the age groups 15-19, 25-29 and 35-39 and deficit of women in the age groups 20-24, 30-34 and 45-49. Egypt DHS 1992 may have a surplus of women in the age groups 15-19 and 25-29, as shown by Myers, and deficit in the age groups 20-24 and 30-34. While Egypt DHS 1995, shown in figure iv.1.4, appear to have a surplus of women in the age groups 15-19 and 35-39 and a deficit of women in the age groups 20-24 and 45-49.

Figure iv.1.5 reveals that Tunisia DHS 1988 data shows a substantial deviation from the expected pattern. The figure also shows that in Tunisia 1988 the age groups 15-19 and 45-49 are deficit while the age groups 20-24 and 30-34 are surplus age groups. Morocco DHS 1992 data reflect a surplus of women in the age-groups 30-34, 35-39 and 45-49. While some of the deviations from the expected pattern may be due to real variations in the age distribution, it is likely that most are due to errors in age reporting.

Age ratios have been calculated to measure the amount of distortion in the five-year age group distortion. The age ratio is defined as 100 times the number of persons in a given age group divided by the arithmetic mean of numbers in the two adjoining age groups. Age ratios should not ordinarily deviate a great deal from 100, except at advanced ages or as a result of major fluctuations in the past birth rates. An index was created from the age ratio, which is the sum of the absolute value of the deviations of the ratios from 100 for age groups 20-24 to 40-44. The values of the sums represent the amount of distortion present in the age group distribution. Classification by this index would be: low (less than 20), moderate (20-35), and high age group distortion (more than 30).

Table iv.1.5 presents the age ratios for five-year age groups and age group distortion indices calculated from the individual questionnaires for the countries included in the analysis.

Table iv.1.5 shows that Egypt PAPCHILD 1991, Morocco DHS 1992 and Tunisia DHS 1988 can be classified as samples with high age group distortion for the 20-44 index. All the rest of the surveys can be categorised as samples with moderate age group distortion for women 20-44.

Table iv.1.5 Age ratios for five-year age group and age group distortion indices, individual questionnaires

Country and year	Age group					Age group distortion index
	20-24	25-29	30-34	35-39	40-44	20-44
Algeria 1993	97.8	102.0	89.9	104.2	104.7	23.3
Morocco 1992	120.2	100.3	114.8	114.8	82.4	67.6
Tunisia 1988	112.3	94.8	106.2	95.7	92.4	35.6
Egypt 1991	85.0	108.1	87.7	113.0	93.0	55.5
Egypt 1992	89.9	107.3	94.7	103.9	100.5	27.1
Egypt 1995	93.3	98.9	94.4	109.0	90.4	32.1

IV.2 DATE OF FIRST MARRIAGE

Data on dates of first marriage were collected from ever-married women in the reproductive age range 15-49 in both the PAPCHILD and DHS surveys. Information on marriage was collected in a series of questions. Women were first asked whether they have ever been married, then those who reported having had a husband were asked about their current union status. Then the respondents are asked to provide the month and year they started living with their first husband. If the woman cannot provide a year of first union, she is then asked to give her age at time of the first union.

IV.2.1 Completeness of Information

Table iv.2.1 presents the percent distribution of ever-married women by completeness of information on the date of first union by ten-year age groups. The age-group 15-19 is not shown because less than half of women in this age group had ever been married. The first column shows the proportion of women who reported the date of their first marriage completely. Column two shows the percentage of cases for which a year was reported but the month was imputed. The third column presents the percentage of women who reported only age at first marriage and for whom both the year and month of first marriage date were imputed. Column four indicates the percentage of cases that lacked all three pieces of information and for which both the year and month were imputed based on the dates of surrounding events and age.

Table iv.2.1 shows that Morocco DHS 1992 survey has the highest proportion of ever-married women who reported both the month and year of the date of their first marriage (92 percent). This is followed by Egypt DHS 1992, where 76 percent of

ever-married women reported their full date of first marriage. Both Egypt DHS 1995 and Tunisia DHS 1988 surveys have full reporting by 62 percent of ever-married women. Lastly, in both PAPCHILD surveys, Algeria 1993 and Egypt 1991, around 55 percent reported both month and age. The table also shows that Egypt DHS 1992 and Morocco DHS 1992, surveys have a much lower proportion of ever-married women who reported their age at first marriage but not the date when compared to all the other surveys. It is notable that the proportion of ever-married women who did not provide any information about the date of their first marriage is negligible in all surveys.

Table iv.2.1 Percent distribution of ever-married women by completeness of information on date of first marriage

Country and year	Year and month reported, no imputation	Year reported, month imputed	Age reported, year and month imputed	No information, year and month imputed	Number of women
Algeria 1993					
20-29	66.4	8.3	25.0	0.3	1521
30-39	52.9	10.2	36.5	0.4	1923
40-49	38.1	13.3	47.4	1.2	1307
Total	53.5	10.4	35.5	0.6	4831
Morocco 1992					
20-29	96.7	3.0	0.3	0.0	1705
30-39	92.3	7.2	0.4	0.0	2275
40-49	87.8	12.0	0.2	0.0	1390
Total	92.5	7.1	0.3	0.0	5370
Tunisia 1988					
20-29	76.0	13.3	10.7	0.0	1400
30-39	62.3	19.6	18.0	0.1	1708
40-49	43.5	18.4	37.9	0.2	1011
Total	61.8	18.0	20.0	0.1	4184
Egypt 1991					
20-29	65.2	12.1	22.6	0.2	3080
30-39	54.9	15.3	29.6	0.2	3217
40-49	42.3	21.6	35.9	0.2	2391
Total	55.6	15.7	28.5	0.2	9073
Egypt 1992					
20-29	85.6	14.3	0.1	0.1	3377
30-39	73.2	26.7	0.1	0.1	3540
40-49	62.7	37.0	0.2	0.1	2510
Total	75.8	24.0	0.1	0.1	9864
Egypt 1995					
20-29	77.1	20.4	2.6	0.0	4937
30-39	56.1	37.2	6.6	0.1	5160
40-49	43.7	46.9	9.3	0.1	3978
Total	61.8	32.5	5.7	0.1	14779

IV.2.2 Heaping on Age at First Marriage

Previous analysis of World Fertility Surveys (WFS) and Demographic and Health Surveys (DHS) data has shown that the distribution of respondents by the year and duration of first marriage may be affected by heaping (Blanc and Rutenberg, 1990; Saha and Mboup, 1992; and Singh, 1985). Different types of data reporting may lead to different patterns of heaping in the data. When dates are reported in the form of calendar year, heaping may occur on calendar years ending in zero or five, or in the years with notable events. If the respondents had difficulty recalling the date, it is likely that the interviewers employ a probe about how long ago the first union had began. This type of questioning may result in dates that are heaped on rounded duration of years of marriage. When ages are reported, misstatement may take the form of heaping on rounded ages. This form of heaping may be difficult to detect because first marriages are usually concentrated in a narrow age range. The extent of imputation will also affect the amount of heaping; since imputation for cases with incomplete data is done randomly within a constrained range, the effect is to reduce heaping.

The following index of heaping on year of first marriage is adopted from (Institute for Resources Development, 1990):

$$Index= \sum_{i=1}^{5} \frac{x_i}{(x_{i-2}) + (x_{i-1}) + (x_i) + (x_{i+1}) + (x_{i+2})}$$

Where i_1=1965, i_2=1970, i_3=1975, i_4=1980, i_5=1985, and x= the number of women married in year i for all surveys from 1985 to 1992. For Egypt DHS 1995, i_1=1970, i_2=1975, i_3=1980, i_4=1985, i_5=1990.

The index of heaping for duration since first union is identical to the above, except that i_1=5, i_2=10, i_3=15, i_4=20, i_5=25 and x= the number of women at duration i since first marriage. A rough indicator of significant heaping is an index of over 1.05.

Table iv.2.2 Indices of heaping on year of first marriage and on duration since first marriage ending in digits 0 or 5

Country and year	Year of first marriage	Duration since first marriage
Algeria 1992	1.04	1.03
Morocco 1992	1.10	0.97
Tunisia 1988	1.06	1.02
Egypt 1991	1.15	1.09
Egypt 1992	1.04	1.03
Egypt 1995	1.15	1.15

Table iv.2.2 lists the results of the indices of heaping on year of first marriage and on duration since first marriage ending in digits 0 and 5 for the surveys included in the study. The results show that both Egypt PAPCHILD 1991 and DHS 1995 have significant heaping in both reported year of marriage and duration of marriage ending in digits 0 and 5. Morocco DHS 1992 shows significant age heaping on the digits 0 and 5 for year of first marriage but not the duration since first marriage. The rest of the surveys can be considered to have no significant age heaping on digits 0 and 5 for both year of and duration since first marriage. However, the index for year of first marriage heaping for Tunisia DHS 1988 is on the border of significance.

IV.2.3 Trends in the Median Age at First Marriage

Age at first marriage is calculated as the difference between a woman's date of birth and her date of first marriage. Thus, this variable incorporates inaccuracies in both the date of birth and the date of first marriage. Some insight into the quality of the data can be obtained by calculating the median age at first marriage by age group and comparing observed and expected patterns. The median age at first marriage is expected either to increase or to remain constant when progressing from older to younger cohorts. A pattern of declining values or a U shaped pattern would suggest problems with the data.

The median age at first marriage for cohorts 25-29 through 45-49 are shown in table iv.2.3. The table below shows that the values for the median age at first marriage performed as expected in all surveys included.

Table iv.2.3 Median age at first marriage for cohorts of women

Country and year	Age cohorts (as of survey date)				
	25-29	30-34	35-39	40-44	45-49
Algeria 1993	21.9	19.1	18.3	16.9	16.3
Morocco 1992	19.4	19.2	19.0	18.5	17.6
Tunisia 1988	22.8	21.3	20.6	19.4	19.9
Egypt 1991	19.0	18.4	18.0	17.6	17.1
Egypt 1992	19.9	19.3	19.3	18.9	18.3
Egypt 1995	20.2	19.4	19.2	19.0	18.0

Figures iv.2.1 to iv.2.6 presents the trends in the median age at first marriage by age-cohort for each survey. The trend in the median age at first marriage deviates from the expected pattern in Tunisia DHS 1988 where it was half year older in the oldest age

cohort, 45-49, than the next age cohort, 40-45. The reason for this is most likely to be forward displacement of first unions in the oldest cohorts. The values of the median age at first marriage by age cohort seem to follow the expected pattern in the rest of the surveys.

Figures iv.2.1 to iv.2.6 Trends in median age at first marriage for cohorts of women for each survey

Figure iv.2.1 Algeria 1993

Age cohorts (as of survey date)

Figure iv.2.2 Egypt 1991

Age cohorts (as of survey date)

Figure iv.2.3 Egypt 1992

Age cohorts (as of survey date)

Figure iv.2.4 Egypt 1995

Age cohorts (as of survey date)

Figure iv.2.5 Tunisia 1988

Age cohorts (as of survey date)

Figure iv.2.6 Morocco 1992

Age cohort (as of survey date)
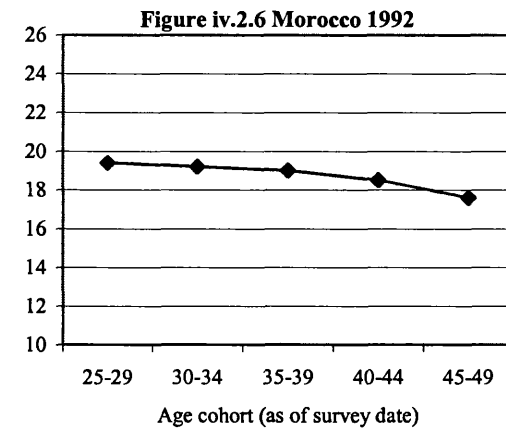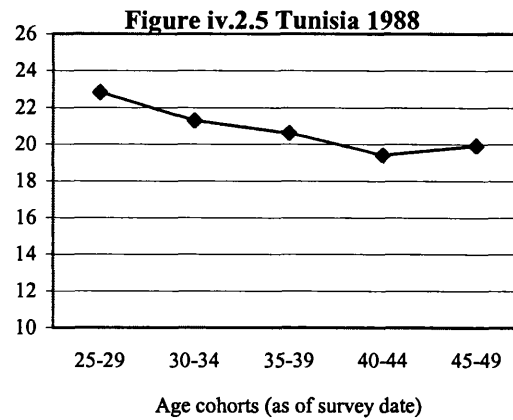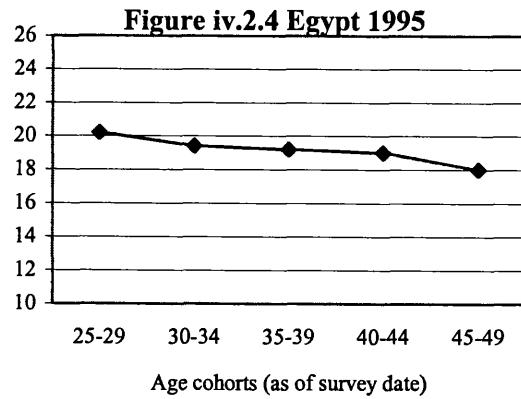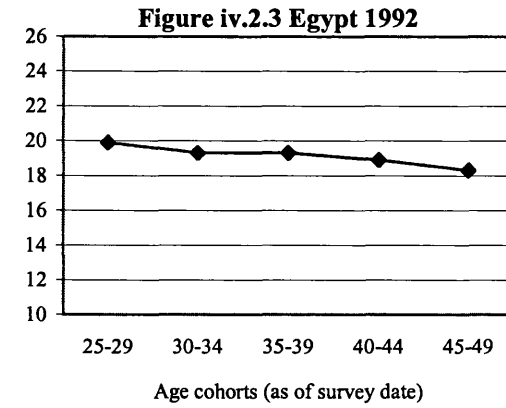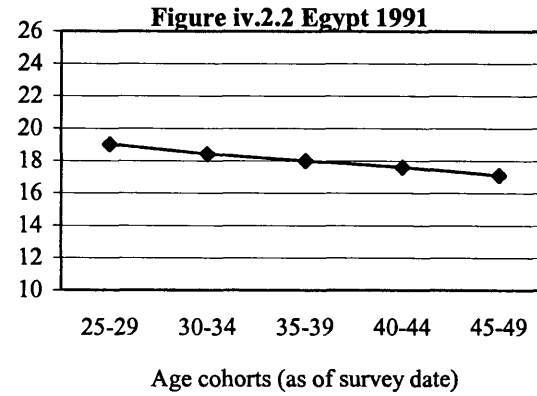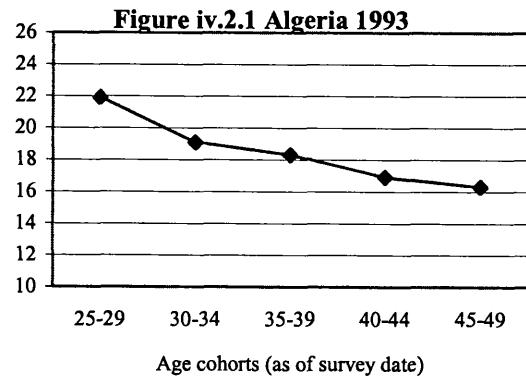
IV.2.4 Proportion of Ever-Married Women at Ages 15-19 and 20-24

The two younger age groups 15-19 and 20-24 are most likely to be affected by omission of early marriages or misstatement of age at first marriage (Singh, 1985). It is generally not possible to calculate the median age at first marriage for women aged 15-19 at the time of survey, and it is only possible to make the calculation for women 20-24 in a few surveys. The quality of marriage data for these age groups will be examined by looking at the proportion of women ever married in cohorts aged 15-19 and 20-24 at the time of survey and at exactly 5, 10 and 15 years prior to the survey. The proportion of ever-married women at the time of the survey, is derived directly from the current marital status of women age 15-19 and 20-24. The proportion of ever married at ages 15-19 and 20-24 five years before the survey are calculated from the date of first union for women 20-24 and 25-29, respectively, at the time of survey and so on. Thus the proportions have been calculated by comparing the date of first marriage with the date that represents the exact interval before the survey. For example, for 5 years before the survey a woman was classified as not being ever-married if her first marriage started in the five years before the survey.

It is expected that if the age at first marriage has been stable and there has been no differential in omission of marriages by birth cohorts, a tendency to push the dates of marriages further back in time than when they really occurred would be reflected in higher proportions of ever-married women at intervals furthest from the survey date. Alternatively, a tendency toward displacement of the date of first marriage would be manifested in a lower proportion of ever-married women at intervals further removed the date of the survey. In general, the proportion of ever-married women in each age group is expected to decline or remain stable when moving forward in time as a reflection of expected trend of rising, or constant, age at first marriage. Also, the proportion ever married at the time of survey, which is derived from the current marital status, should be consistent with trends observed for previous intervals.

The proportions of ever-married women at ages 15-19 and 20-24 at exactly 0, 5, 10 and 15 years prior to the survey are shown in table iv.2.4. Table iv.2.4 indicates large declines in the proportion of ever-married women at age 15-19 occurring from the 10th year prior to the survey to the 5th in all the surveys. The trend toward a decreasing proportion of women ever married in the age group 15-19 accelerates in the most recent period for most of the surveys, except for Algeria PAPCHILD 1993 and Tunisia DHS 1988. This pattern may be attributed to changes in marriage timing, but

may also arise from errors in the reporting of marital status or age. If married women overstate their ages and unmarried women understate their ages then the proportion ever married would tend to be underestimated among younger women (Coale, 1988, Makinson, 1984). An exaggerated decline in the proportion ever married in the recent past will appear if newly married women tend to overestimate the duration of their marriage. Thus, the proportion of women ever married five years prior to the survey will be overestimated while current proportion of women ever married will be accurate (United Nations, 1987). Another possibility is that young women underreport very early marriages or current marriages. Misreporting of the marital status of young women in the household survey may contribute to underestimating the proportion of women ever married in this age group.

As expected, the proportion ever married among women 15-19 and 20-24 generally decreases from the distant to the recent past. However, in Morocco DHS 1992 the proportion ever married for age group 15-19 was very slightly higher 5 years before the survey than 10 years before the survey, then it dropped by 9 percentage points to the time of the survey.

Table iv.2.4 Percentage of ever married women at age 15-19 and 20-24 for selected years prior to the surveys

Country and year	Percent ever married for selected years prior to survey							
	Among women 15-19				Among women 20-24			
	0	5	10	15	0	5	10	15
Algeria 1993	2.8	8.7	16.3	27.1	23.4	46.9	66.4	70.3
Morocco 1992	12.5	21.6	20.8	27.8	44.0	53.2	64.7	70.0
Tunisia 1988	4.4	7.9	10.2	13.0	35.9	45.4	57.6	61.2
Egypt 1991	12.1	23.2	29.0	31.8	56.8	67.2	70.1	72.0
Egypt 1992	13.9	26.0	34.0	36.0	56.6	70.8	73.5	74.2
Egypt 1995	14.3	23.1	28.2	31.5	58.1	65.5	67.7	73.0

The proportion ever married at age 20-24 tends to show a smaller decline for the current period than the comparable proportion among women 15-19 in almost all the surveys. An accelerating decline in the proportion of women ever married at age 20-24 can be seen in Algeria PAPCHILD 1993 in which there was a recent increase in the age at marriage. However, the same is also observed in Egypt three surveys, and in particular the DHS 1992, where there is no apparent trend toward increasing age at first marriage (see Table iv.2.3). Such accelerated decline in the proportion of women

ever married is suggested to be a consequence of newly married women overestimating the duration of their marriage in these two surveys.

IV.3 CONCLUSION

The assessment of quality of data shows that both Algeria 1993 and Tunisia 1988 can be considered as surveys with good data quality when considering information on age. The highest proportion of ever married women who reported both their month and year of birth was found in Tunisia DHS 1988 (94 percent) followed by Algeria PAPCHILD 1993 (83 percent). Egypt DHS 1992 had the highest proportion of women who reported both month and year of birth when compared to the other two Egyptian surveys (61 percent). However, the proportion of women who reported at least year of birth and age is not different between the Egyptian DHS 1992 and 1995. Egypt PAPCHILD 1991 presented the highest proportion of ever married women who only reported their age with no information on date of birth, 31 percent. This may suggest an excessive guessing of the respondents' ages by the Egyptian PAPCHILD 1991 interviewers. Or on the other hand, given the high level of illiteracy among Egyptian ever-married women, 63 percent in 1995, the case could be that the interviewers in both the Egyptian DHS surveys were trained to calculate the year of marriage even if only the age was reported by the woman. Morocco DHS 1992 survey had the lowest proportion of women reporting both the year and month of their birth, 38 percent. However, the rest of women reported both their year of birth and age at time of survey.

For digit preference, the Myers index was lowest for Morocco DHS 1992, 4.6, and Tunisia DHS 1988, 5.6. The three Maghreb countries surveys, Morocco DHS 1992, Tunisia DHS 1988 and Algeria PAPCHILD 1993 are found to be surveys with low digit preference when reporting age. All the three Egyptian surveys fall in the moderate category of digit preference.

The index for five year age group distortion for age 20-44 was moderate for Algeria PAPCHILD 1993, Egypt DHS 1992 and Egypt DHS 1995 and was high for Egypt PAPCHILD 1991, Morocco DHS 1992, and Tunisia 1988. The same index but for the age group 25-44 was low only for Egypt DHS 1992, and high for Egypt PAPCHILD 1991 and Morocco DHS 1992, and moderate for the rest of the surveys.

Morocco DHS 1992 had the highest proportion of women reporting both the year and month of their first marriage, 92 percent, which is not very consistent with the age

reporting. Tunisia DHS 1988 can be considered as a survey with moderate quality of reporting date at first marriage, where 20 percent of ever-married women reported only their age at first marriage.

The results show that Morocco DHS 1992, Egypt PAPCHILD 1991, and Egypt DHS 1995 have significant amount of heaping in reporting year of first marriage and duration since first marriage, while the rest of the surveys fell on the border of the acceptable degree of heaping.

When studying trends in the median age at first marriage, the results show that the values for the median age at first marriage performed as expected in most of the surveys included. An accelerating decline in the proportion of women ever married at age 20-24 can be seen in Algeria 1993 where there was a recent increase in the age at marriage. However, the same is observed in Egypt PAPCHILD 1991 and DHS 1992 where there are no apparent trends toward increasing age at first marriage, which may indicate that the newly married women overestimated the duration of their marriage in these two surveys. In Tunisia DHS 1988, the comparison of median ages at marriage in the two oldest cohorts, women 40-44 and 45-49, deviates from the expected pattern. The reason for this is most likely forward displacement of first marriage in the oldest cohorts.

In sum, both Egypt DHS 1992 and 1995 seem to have better quality of age and age at marriage data than Egypt PAPCHILD 1991. Both of the Egyptian DHS surveys as well as Morocco DHS 1992 can be considered to have moderate quality for age and age at marriage data. On most of the indices both Algeria PAPCHILD 1993 and Tunisia 1988, scored higher than the Egyptian surveys and can be considered to have good quality of age and age at marriage reporting.

CHAPTER V : MARRIAGE PATTERNS IN THE MAGHREB COUNTRIES

V.1 INTRODUCTION

Maghreb is the name of north-western Africa, coming from Arabic word for "the land where the sun sets". The Maghreb is more closely related in terms of climate, landforms, population, economy, and history to North Mediterranean areas than to the rest of Africa. The region was united politically only during the first years of Arab rule (early 8th century), and again under the Almohads (1159-1229). Maghreb usually refers to the three countries touched by the Atlas Mountains: Morocco,

Map v.1.1 The Maghreb Countries
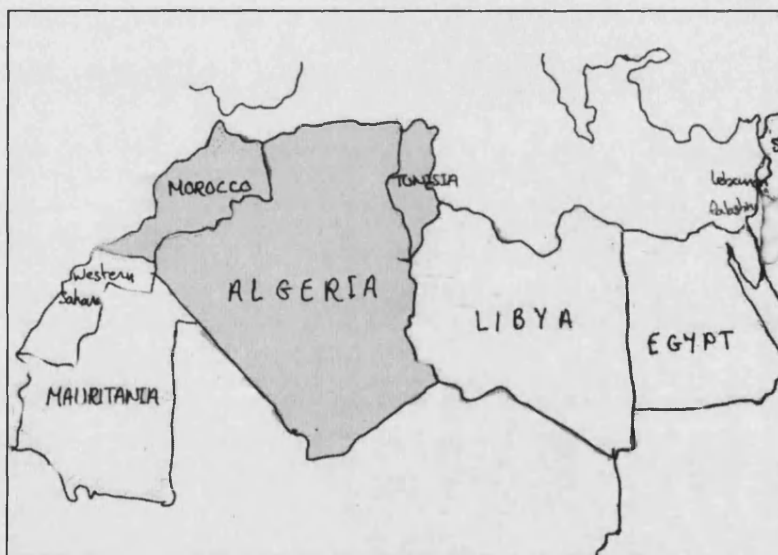
Algeria and Tunisia. Atlas is the mountainous area that fills most of the north-western corner of Africa, with the exception of the Rifs Mountains in northern Morocco. A wider definition for Maghreb is to include the countries with substantial Berber populations and cultures, that means including the previous three countries in addition to Mauritania and Libya. In this study the first definition of Maghreb is used, i.e. Morocco, Algeria and Tunisia only.

V.1.1 Population

In 1995, the population of Morocco and Algeria was 27 and 28 millions respectively, and in Tunisia it was 9 millions. The three countries are characterised by moderate fertility rates and moderate annual population growth rates (see Tables v.1.1 and

v.1.2). The majority of the population of the three countries are Muslim Arabs and the main and official language is Arabic. However, French, Spanish and Berber languages are frequently used. Moreover, most of people who live in the Atlas Mountains count themselves as Berbers, except when we get to Tunisia, where the locals regard themselves as Arabs. Berbers constitute a large part of the population in Morocco, 40 percent, and Algeria, 30 percent, but only form a minority of 3 percent in Tunisia (McDowell, 1992). Of major cities in North Africa, only Marrakech, in Tensift region in Morocco, still has a population with a predominant Berber identity (Nisan, 1991). Unfortunately, no recent accurate information is available on the Berber population's distribution in the three Maghreb countries.

In Algeria the differences between Arabs and Berbers have been clearer than for the two other Maghreb countries. It is suggested that the Berbers constitute today the group of the highest educated, and hold many leading positions in society. This has resulted from the colonial period, when the French tried to weaken the Arab parts of Algerian culture, by preferring Berbers in education and administration (Lacoste, 1991). The Berbers consolidated a living pattern that was rooted in the family, usually an extended grouping, practicing tight kinship ties based on endogamous marital patterns (Nisan, 1991).

V.1.2 Poverty and The Status of Women

The discussion in this section draws from poverty assessments of Morocco and Tunisia prepared by the World Bank and based on household consumption or living standards measurement surveys carried out in 1990 and 1991 (World Bank, 1994, 1995a). Whereas the Tunisian government has demonstrated a commitment to social spending and has been expanding its social insurance program, Morocco lacks formal social security arrangements for 82 percent of the population. Despite Morocco's high and labour-intensive pattern of growth, it was criticised that "not enough of this income has been channelled into categories of public spending-basic healthcare, schooling and essential infrastructure services-that improve the well-being of the poor". Furthermore, the Moroccan government retains a larger military budget. In 1992, expenditures for housing, social security, and welfare were only 5.8 percent of total expenditure, while "defence" represented 12.8 percent. In Morocco, the highest poverty levels were among rural wage earners, and females are the most disadvantaged. In urban areas, the poor are mainly self-employed. The poverty

assessment reports that poor females get as little as half the wage rate per hour earned by poor males (World Bank, 1994).

In Tunisia, poverty fell in both urban and rural areas, but inequality was higher in urban areas during the 1990s. According to the 1990 Household Consumption Survey, about 7 percent of the population, have annual expenditures below the poverty line; another 7 percent are "near poor." One study suggests that 45 percent of Tunisian poverty is urban (Bedoui 1994). According to a government publication, however, 67 percent of the 544,000 impoverished individuals in 1989 lived in urban areas, and nearly half were non-agricultural labourers (Republique Tunisienne, 1995). The World Bank poverty assessment states that most of the urban poor are wage-earners in the construction sector with little or no formal education (World Bank, 1995b). One survey of urban poor women found unexpected resourcefulness among women living in dire poverty, suggesting that poor women appear to manage better than men under similar circumstances (El-Solh, 1994).

In contrast to Morocco, the Tunisian government cut social expenditures less than other expenditure categories during its period of fiscal restraint. Indeed, from 1987 to 1993-1994, social spending rose from 47.5 percent to 52.5 percent of gross expenditures and remained a constant share of GDP at about 18 percent. This compares with 6.8 percent in Morocco in 1990, down from 9.9 percent in 1976 (World Bank, 1994). Although real wages have fallen, disposable household income has increased as a result of increased income from self-employment and social transfers. Again, unlike Morocco, the social security system in Tunisia covers wage earners in both the public and private sectors, including self-employed workers and government employees (Moghadam, 1997).

In Algeria, women have constituted a small part of the total labour force; in 1995 women aged 15-65 were only 8 percent of the labour force (Moghadam, 1997). In 1989 recorded unemployment was about 18 percent. With few employment opportunities as a result of the economic crisis, both male and female unemployment is very high. Currently, Algeria is one of the few Arab countries where male unemployment is higher than female unemployment. Both absolutely and relatively, male unemployment is much greater than female unemployment, reflecting the fact that the labour force in Algeria has been traditionally masculine. But given the extremely small female share (under 10 percent) of the labour force, the 20.3 percent unemployment rate among women (compared with 24.2 percent among men) in 1992

is disproportionately high. Moreover, 22 percent of unemployed women are university educated, compared with 2.5 percent of men (World Bank, 1994). Bernard (1991), using 1989 data, found that self-employment had been increasing for both women and men. As a result of both declining wages and changing consumption patterns, male workers had begun to take on second jobs in the early 1980s, while women took on more home-based work.

The patriarchal gender contract is especially strong in Algeria despite the fact that after independence, Algeria became famous for its *moudjahidates* (women liberation fighters) and for its women judges, doctors, and teachers. Algeria has had six women cabinet ministers in office at different periods, some women deputies, and several dozen pilots (Skif, 1994). But relatively few women ever achieve the status of worker or professional, and family roles have always been exalted. A 1982 article stated that "a woman who works for a wage outside the family home is still frowned upon nowadays since she represents a challenge to the traditional order and the forms of power which prevailed there under" (Khodja, 1982). More recently, two Algerian feminist scholars have observed that in a society where women serve as symbols of national, cultural, and religious identity (Bouatta and Cherifati-Merabtine, 1994), a salaried position is contested territory. Cherifati-Merabtine reports that studies indicate hostility of the society towards the woman at work (Cherifati-Merabtine, 1995).

V.1.3 Laws Governing Marriage and Family Formation

Prior to independence, the basic Algerian family unit, particularly in the countryside, was the extended family consisting of grandparents, their married sons and families, unmarried sons, daughters if unmarried or divorced or widowed with their children, and occasionally other related adults. The structure of the family was patriarchal and patrilineal, with the senior male members making all the major decisions affecting family welfare, dividing land and work assignments, and representing it in dealings with outsiders. Since independence there has been a trend toward smaller family units, and the nuclear family is the norm in the cities. But the family unit and gender relations have remained patriarchal. In the 1960s and 1970s, during its socialist era, the Algerian leadership chose not to legislate an Islamic family code in order to avoid controversy. Still, women's roles were largely limited to the family, which was financially feasible because of oil wealth and high wages for male workers (Knauss,

1987). For some differences in the laws governing marriage in the three countries refer to Section II.3.1.

V.1.4 Demographic and Health Profile

Some basic demographic characteristics about the three Maghreb countries have been gathered to draw an overall picture of the level of the population profile in the three countries, and are presented in table v.1.1. The three countries are similar in the high proportion of youth and the young median age of the population, however, the median age in Tunisia is 2 years higher than that in Algeria. The highest GNP per capita is in Tunisia followed by Algeria then Morocco. It is notable also that Tunisia had the lowest proportion of illiterate males and females age 15 or more when compared to the other two countries. The same country also scored best in the human rights instrument score with 11 out of 15 while Morocco scored only 5 out of 15 in 1990. Both Algeria and Tunisia scored almost the same in the human development index with 0.7 out of 1, which is based on life expectance at birth, the literacy rate, and GNP per capita (UNDP, 1995) and gives an indication of mortality decline and overall social economic development, while Morocco only scored 0.5 out of 1. The overall picture that although the three countries are characterised by high annual growth rates and young population, however, Tunisia has better living standards followed by Algeria and lastly Morocco.

Table v.1.1 Some Demographic Characteristics of the three Maghreb countries.

	Country		
	Algeria	**Morocco**	**Tunisia**
Population 1995[1]	28,109,000	26,524,000	8,987,000
Median age in 1995[1]	19.8	21.1	22.3
Youth Population (15-24) 1995[1]	21.0%	21.4%	20.2%
Average annual population growth[1]	1.7%	1.6%	1.5%
GNP per capita in (US$) 2002[2]	1550	1200	2100
Illiterate 15+ 1995[3]			
Females	64.2	69.0	45.4
Males	36.6	43.3	21.4
Life expectancy 1995[4]			
Females	71	68	70
Males	68	64	68
Human rights score 1990[5]	9	5	11
Human development index 1995[6]	0.732	0.554	0.736

1 UN 1996, 2 UNICEF 2002, 3 UNESCO 1996, 4 WHO 1995, 5 Score out of possible 15 major international instruments related to the human rights of youth, UN 1990b. 6 UNDP 1995

Within each country the regional variations in socio-economic and health characteristics are also pronounced. Maps v.1.2 to v.1.4 presents the geographical regions in each of the three Maghreb countries. It is unfortunate that the principal report of Algeria PAPCHILD 1993 survey did not include a map with the geographical regions used in the survey. However, the regions used were mainly the Sahel, which presents the Coastal area, and divided into West, Centre, and East areas, then the high plateau regions, which falls in the middle of the country and divided into East and West regions, then the South region. To draw a picture on which regions suffers most in each country some health and demographic characteristics are gathered and presented in table v.1.2. The data presented in this table are mainly based on the surveys used later in the analysis.

Table v.1.2 shows that in Algeria total fertility is highest in the High Plateau West and the South regions. The High Plateau West region also has the lowest percentage of children 12-23 months who had the full 3 DPT injections, 69 percent, while the same percentage is 80 percent or more in the other Algerian regions. Women aged 15-49, (ever or never married), living in the same region, had the lowest percentage of having any education, 32 percent, which was similar to those living in the High Plateau East region and is around 10 percentage points less than that in the other regions. Among ever-married women aged 15-49 achievement of secondary education was in general much lower in Algeria than the other two Maghreb countries despite the fact that the percentage of women with any education was similar to that in both Tunisia and Morocco. The same percentage was in particularly low among women living in the High Plateau East and the South regions. It is notable that both infant and under five mortality rates in Algeria are much lower than those in both Morocco and Tunisia, however, no information was available on the same rates according to region in Algeria. On the other hand, the Sahel regions seem to be more advantageous than the rest of the country.

In Tunisia, the Centre West region appears to be the least advantaged region in the country in terms of the health and demographic indicators used, it also had the highest total fertility rate of 5.8. Tunis the capital, on the other hand, had the highest proportions of educated women and those with at least secondary education, lowest infant and under five mortality rates, and highest prevalence of modern contraceptive methods, as well as the lowest TFR.

Maps v.1.2 to v.1.4 Morocco, Algeria, and Tunisia regional
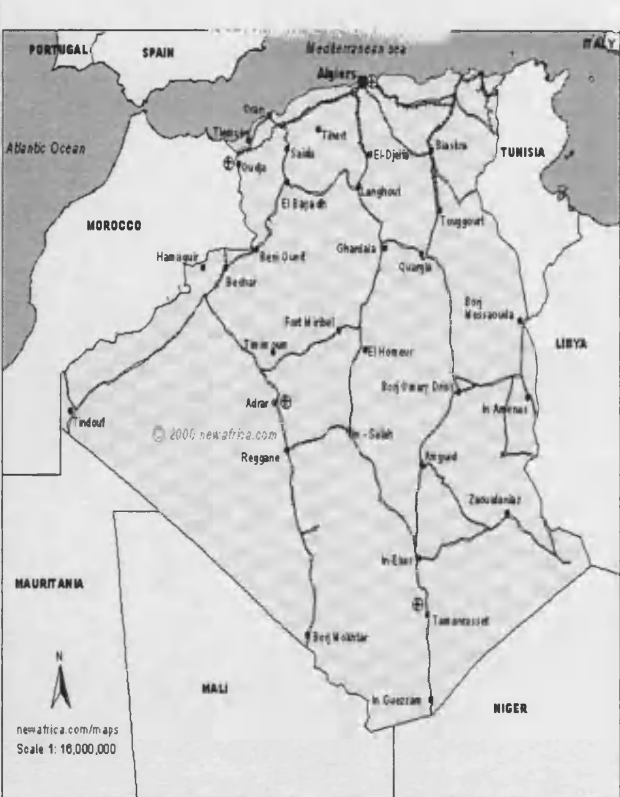
Table v.1.2 Some Demographic and Health indicators by regions in the three Maghreb countries, Algeria PAPCHILD 1993, Morocco DHS 1992 and Tunisia DHS 1988

Country and Region	Total fertility rates TFR	Infant Mortality Rate	Under 5 Mortality rate	% of women 15-49 who Had any education	% of women 15-49 who Live in HH with electricity	% of Children 12-23 months With 3 DPT	% Currently married women 15-49 using modern contraceptive method	% of ever married women 15-49 with secondary education or more
Algeria 1993	**4.4**	**24.6**	**61.3**	**38.9**	**91.9**	**83.3**	**66.5**	**5.9**
Sahel West	3.8	na	na	41.1	93.4	85.3	76.1	6.9
Sahel Centre	3.7	na	na	41.7	94.0	87.8	65.6	7.4
Sahel East	3.8	na	na	44.0	90.6	91.5	67.9	5.2
High Plateau East	5.0	na	na	32.8	86.5	78.4	59.8	3.8
High Plateau West	5.7	na	na	32.3	93.6	69.2	62.9	5.5
South	6.0	na	na	36.0	92.7	86.9	58.8	3.4
Morocco 1992	**4.04**	**63.1**	**83.9**	**36.6**	**37.8**	**62.9**	**35.8**	**10.6**
North West	3.8	77.3	96.0	39.7	40.8	72.4	24.8	14.4
Centre North	4.7	69.8	95.5	32.0	29.4	56.2	21.5	7.0
Centre	3.4	50.0	60.4	44.2	45.1	61.7	38.5	13.5
Eastern (Oriental)	4.1	57.6	72.4	37.0	44.6	57.7	34.4	7.7
Centre South	3.4	48.9	72.1	44.3	43.7	82.9	37.6	12.0
Tensift	5.1	62.9	85.0	26.9	26.0	64.8	30.0	4.9
South	5.0	70.6	110.7	18.8	29.6	50.6	13.4	6.4
Tunisia 1988	**4.3**	**56.8**	**74.5**	**39.3**	**72.9**	**88.4**	**40.4**	**12.2**
Tunis	3.2	39.6	47.0	60.1	96.8	96.5	51.5	24.7
North East	3.9	43.8	58.7	44.8	75.7	85.8	41.3	13.5
North West	4.3	66.6	78.7	22.2	47.5	78.8	48.9	5.6
Centre West	5.8	68.0	93.3	20.5	47.7	83.8	27.3	2.3
Centre East (Sahel)	4.2	46.4	63.5	42.1	78.7	93.0	38.0	14.6
South	4.5	75.4	103.8	39.6	83.0	93.4	32.6	8.9

na Not available in the principle report of Algeria PAPCHILD 1993.

In Morocco, the Tensift, and South regions as well as the Centre North region had some of the highest total fertility rates and mortality rates. The same regions have the lowest proportions of women 15-49 with any education, and who live in households with electricity, as well as the lowest proportions of ever-married women 15-49 with at least secondary education. The percentage of currently married women who use any modern contraceptive women is strikingly low in the South region, 13 percent, followed by the Centre west region, 21 percent. The under-five mortality rate and the percentage of children 12-23 months without all three DPT shots, were also substantially higher in the South region. The data points to the three previous regions, and in particular the South region, as the least advantaged regions in Morocco. On the other hand, the Centre and Centre South regions have better health and demographic indicators. For example, the percentage of women 15-49 who had any education and who lived in households with electricity were highest among the Centre region. Infant and under five mortality rates were also lowest among the Centre and the Centre South regions.

V.2 DATA

This study uses the data sets of Algeria PAPCHILD 1993, Morocco DHS 1992, and Tunisia Demographic and Health Survey (DHS) 1988 data. The choice of the data sets used is mainly because they are the only available national data that includes some information on marriage. However, both the DHS and PAPCHILD surveys did not include much information on women's religion, ethnicity or other variables that can indicate her socio-economic status before marriage, such as her parents' education or profession. From the very limited characteristics the following variables are chosen to be used as some of the micro-level prior set of variables that can affect marriage elements; Women's age at time of survey, year of marriage, place of residence, childhood place of residence, region, education, and ever worked for cash before marriage. The logic behind choosing these variables is described in chapter I. The proposed set of variables has the limitation that it did not include any variables that may reflect the women's social status before marriage nor her religion or ethnicity.

Tunisia DHS 1988 included a question about whether the wife's parents or her husband's parents are related to each other, i.e. are or were in a consanguineous union. This variable

is not a strong indicator of anything, especially as the degree of the relationship was not specified. However, it can be included as an independent variable in an attempt to explore whether there is an association between the parents consanguinity status and the probability of their daughter (or their son's bride) to be married in a certain age group. Thus, the variable whether the wife's or the husband's parents are related to each-other or not will be added to the set of independent variables.

The Algerian PAPCHILD 1993 survey, as the other two surveys, was mainly concentrating on the mothers' and children's health and not designed to collect detailed information on marriage patterns. However, it included a section that gathered basic information on marriage timing and some characteristics from a representative sample of ever-married women aged 15-54. For comparability, only women aged 15-49 were included in the study to be consistent with the data available for both Tunisia and Morocco. The Algerian PAPCHILD 1993 survey interviewed 9587 women in the age group 15-49, regardless of their marital status. Out of these women, 4173 were at age 15-49 and were ever-married at time of survey and had successfully completed the individual questionnaire. The Tunisian DHS survey interviewed 7143 women in the age group 15-49 in the household survey; out of those 4184 had completed the individual questionnaires. While Morocco DHS 1992 included information on 9256 women in the age group 15-49 in the household survey and out of them 5639 were ever-married and successfully completed the individual questionnaire.

V.3 PREVALENCE OF MARRIAGE

In this section the distribution of all women according to their marital status at the time of surveys are studied for the three countries; Algeria, Morocco and Tunisia. Table v.3.1 presents the distribution of women who had been interviewed in the household survey according to their age at time of survey and marital status. The table shows that the proportion of women aged 15-49 who were never married at the time of surveys was highest in Algeria 1992 (47 percent) while both Morocco and Tunisia had roughly the same proportion of 40 percent.

Tunisia in 1988 had the lowest proportion of women who were widowed or divorced at the time of survey (2.4 percent compared to 4.1 percent in Algeria 1992 and 5.6 in

Morocco 1992). This can be due to either lower divorce and widowhood rates or higher remarriage rates in Tunisia when compared to the two other Maghreb countries. Indeed first marriage dissolution rates were lower in Tunisia than in the other two countries. In Tunisia only 6.7 percent of ever-married women reported that their first marriage was dissolved, compares to 14 percent in Algeria and 20 percent in Morocco. However, only 44 percent of those who had their first marriage dissolved remarried in Tunisia, compared to 59 percent in Algeria and 65 percent in Morocco.

As expected, a direct relationship is observed between the percentage married at time of survey and women's age in all three countries. For example, in Tunisia the percentage currently married increases from 35 percent among the age group 20-24 to reach 91 percent among women 40-44. We notice that in Morocco, the proportions currently married at the youngest age groups (15-19 and 20-24) are considerably higher than their corresponding proportions in both Tunisia and Algeria. For example, Morocco has the highest proportion of women 15-19 who were married at the time of survey (12 percent) compared to 3.5 percent in Algeria and 4.3 percent in Tunisia. Such observations point to higher prevalence of adolescent marriage in Morocco than the other two Maghreb countries. In Section V.6 the timing of marriage, in the three countries, is investigated and table v.6.1 shows that Morocco had the highest proportion of women 20-49 who had married for the first time by age 16, 15 percent compared with 10 percent in Algeria and 5 percent in Tunisia.

In the three countries, the percentage never married decreases as age of women increases. In Algeria the proportion of never married women drops by 67 percent when we move from age group 20-24 to age group 40-44, compared to a drop of 53 percent in Morocco and 61 percent in Tunisia.

It worth noting that, in Tunisia, the proportion never married is higher among the oldest age group (45-49) than that for the age group 40-44 this is likely to be due to the data quality. As seen from chapter IV (assessment of data quality) the Tunisia DHS 1988 data showed that the age groups 15-19 and 45-49 were deficient while the age groups 20-24 and 30-34 were surplus age groups (see Figure iv.1.5 in Chapter IV). Thus, it is more reliable to exclude the youngest and oldest age groups when studying the differentials in the distribution according to age.

As expected, the percentage of women widowed at the time of survey also increases by age in the three countries. Notably the proportion widowed at the time of survey was higher among the age groups 35-49 in Morocco when compared to both Algeria and Tunisia (6.4 percent compared to 4.1 percent and 3.9 percent respectively). Such observations may suggest notable differences in the inter-spousal age-gaps in the three countries. However, unfortunately no information on husband's age was available for either Morocco DHS 1992 or Tunisia DHS 1988 to assess such suggestion.

Table v.3.1 Percent distribution of women by current marital status, according to age, Algeria PAPCHILD 1992, Morocco DHS 1992 and Tunisia DHS 1988

Age	Marital status					Number of women
	Never married	Married	Widowed	Divorced/ Separated	Total	
Algeria 1992						
15-19	96.4	3.5	0.0	0.1	100.0	2339
20-24	70.3	28.2	0.2	1.4	100.0	1950
25-29	34.7	60.8	0.5	0.5	100.0	1612
30-34	13.5	80.5	1.3	4.8	100.0	1193
35-39	6.7	87.1	1.6	4.6	100.0	1070
40-44	3.1	87.4	4.5	5.0	100.0	841
45-49	1.9	85.9	8.1	4.1	100.0	582
Total	46.5	49.4	1.3	2.8	100.0	9587
Morocco 1992						
15-19	87.5	11.8	0.0	0.7	100	2145
20-24	56	40.2	0.2	3.6	100	1686
25-29	34.3	60.1	0.3	5.2	100	1468
30-34	13.9	80.0	1.7	4.3	100	1372
35-39	6.7	86.0	3.2	4.1	100	1173
40-44	2.6	86.7	5.5	5.2	100	744
45-49	0.4	82.8	13.2	3.6	100	668
Total	39.1	55.3	2.1	3.5	100	9256
Tunisia 1988						
15-19	95.7	4.3	0.0	0.0	100.0	1466
20-24	64.2	34.9	0.1	0.9	100.0	1512
25-29	30.0	68.2	0.3	1.5	100.0	1225
30-34	11.5	85.9	1.0	1.6	100.0	1073
35-39	4.8	90.8	2.4	2.0	100.0	796
40-44	3.4	91.2	3.6	1.9	100.0	590
45-49	8.3	83.8	6.7	1.2	100.0	481
Total	41.4	56.2	1.2	1.2	100.0	7143

Regarding divorce, table v.3.1 shows that the proportion of divorced or separated women at the time of survey was highest in Morocco, 3.5 percent, with comparison to 2.5 percent in Algeria and only 1.2 percent in Tunisia. The same proportion was quite high among Moroccan women aged 20-29 when compared to Algeria and Tunisia; 5.2 percent compares to 0.5 percent and 1.5 percent respectively.

V.4 MARRIAGE STABILITY

The three surveys included a question about whether the ever-married women had been married once or more. Using this variable in addition to the variable of current marital status one can calculate the proportion of first marriage dissolution as well as the proportion remarried. In addition to these variables, Morocco DHS 1992 included a question about how was the first marriage ended, whether by divorce or widowhood. This additional piece of information enabled us to calculate the proportion of ever-married women who had their first marriage dissolved due to divorce and due to widowhood separately, as well as calculating the proportion remarried following divorce and widowhood separately. Such information on marriage dissolution suffers severely from censoring effects, as those who had married for smaller durations of time still have not experienced the chance of their marriage to be dissolved. Also because the time of dissolution was missing, the data on marriage dissolution is current status data and thus, current states life table techniques are used to study the differentials in marriage stability in the next section, for full discussion of current-status data please refer to Chapter III.

Table v.4.1 presents the proportions of ever-married women who had their first marriage dissolved and the proportions of them who remarried again according to some background characteristics for the three countries. The differentials observed in this descriptive table give an initial view of variations in marriage dissolution and the significance of any variations will be examined in the next section. The table shows that Morocco in 1992, had the highest proportion of first marriage dissolution of 20 percent, followed by Algeria in 1993 with 14 percent then Tunisia in 1988 by only 7 percent. Out of the 20 percent of marriages that were dissolved in Morocco, 15 percent were due to divorce, 4 percent due to widowhood and 0.6 percent were not stated. Proportions of those remarried out of those who had their first marriage dissolved was also highest

among Moroccan women with 65 percent had remarried by the time of survey, followed by 59 percent in Algeria, and 44 percent in Tunisia. In Morocco, 71 percent of women who had their first marriage ended due to divorce had remarried with comparison to 39 percent among those who had their marriage ended in widowhood. Such observation can be mainly due to the fact that widowhood is an event that has higher probability to occur at older ages than divorce, thus, on average, women who had been divorced have, by definition, more opportunities to seek another partner than those who had been widowed. Clear differentials in both the proportions of first marriage dissolution and remarried were observed according to the region in the three Maghreb countries. In Algeria, the High Plateau West and Sahel West regions stand as the regions with the highest proportions of first marriage dissolution,17 percent. Both the High Plateau East and West regions had the highest levels of remarriage, 70 percent respectively. In contrast, women living in the Sahel East region had the lowest proportion of marriage dissolution (6.5 percent) and the proportion remarried were also the lowest (43 percent) when compared to women living in other parts of the country. One would expect widowhood rates to be fairly constant across the country, unless significant differentials in inter-spousal age gap were observed according to region of residence. In fact, the Sahel East region has the lowest median inter-spousal age-gap of 5 years. The relatively low prevalence of marriage dissolution and remarriages in this region can be an indication of culture non-acceptability of divorce and remarriage in this area

In Morocco 1992 such differentials were also clear for both reasons of marriage dissolution. For example, the proportions of women who had their first marriage ended by divorce or widowhood were highest among women in the Centre South region (19 percent and 6 percent respectively, for marriage dissolution following widowhood (see Table v.8.1 in appendix). Moreover, women living in the same region, Centre South, and those living in the Eastern region had the lowest proportions of remarriage (59 percent and 56 percent compares to 65 to 69 percent in the other regions). The proportions of women who had remarried following widowhood were at least 10 percent lower among women living in the Centre South and the South regions when compared to the rest of the regions (28 percent and 31 percent compares to 31 to 50 percent in the other regions (see Table v.8.1). On the other hand, women living in the Tensift region had one of the lowest

proportions of first marriage dissolution (13 percent divorced and 3.4 percent widowed) and the highest proportion remarried (69 percent). These findings suggest that the prevalence of marriage dissolution is higher in the Centre South region and that it might be less acceptable in this particular region for women to remarry especially following widowhood when compared to women in other region. While in Tensift, where the Berber population is high, the prevalence of dissolution is lower and the chances of remarriage are higher.

Differentials in the proportions of first marriage dissolution according to region of residence were also observed in Tunisia. The previous proportion was highest among women living in the South region (11 percent) while it was less than or equal to 7 percent in the other five region. Women living in the North East region had the lowest proportion of first marriage dissolution, 5 percent. Women living in the North East region also had the lowest proportion remarriage of 28 percent, compared to 40 percent to 54 percent in the other regions. Around half of women who had their first marriage dissolved and live in the North West or the Centre regions had remarried by the time of survey.

Table v.4.1 shows that, differentials in marriage stability are not as strong regarding urban and rural residence as by region, except perhaps in Morocco. However, in the three countries, the proportion of women who had their first marriage dissolved were slightly higher (by 1 percent or less in Algeria and Tunisia and 3 percent in Morocco) among women living in urban areas than those living in rural areas. On the other hand, the proportions of women who remarry, out of those who had their first marriage dissolved, are higher among women living in rural areas than those living in urban areas. The differentials in the last proportion are marginal in Tunisia (only 2 percent), where they are more apparent in both Algeria and Morocco.

In Algeria, the proportion of women who were living in rural areas and had remarried after the dissolution of their first marriage was 15 percentage points higher than those who were living in urban areas, the same difference was 17 percentage points in Morocco. These results may suggest that remarriage can be less feasible in urban areas in both Algeria and Morocco relative to rural areas, but has the same feasibility in both urban and rural areas in Tunisia.

Table v.4.1 Distribution of women who had their first marriage dissolved and percentage remarried for the three Maghreb Countries according to different background variables

Background variables	Algeria 1993 First marriage dissolved Percent	Remarried No. exposed	Remarried Percent	Number of women	Morocco 1992 First marriage dissolved Percent	Remarried No. exposed	Remarried Percent	Number of women	Tunisia 1988 First marriage dissolved Percent	Remarried No. exposed	Remarried Percent	Number of women
Duration of marriage												
0-4	5.1	41	(19.5)	808	10.4	109	22.6	1049	2.7	23	***	863
5-9	11.5	97	28.1	843	15.3	150	53.0	979	4.9	44	(29.5)	894
10-14	11.9	108	54.6	905	16.9	173	69.0	1024	6.1	51	51.0	836
15-19	12.7	99	64.9	782	22.8	212	75.4	929	7.7	47	53.2	610
20+	22.7	339	71.7	1493	29.1	483	71.2	1658	11.8	116	48.3	981
Age at survey												
15-19	3.8	3	***	80	7.8	21	***	269				
20-24	6.5	35	(31.4)	535	13.2	98	40.6	741	2.8*	17*	***	607*
25-29	9.3	92	38.0	986	16.5	159	57.7	964	4.2	36	(41.7)	858
30-34	12.1	118	58.1	974	17.9	211	68.6	1181	5.6	53	47.2	950
35-39	13.8	131	63.1	949	21.9	240	74.4	1094	8.3	63	52.4	758
40-44	20.6	160	66.5	778	24.8	180	71.9	725	8.8	50	48.0	570
45-49	27.4	145	67.8	529	32.8	218	63.1	665	14.1	62	41.9	441
Age at first marriage												
<16	25.8	187	80.7	724	33.6	392	77.2	1166	14.2	45	(73.3)	317
16-19	12.6	287	58.1	2270	16.8	417	62.6	2484	7.3	124	44.4	1692
20-21	9.6	75	41.3	778	14.3	124	52.8	866	6.1	54	29.6	889
22-24	11.8	76	41.9	646	15.5	98	56.3	631	3.3	25	(36.0)	750
25+	14.3	59	34.5	413	19.5	96	45.3	492	6.2	33	(30.3)	536
Childhood place of residence												
Capital/ LC	-	-	-	-	18.6	111	46.3	597	7.0	55	40.0	783
City/Town	-	-	-	-	21.1	240	49.8	1139	7.5	89	43.8	1183
Country side	-	-	-	-	19.9	771	71.7	3882	6.2	137	45.3	2218
Current place of residence												
Urban	14.4	347	51.2	2413	21.7	550	55.8	2539	7.3	180	42.8	2462
Rural	13.9	337	66.5	2418	18.6	577	73.0	3100	5.9	101	45.5	1722
Region**												
1	17.2	220	52.3	1282	18.9	216	64.5	1143	5.6	43	(39.5)	772
2	13.8	182	63.5	1316	17.9	125	65.3	700	4.9	36	(27.8)	728
3	6.5	30	(43.3)	461	22.0	360	64.7	1640	7.1	46	(50.0)	648
4	12.1	114	63.4	941	15.8	55	56.4	349	6.4	39	(53.8)	606
5	17.3	73	69.9	421	25.5	123	59.3	482	·5.7	44	(40.9)	776
6	15.9	65	53.1	410	16.2	100	69.0	617	11.2	73	46.6	654
7					20.9	148	68.5	708				
Education												
None	15.4	587	62.3	3806	21.2	915	70.5	4310	7.7	182	48.9	2372
Primary	10.6	78	38.5	737	17.7	130	37.7	734	5.6	73	37.0	1302
Secondary +	6.4	18	***	283	13.8	82	40.3	595	5.1	26	(26.9)	510
Worked before marriage												
Yes	14.2	626	59.8	4399	-	-	-	-	6.7	228	45.6	3402
No	13.4	58	46.4	432	-	-	-	-	6.8	53	35.8	782
Total	14.2	684	58.7	4831	20.0	1127	64.6	5639	6.7	281	43.8	4184

* Age group 15-24. ** Regions: Algeria 1. Sahel West, 2. Sahel Centre, 3. Sahel East, 4. High Plateau East, 5. High Plateau West, 6. South; Morocco: 1. North West, 2. Centre North, 3. Centre, 4. Eastern, 5. Centre South, 6. Tensift, 7. South; and Tunisia: 1.Tunis, 2. North East, 3. North West, 4. Centre, 5. Sahel, 6. South. – Not available. *** Omitted because fewer than 25 cases in dominator. ( ) 25-50 cases only in dominator.

Childhood place of residence shows, to some extent, the same pattern of association with marriage dissolution as current place of residence. In Tunisia, women who lived their childhood in the countryside had lower percentages of marriage dissolution and higher proportions of them were remarried when compared to women lived in other areas. However, in Morocco, the same proportion of first marriage ending in divorce (15 percent) were found among women lived their childhood in the countryside and those lived in the Capital or large cities. However, the proportion who had remarried was much higher among women who lived their childhood in the countryside, in particular following a divorce (80 percent compares to around 50 percent in the other areas).

Regarding the relationship between age at first marriage and marriage dissolution, an almost U-shaped curve was observed for both Algeria and Morocco as we move from younger to older ages (see figure v.4.1). For Tunisia, the curve of the relation almost took the shape of a declining straight line, except for the last age-at-marriage group. The proportion of women who had their first marriage dissolved was highest among women who had married before the age of 16 in the three countries. Table v.4.1 shows that the proportions of women who remarry after the dissolution of their first marriage were also much higher among women who marry relatively very young in the three countries. This can be mainly due to the fact that women in this category, married before the age of 16, would be on average younger when dissolution occurs than women in the other categories, and therefore had higher chances of remarriage. Moreover, if the average duration of the dissolved marriage is particularly low among women in this category this can further increase the chances of such women to find a new suitable partner. However, the available data do not provide enough information to check the validity of such hypothesis. It should be noted that the marriage duration in this study refers to the duration since first marriage up to the date of survey rather than up to the date of end of first marriage as the last piece of information was not provided in any of the three surveys.

Table v.8.1 (appendix) shows that, in Morocco, women who had married younger than the age of 16 had the highest proportion of marriages ending in either divorce or widowhood (24 percent and 8 percent respectively). On the other hand, while women who had married for the first time at age 25 or more had the second highest percentage of marriages ending in divorce (17 percent), they had the lowest percentage of marriages

ending in widowhood (only 2 percent). These findings suggest that, in Morocco, women who marry relatively very young tend to marry a much older spouse than themselves when compared to those who marry at older ages, especially at ages 25 or more. Unfortunately, the Morocco DHS 1992 did not include any information on husbands' age (whether first or last husband's) and thus analysis of inter-spousal age-gap could not be carried out to validate such a suggestion. Such observations also imply that women who marry relatively very young are more vulnerable to the risk of divorce.

Figure v.4.1 Percentage of ever-married women who had their first marriage dissolved by age at first marriage in the three Maghreb countries
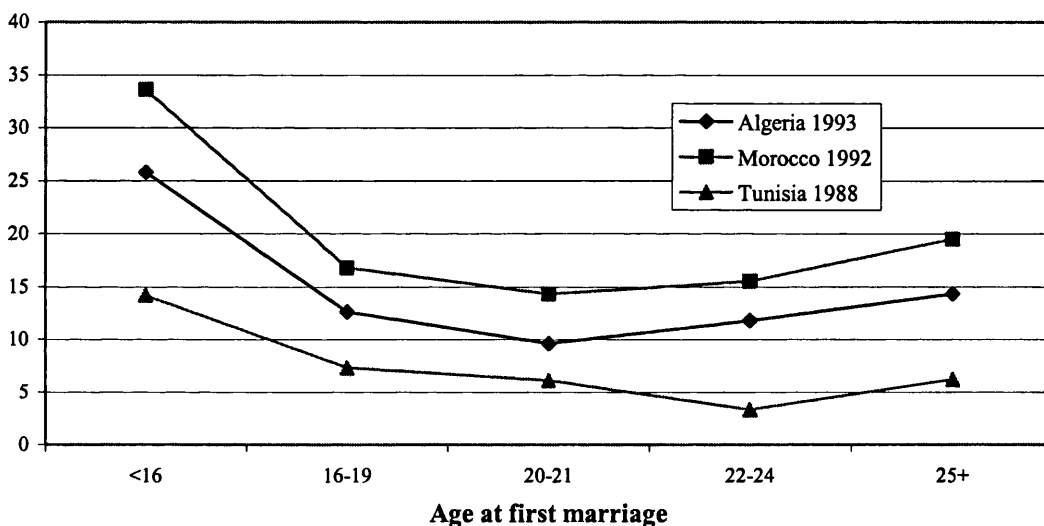
Both first marriage dissolution and remarriages show an inverse relationship with women's education in the three countries: as women's education gets higher the dissolution and remarriage decrease. This relationship with education can be linked to age at marriage, where median age at marriage among women with at least secondary education is higher than that among women with no education (differences of 11.3 years, 7.4 years and 3.4 years in Algeria, Morocco and Tunisia respectively). Thus, more educated women are on average older than non educated women when they start their first marriage and consequently when they end their first marriage and therefore, will have less chances of finding a new partner.

Information from the descriptive data on whether women had worked for cash before first marriage was only available for Algeria 1993 and Tunisia 1988 but not for Morocco 1992.

Table v.4.1 shows that the proportion of ever-married women who had their first marriage dissolved was almost the same among women who had experienced work before marriage and who had not in both Algeria and Tunisia (13 and 14 percent in Algeria and 7 percent in Tunisia). However, the proportion of women who had remarried following the dissolution is higher among women who had not worked before marriage than among those who had in both Algeria and Tunisia (60 percent and 46 percent in Algeria, and 46 percent and 36 percent in Tunisia respectively). These results may not be due to fewer chances of women with work experience to remarry than with no work experience, but rather that women who had not worked before marriage might be more dependent on their partners and thus in more need to remarry.

As expected, the proportion of women who had their first marriage dissolved increased as age and duration of marriage increased in the three countries, which can be mainly due to the time effect. In both Tunisia and Morocco, the proportion remarried increases from age 20-24 up to age group 35-39 then declines. This is mainly, as is clearer from Morocco data, due to the fact that widowhood forms a larger part of marriages ending among the older age groups than the younger ones; therefore many of the women would have been older at the event of dissolution to seek a new marriage. In Algeria, however, the percentage of women who had remarried following their first marriage dissolution increased monotonically by age from 31 percent among age group 20-24 to 68 percent among women aged 45-49 at time of survey. It is very difficult to interpret such results because we don't know the age at which the dissolution occurred and we are using age at time of survey or duration since first marriage as proxies. In an attempt to overcome this problem current-status techniques are next used to study the association of different variables with marriage dissolution simultaneously.

V.4.1 Differentials in Marriage Dissolution

The three surveys used in this chapter, Algeria PAPCHILD 1993, Morocco DHS 1992, and Tunisia DHS 1988 provide data on marriage dissolution that is current-status data, comprising information on whether the marriage dissolution has or has not been reached at the time of survey and information on age at time of survey and age at first marriage (age of exposure to risk of dissolution). In this case, time since first marriage reflects the

exposure time, however, there is no information on when the dissolution occurred. Also we do not know when it will be reached (if ever) for those respondents who have not achieved the dissolution at the time of survey. For a discussion of current-status models refer to Section III.5, and Diamond and McDonald (1992).

Four link-functions were used with the data, the complementary log-log, the logit, the probit and the negative log-log; we then chose the best model that included log-duration since first marriage in months is an explanatory variable. Other explanatory variables were: age at first marriage, region, place of residence, childhood place of residence (for Morocco and Tunisia only), education level, working for cash before marriage (for Algeria and Tunisia only), and consanguinity among parents (for Tunisia only). Our dependent variable is the probability of experiencing first marriage dissolution whether due to divorce or widowhood (we were able to distinguish between marriage dissolution due to divorce and widowhood separately in Morocco). We used the log-duration as an explanatory variable of marriage dissolution to be able to interpret the models as Proportional Hazard models (PH). To interpret such model as a PH model the exponential of the parameter estimates are used to estimate the relative risks. We compared twice the difference of the log-likelihoods (deviance). If the reduction in deviance exceeds the upper 5 percent point of the χ^2-distribution with the relative degree of freedom, then one can conclude that such explanatory variable should be included in the best model.

Table v.4.2 presents the analysis of deviances for marriage dissolution in Tunisia 1988. We found that four explanatory variables: duration since first marriage, region, current place of residence, and working for cash before marriage formed the best model. As shown in the table, the negative log-log model provides better fit with the lowest deviance (at the 5 percent level) for our model explaining marriage dissolution.

Table v.4.2 Analysis of the deviances for dissolution of first marriage, in Tunisia DHS 1988

	Logit	Probit	Complementary log-log	Negative log-log	DF
Total Deviance	1925.2	1906.2	1905.8	1925.2	4023
Reduction in deviance					
Log (duration of marriage)	*67.8*	*65.9*	*67.9*	*68.2*	*1*
+Region	*19.8*	*21.1*	*21.9*	*19.4*	*5*
+ Working for cash	*5.9*	*5.5*	*5.3*	*6.0*	*1*
+ Place of residence	*5.3*	*5.1*	*4.9*	*5.3*	*1*
+ Age at first marriage	11.9	12.5	13.0	11.7	4
+ Childhood place of residence	1.2	1.2	1.3	1.1	2
+ Education	1.4	1.5	1.7	1.4	2
+ Consanguinity among parents	0.4	0.3	0.2	0.5	1
Best Model	*1549.9*	*1550.9*	*1551.9*	*1549.8*	*2764*

Table v.4.3 presents the relative risks and their asymptotic 95 percent confidence intervals for the best model. As expected duration since first marriage is positively associated with probability of marriage dissolution. In Tunisia, the variations in the probability of first marriage dissolution according to other variables except with region were not highly significant. The results show that women living in the South region were significantly more prone to the risk of marital dissolution when compared to women living in Tunis region (OR=2.11, p-value=0.000). Both women who had worked for cash before marriage and those living in urban areas had higher relative risks of marriage dissolution than their counterparts, however, on p-value <0.05 only.

In Algeria, duration of marriage, region and age at first marriage explained best the variation in marriage dissolution with the negative log-log link (see Table v.4.4).

Table v.4.5 shows that, relative to women living in the Sahel West region, women living in the Sahel Centre, Sahel East and High Plateau East had significant lower risks of marriage dissolution. Women living in the Sahel East region had the lowest significant relative risk of first marriage dissolution, RR=0.33 and p-value=0.000. Women married at ages 16-21 had a relative risk of marriage dissolution that is significantly lower than that for women married at age 25 or more. Risk of marriage dissolution for women married younger than 16 years, or 22-24 years were not significantly different than that among women married at ages 25 or more.

Table v.4.3 Results of the current-status model for differentials in marriage dissolution, Tunisia DHS 1988

| | Relative risk | Sig. | 95% Confidence Interval | |
			Lower	Upper
Constant	n/a	0.000	n/a	n/a
Log (marriage duration)	n/a	0.000	n/a	n/a
Region				
Tunis[r]	1.00	-	-	-
North East	0.98	0.924	0.63	1.53
North West	1.53	0.051	0.99	2.38
Centre West	1.42	0.130	0.90	2.25
Centre East	1.13	0.584	0.74	1.72
South	*2.11**	0.000	1.44	3.10
Worked for cash before marriage				
No	*0.72*^	0.044	0.53	0.99
Yes [r]	1.00	.		
Place of residence				
Urban	*1.35*^	0.027	1.03	1.77
Rural[r]	1.00	.		

* Significant on p-value<0.005. ^ Significant on p-value <0.05. [r]Reference category.

Table v.4.4 Analysis of the deviances for dissolution of first marriage, in Algeria PAPCHILD 1993

	Logit	Probit	Complementary log-log	Negative log-log	DF
Total					
Deviance	3173.4	3174.7	3177.3	3172.9	4106
Reduction in deviance					
Log (duration of marriage)	*161.6*	*158.7*	*155.0*	*163.1*	*1*
+Region	*50.9*	*52.1*	*53.1*	*50.5*	*5*
+age at first marriage	*45.4*	*45.5*	*45.8*	*44.7*	*4*
+Education	7.8	6.4	6.7	5.8	2
+ Working for cash	0.2	1.8	1.4	2.2	1
+ Place of residence	0.4	0.4	0.4	0.4	1
Best Model	*2706.1*	*2707.8*	*2710.6*	*2705.4*	*3275*

Table v.4.5 Results of the current-status model for differentials in marriage dissolution, Algeria PAPCHILD 1993

	Relative risk	Sig.	95% Confidence Interval	
			Lower	Upper
Constant	n/a	0.000	n/a	n/a
Log (marriage duration)	n/a	0.000	n/a	n/a
Region				
Sahel West	1.00	-	-	-
Sahel Centre	0.74*	0.003	0.66	0.90
Sahel East	0.33*	0.000	0.23	0.49
High Plateau East	0.67*	0.001	0.54	0.84
High Plateau West	1.06	0.660	0.81	1.39
South	0.94	0.656	0.71	1.24
Age at first marriage				
<16	0.75	0.092	0.54	1.05
16-19	0.47*	0.000		
20-21	0.47*	0.000	0.33	0.67
22-24	0.72	0.060	0.51	1.01
25+	1.00	.		

Link function: Negative Log-log. * Significant on p-value<0.005. ^ Significant on p-value <0.05.

In Morocco, we studied differentials in marriage dissolution due to divorce and widowhood separately. A sub-sample of ever-married women is restricted to those who had not experienced widowhood is used to study differentials in first marriage ending in divorce, and vice versa. Table v.4.6 shows that, duration of marriage, age at first marriage, place of residence, and education were all significantly associated with the probability of first marriage ending in divorce. Although differentials in the proportions of women who had their first marriage ended in divorce according to region were seen in table v.8.1 in the appendix, however, when controlling for other variables, such differentials were not significant. Table v.4.7 shows that women living in urban areas had a significant relative risk of their first marriage ending by divorce relative than those living in rural areas (RR=1.3, p=0.000, see Table v.4.7). Women with no education had a significant relative risk of experiencing divorce when compared to women with at least secondary education (RR=1.4, p=0.015). There was no significant difference in the probability under study between women with primary or at least secondary education. The results also show that women who married relatively very young, under 16 years old, or at older ages, 25 years

or more, had significantly higher relative risk of their first marriage ending in divorce than those married in the middle age groups, 16-24 year.

Table v.4.6 Analysis of the deviances for dissolution due to divorce of first marriage, Morocco DHS 1992

	Logit	Probit	Complementary log-log	Negative log-log	DF
Total					
Deviance	4150.8	4152.2	4154.3	4149.7	4845
Reduction in deviance					
Log (duration of marriage)	*75.2*	*76.2*	*77.3*	*74.9*	*1*
+ *Age at first marriage*	*70.6*	*68.5*	*65.6*	*71.9*	*4*
+ *Place of residence*	*7.7*	*7.9*	*7.9*	*7.8*	*1*
+*Education*	*7.9*	*7.8*	*7.7*	*7.9*	*2*
+ Childhood place of residence	3.2	3.5	3.9	3.1	2
+ Region	21.1	20.5	19.8	21.3	6
Best Model	*2790.1*	*2790.2*	*2790.6*	*2789.9*	*3005*

Table v.4.7 Best Model for variation in dissolution of first marriage due to divorce, Morocco DHS 1992

	Relative Risk	sig.	95% confidence interval for RR	
			Lower	Upper
Constant	n/a	0.000	n/a	n/a
Log (marriage duration)	n/a	0.000	n/a	n/a
Place of residence				
Urban	*1.31**	0.000	1.13	1.52
Rural[r]	1.00	.		
Education				
No education	*1.41*^	0.015	1.07	1.86
Primary	1.24	0.173	0.91	1.70
Secondary +[r]	1.00	.		
Age at first marriage				
<16	1.05	0.696	0.81	1.38
16-19	*0.57**	0.000		
20-21	*0.52**	0.000	0.38	0.70
22-24	*0.62**	0.003	0.45	0.84
25+[r]	1.00	.		

Link function: Negative Log-log, * significant on p-level<0.005, ^ significant on p-level <0.05. [r] Reference category.

Table v.4.8 shows that, as predicted, there were no significant differentials in the proportion of women who had their first marriage ended in widowhood according to any explanatory variable except for the duration of marriage.

Table v.4.8 Analysis of the deviances for dissolution due to widowhood of first marriage, Morocco DHS 1992

	Logit	Probit	Complementary log-log	Negative log-log	DF
Total Deviance	1613.9	1619.5	1625.8	1613.5	4845
Reduction in deviance					
Log (duration of marriage)	*192.2*	*182.8*	*171.8*	*193.0*	*1*
+age at first marriage	4.7	5.1	6.2	4.7	6
+ Place of residence	0.2	0.0	0.0	0.1	1
+Education	0.0	0.0	0.0	0.0	2
+ Childhood place of residence	4.7	5.7	6.8	4.6	2
+ Region	7.8	10.4	12.9	7.5	4
Best Model	*408.3*	*417.7*	*428.7*	*407.5*	*443*

V.5 MARRIAGE CHARACTERISTICS

V.5.1 Polygyny

As seen from the introduction, polygyny is illegal in Tunisia thus this section will be based on comparisons of polygyny results drawn from Algeria PAPCHILD 1993 and Morocco DHS 1992 data only. Tables v.5.1 and v.5.2 present the percentage of currently married women who were living in polygynous unions at time of survey by duration since first marriage and some background characteristics for Algeria and Morocco. The results show that the percentage of women in polygynous union was the same (5 percent) in both Algeria 1993 and Morocco 1992.

In total, the prevalence of polygyny was similar in urban and rural areas in both countries, and no large differentials were found among each age group in Morocco. However, in Algeria, prevalence of polygyny was higher among younger women living in urban areas than those living in rural areas. For example, 4.1 percent of currently married women aged 20-24 who live in urban areas were in polygynous unions compared to 2.5 percent among their corresponding who live in rural areas. On the other hand, large differentials in the prevalence of polygyny were observed according to region in both countries. In

Algeria, the highest prevalence of polygyny was found in the South region (7 percent), while the lowest one was found in the Sahel East region (3 percent). In Morocco, the Centre North and Eastern regions had the highest percentages of polygyny, 8 and 8.5 percent respectively, while the North East and Tensift regions had the lowest, 3.3 and 3.5 percent respectively.

In Morocco, a clear linear relationship was found between duration since first marriage and percentage of polygyny, the proportion of women who were married in polygynous unions at time of survey increased from 3 percent among women who had first married less than five years before the survey to 7.8 percent among women who had first married since 20 years or more. However, in Algeria, the prevalence of polygyny seems to be lower among women who had married for the first time 5-9 years before the survey (3.9 percent), and to be the same among women with other durations (4.7 percent) except those with 20 years or more (6.6 percent). Tables v.5.1 and v.5.2 also show that the percentage in polygynous unions tends to decline when we move from older age-cohorts to younger ones in both countries. This age pattern may reflect a decline in the prevalence of polygyny among younger age cohorts, or it may reflect a life-cycle effect where the transition from monogamy to polygyny is more common among couples who have longer duration of marriage.

In Algeria, the youngest age group (15-19) had been excluded due to the very small numbers. The prevalence of polygyny is almost identical among women aged 25-29 in all regions except for the South region where it is at least 2 percent higher. The prevalence of polygyny was quite high among older age groups in the High Plateau East region; for example, it was 11 percent among women 40-44 in comparison to 5.6 percent among women 35-39. The prevalence of polygyny in the Sahel Centre region varied very little according to age group (ranging from 3.5 to 4.5 percent), and was slightly higher among the age group 30-34 than the others (5.5). The later variations can be due to random errors rather than genuine differences.

Table v.5.1: Percentage of currently married women in Polygynous unions by duration since first marriage and women's background characteristics, Algeria PAPCHILD 1993

Background Variables	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Place of residence								
Urban	(6.9)	4.1	4.6	4.5	5.3	6.2	6.6	5.2
Rural	0.0	2.5	3.9	5.7	4.8	8.1	6.6	5.1
Region								
Sahel West	--	1.8	3.4	5.8	4.7	6.2	10.6	5.1
Sahel Centre	--	4.1	4.0	5.5	3.5	4.1	4.5	4.2
Sahel East	--	--	3.7	4.1	2.8	4.9	0.0	3.0
High Plateau East	--	3.8	4.7	4.3	5.6	11.0	12.6	6.6
High Plateau West	--	1.5	4.3	6.6	8.3	8.0	(5.6)	5.5
South	--	7.4	6.7	4.3	10.6	(15.6)	(2.6)	7.3
Working before marriage								
No	2.6	3.4	4.3	4.8	4.8	7.2	6.7	5.1
Yes	--	(0.0)	3.9	8.2	7.4	5.2	--	5.6
Age at first marriage								
Less than 16	--	(9.7)	4.4	5.1	9.4	7.3	5.9	6.9
16-19	1.5	2.2	3.4	4.2	3.7	6.4	7.2	4.3
20-21	na	2.3	3.4	4.4	3.5	1.1	3.7	3.2
22-24	na	6.8	5.8	3.3	6.7	15.2	--	6.5
25 or more	na	na	6.3	12.3	5.2	9.7	(9.4)	8.5
Respondent's education								
No education	1.7	3.4	5.3	5.3	5.3	6.9	6.8	5.5
Primary	--	2.9	2.2	3.7	5.1	6.4	--	3.7
Secondary+	--	(2.2)	2.7	6.3	(0.0)	--	--	3.5
Husband's education								
No education	2.5	3.1	4.8	6.1	5.6	7.1	6.4	5.7
Primary	--	5.1	4.7	3.7	2.7	(2.8)	--	4.0
Secondary+	--	--	(2.4)	1.7	--	(5.7)	--	2.9
Years since first marriage								
0-4	2.6	2.9	5.7	11.3	--	--	--	4.7
5-9	--	3.3	2.8	7.4	(4.9)	--	--	3.9
10-14	Na	--	5.5	4.1	5.0	(2.9)	--	4.6
15-19	Na	na	--	3.8	3.4	12.6	--	4.7
20+	Na	na	na	--	6.6	6.6	6.5	6.6
Total	2.5	3.2	4.3	5.1	5.1	7.1	6.6	5.2

na: Not applicable because there are no cases in the denominator. --: Less than 25 cases in the denominator.
( ): 25-50 cases in the denominator.

Table v.5.2: Percentage of currently married women in Polygynous unions by duration since first marriage and women's background characteristics, Morocco DHS 1992

	Age at time of survey							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Region								
North west	(2.3)	2.2	2.6	2.9	4.8	3.0	4.4	3.3
Centre north	(0.0)	7.1	6.6	3.8	11.2	11.9	13.9	8.0
Centre	0.0	3.4	6.3	4.8	6.3	8.1	6.4	5.5
Eastern	--	(8.8)	3.2	5.7	12.3	(18.4)	(5.6)	8.5
Centre south	(3.6)	(4.0)	3.9	1.3	7.9	5.8	(7.3)	4.8
Tensift	(0.0)	1.2	2.3	4.1	1.8	6.3	7.6	3.5
South	(4.2)	0.0	3.6	2.4	8.2	2.7	14.3	4.6
Type of place of residence								
Urban	1.7	3.3	4.9	3.9	6.0	6.2	7.7	5.1
Rural	1.0	3.2	4.1	3.6	7.6	7.6	8.2	5.2
Childhood place of residence								
Capital, large city	--	5.1	6.9	4.1	7.3	7.8	(6.1)	5.9
City or Town	(0.0)	2.2	5.0	3.0	5.2	5.5	7.8	4.3
Country city	1.4	3.4	4.0	3.8	7.3	7.2	8.2	5.3
Age at first marriage								
Less than 16	1.3	8.5	6.8	5.3	9.9	4.4	6.4	6.4
16-19	1.2	2.6	4.6	3.3	6.9	6.0	8.3	4.7
20-21	na	1.4	3.0	4.0	5.4	13.3	6.6	4.9
22-24	na	3.8	4.0	2.1	5.2	6.2	14.5	5.0
25 or more	na	na	4.0	4.5	5.3	8.9	(6.1)	5.3
Respondent's education								
No education	1.1	3.1	5.1	4.5	6.7	7.2	8.5	5.6
Primary	2.0	2.7	2.1	1.5	10.1	3.9	(5.1)	4.0
Secondary+	--	4.8	2.6	1.5	4.4	10.2	--	3.5
Husband's education								
No education	1.4	4.1	6.9	4.8	8.0	6.8	8.6	6.3
Primary	1.6	2.5	0.9	3.3	5.3	11.0	(4.5)	3.6
Secondary+	(0.0)	2.1	2.2	1.6	4.8	4.7	(2.4)	2.8
Years since 1st marriage								
0-4	1.2	2.2	4.9	5.2	--	--	na	3.0
5-9	--	5.1	2.8	3.0	6.1	--	na	3.8
10-14	na	--	6.5	2.9	4.1	(7.7)	--	4.3
15-19	na	na	--	4.5	6.2	4.9	--	5.4
20+	na	na	na	(10.7)	8.5	7.2	7.8	7.8
Total	1.2	3.3	4.4	3.7	6.9	7.0	8.0	5.1

na: Not applicable because there are no cases in the denominator. --: Less than 25 cases in the denominator.
( ): 25-50 cases in the denominator.

In Algeria, the prevalence of polygyny in the South region was higher than in the other regions. In Morocco, notable differentials in the prevalence of polygyny were also observed according to region (see Table v.5.2). The highest prevalence of polygyny was found among women living in the Eastern region (8.5 percent) followed by those living in the Centre North region (8 percent), while lowest prevalence was found in the North West and Tensift regions (3.3 and 3.5 respectively). We notice that the prevalence of polygyny is highest among the age group 35-39 in all regions except the Tensift region. Wide differentials in the prevalence of polygyny were observed according to region among younger women (20-24) and older women (35-39 and 40-44). While polygyny prevalence was clustered among women age 25-29 at two levels, around 6 percent in the Centre and Centre South regions and from 2 to 4 percent in other regions.

Prevalence of polygyny in Morocco, was highest among women who had lived their childhood in the Capital, large city or abroad (6 percent) followed by those who had lived in the country side (5 percent) then those who lived in other city or town (4 percent). The same pattern held true among almost all age groups.

In both Algeria and Morocco, the percentage of women who were living in polygynous unions at time of survey was high among women who had married relatively very young (younger than 16 years old) or old (25 years or more). However unlike Morocco, in Algeria, the prevalence of polygyny was higher among women who had married at age 25 or more than those married younger than 16 years old (8.5 percent compares to 6.9 percent). Such observation can be linked to wives' rank, and question whether relatively older single women prefer to be second wives rather than not marry at all. A similar suggestion was made by Chamie in 1986 when studied polygyny in the Arab region. However, the available data does not provide any information on wives' rank.

In summary, in both Algeria and Morocco, as women's education got higher the prevalence of polygyny declined. However, in Morocco, among younger women 20-24 the prevalence of polygyny was highest among women with at least secondary education (4.8 percent) followed by non-educated women (3.1 percent). The same pattern was observed among relatively older women (40-44). In Algeria a similar pattern was observed among women aged 30-34 at time of survey. The prevalence of polygyny was highest among women with uneducated husbands, and almost the same at all age groups

in both Algeria and Morocco. No large differentials were observed in Algeria according to whether women had worked for cash before marriage or not.

Differentials in Polygyny

To study the association between different background variables and the prevalence of polygyny a logistic regression technique was used. A step-wise forward conditional logistic regression model was used, where the significantly associated variables at the last step only are presented in the results. The independent variables included in the model are the list of background variables for each country in addition to the interaction factors between current age, age at first marriage and duration since first marriage, and the dependent variable is being in a polygynous union. The results of the logistic regression analyses are presented in table v.5.3.

Table v.5.3 shows that the three variables; region, duration since first marriage and husband's education were significantly associated with the probability of being in a polygynous union in both Algeria and Morocco. In addition, age at first marriage was significantly associated with the probability under study in Algeria. The results show that, in Algeria, the probability of being in polygynous unions was only significantly different, lower, among women living in the Sahel East region when compared to women living in the Sahel West region (OR 0.522, p-value=0.032). Although the prevalence of polygyny was highest among women living in the South region (see Table v.5.1 for the bivariate analysis), yet when controlling for other variables it was not significantly higher than other regions except the Sahel West region. In Morocco, women living in Centre North, Centre, and Eastern regions were significantly at higher risks of being in polygynous unions than women living in the North West region (OR= 2.4, 1.6 and 2.8, p-value= 0.000, 0.017, and 0.000 respectively, see Table v.5.3).

Regarding duration of marriage, in both countries, only women who had been first married for 20 years or more have significantly higher odds ratio (Twice as likely) of being in polygynous unions than those who had been first married 5-9 years before the survey. This result can be linked to the nature of polygyny as an event that usually occurs after long periods of marriage, if the wife's rank is the first.

Table v.5.3 Logistic regression result for variables associated with polygyny, Algeria PAPCHILD 1993 and Morocco DHS 1992

Variables significantly associated at last step	Algeria 1993 Odds Ratio	95% C.I. for OR Lower	95% C.I. for OR Upper	Variables significantly associated at last step	Morocco 1992 Odds Ratio	95.0% C.I. for OR Lower	95.0% C.I. for OR Upper
Region				Region			
Sahel west[r]	1.00	-	-	North west[r]	1.00	-	-
Sahel Centre	0.80	0.55	1.16	Centre north	2.38*	1.52	3.73
Sahel East	0.52^	0.29	0.95	Centre	1.64^	1.09	2.47
High Plateau East	1.25	0.87	1.80	Eastern	2.81*	1.66	4.70
High Plateau West	1.20	0.73	1.98	Centre south	1.50	0.85	2.64
South	1.55	0.98	2.45	Tensift	0.93	0.53	1.63
				South	1.39	0.84	2.30
Age at 1st marriage							
<16	1.26	0.87	1.83				
16-19[r]	1.00	-	-				
20-21	0.90	0.56	1.43				
22-24	2.19*	1.46	3.29				
25+	3.05*	1.96	4.76				
Duration since first				Duration since first			
0-4	1.09	0.67	1.76	0-4	0.78	0.47	1.30
5-9[r]	1.00	-	-	5-9[r]	1.00	-	-
10-15	1.21	0.76	1.94	10-14	1.06	0.66	1.69
15-19	1.40	0.86	2.30	15-19	1.36	0.86	2.15
20+	2.03*	1.29	3.20	20+	1.88*	1.26	2.81
Husband education				Husband education			
None[r]	1.00	-	-	None[r]	1.00	-	-
Primary	0.76	0.52	1.11	Primary	0.61^	0.42	0.88
Secondary+	0.53^	0.31	0.92	Secondary+	0.51*	0.33	0.78
Constant	0.03			Constant	0.03		

^ p-value <0.05 , * p-value<0.005. [r] Reference category.

The association between husbands' education and probability of a woman of being in polygynous union is more significant in Morocco than in Algeria. In Morocco, women married to husbands with primary or at least secondary education were significantly less likely to be in polygynous unions than women married to non-educated husbands (OR= 0.6 and 0.5, p-value= 0.009 and 0.002 respectively). On the other hand, in Algeria, only women who were married to husbands with at least secondary education were significantly less likely to be married in polygynous unions than women married to non-educated husbands (OR= 0.532, p-value=0.025).

In Algeria, women who were first married at older age groups, 22-24 and 25+, were significantly more likely to be in polygynous unions than women married for the first time at age 16-19. Specifically, women who were married for the first time at age 25 or more were 3 times more likely, and women married at age 22-24 were twice as likely, to be in polygynous unions than women married at age 16-19 (p-value= 0.000 for both categories).

To sum up, in Morocco, prevalence of polygyny is significantly associated with region being highest in the Eastern region followed by the Centre North and then the Centre regions. Husband's education is significantly associated with polygyny, where women who were married to non-educated men were one and a half times more likely to be married in polygyny than women married to husbands with primary education, and twice as likely when compared to women married to husbands with at least secondary education. As expected, a long duration since first marriage is associated with the prevalence of polygyny. In Algeria, age at first marriage was the most significant variable associated with polygyny. Women who were married for the first time at age 25 or more had triple the chance to be in polygyny union than women married at age 16-19. These women are most probably second wives, as it is sometimes suggested that, in the Arab region, it is preferable to be married, even as a second wife, than not marry at all (Chamie, 1986). However, there is no way to prove these assumptions using the available data.

V.5.2 Consanguinity

As described in chapter II, first cousin marriages whether cross first-cousin marriage, of the mother's brother's daughter (MBD), or parallel first-cousin marriage, father's brother's daughter (FBD), form the same risk of genetic inbreeding (F) of 0.065. Thus, one category will be used to test for consanguinity and this will include both cross first-cousin and parallel first cousin marriage. It should be noted, however, that many women in the Middle East may traditionally refer to a distant husband from her father family as 'my cousin from my father', and thus do not report the correct relation. They do, however, provide indications of tendency toward family marriages.

Figure v.5.1 presents the distribution of ever-married women by type of relation with their current, or last, husbands for the three Maghreb countries. The largest percentage of

first-cousin marriages was found in Tunisia DHS 1988, 36.2 percent compares to 21.7 percent in Morocco 1992 and 25.8 percent in Algeria 1993.

Figure v.5.2 Percent distribution of ever-married women by relation to husband, for the three Maghreb countries
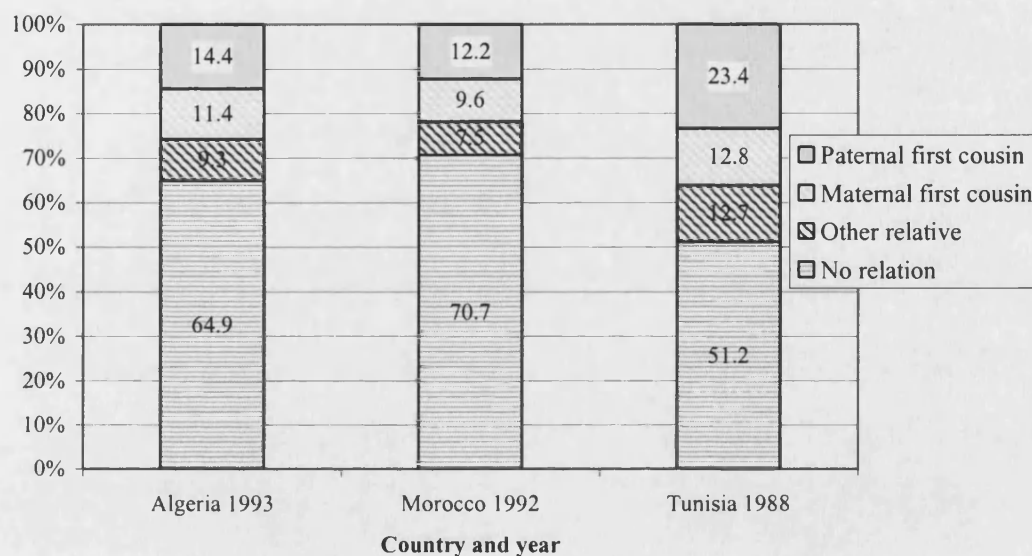
Table v.5.4 presents the percentages of ever-married women who were in consanguineous unions according to some background characteristics for the three countries. The tables show that, in both Algeria and Morocco around one quarter of interviewed women reported that their current, or last, husbands were first-cousins, compared to above third of women in Tunisia. In Algeria, consanguinity prevalence was nearly the same in urban and rural areas, while in Morocco it was slightly higher in rural areas. In contrast, a very remarkable difference in consanguinity prevalence according to place of residence was found in Tunisia, where it was almost 20 percentage points higher in rural areas than urban areas (46 percent compares to 29 percent).

Table v.5.4 Prevalence of consanguinity in the three Maghreb countries according to background characteristics

Background characteristics	Algeria 1993 First Cousin	Algeria 1993 Other relation	Algeria 1993 Number of women	Morocco 1992 First Cousin	Morocco 1992 Other relation	Morocco 1992 Number of women	Tunisia 1988 First Cousin	Tunisia 1988 Other relation	Tunisia 1988 Number of women
Place of residence									
Urban	**24.1**	8.9	2413	18.9	6.0	2539	29.4	11.2	2462
Rural	27.1	9.5	2418	24.2	8.7	3100	46.2	15.4	1722
Region**									
1	21.0	13.0	1282	21.5	8.4	1143	22.0	13.6	772
2	19.3	9.3	1316	26.4	4.9	700	32.1	8.5	728
3	25.8	4.3	461	19.8	7.3	1640	40.0	8.6	648
4	29.5	6.9	941	28.7	4.9	349	48.7	22.4	606
5	32.1	10.2	421	17.2	2.7	482	31.2	13.5	776
6	44.5	6.8	410	18.6	13.1	617	48.6	11.9	654
7				25.0	8.9	708			
Childhood place of residence							20.7	9.6	783
Capital/ Large city	-	-	-	15.4	5.9	597	29.4	10.2	1183
Town	-	-	-	14.0	3.9	1139	45.4	15.6	2218
Countryside	-	-	-	25.2	8.9	3882	29.4	11.2	2462
Education level									
No education	27.6	9.0	3806	24.3	8.4	4310	43.8	14.2	2372
Primary	19.7	10.9	737	16.9	5.5	734	30.3	12.3	1302
Secondary+	13.8	7.4	283	9.8	3.5	595	16.7	9.0	510
Working before marriage									
No	26.8	9.0	4399	-	-	-	39.2	13.4	3402
Yes	13.4	11.3	432	-	-	-	23.7	11.0	782
Husband education									
No education	27.2	8.8	3226	23.7	7.9	3450	43.0	12.6	1549
Primary.	24.1	9.7	948	22.3	8.2	1093	38.5	14.7	1440
Secondary+	18.7	9.1	509	15.1	5.7	1042	23.9	10.9	1043
Don't know	22.9	15.3	131	15.6	2.2	45	31.6	13.8	152
Current age									
15-19	40.0	5.0	80	23.0	7.1	269			
20-24	27.7	9.7	535	21.3	8.5	741	37.1*	14.5*	607*
25-29	25.2	10.4	986	23.6	7.2	964	32.2	13.5	858
30-34	27.2	8.3	974	19.7	7.2	1181	36.9	13.4	950
35-39	23.1	8.3	949	21.0	8.2	1094	37.9	12.0	758
40-44	24.7	9.5	778	22.5	7.2	725	34.4	12.1	570
45-49	25.1	9.8	529	23.7	6.8	665	41.5	11.6	441
Age at first marriage									
Less than 16	32.2	9.8	724	24.5	7.7	1166	43.5	12.0	317
16-19	27.7	10.1	2270	23.1	8.7	2484	40.1	14.4	1692
20-21	25.5	8.6	778	21.5	6.2	866	35.5	11.7	889
22-24	19.2	7.1	646	18.6	6.7	631	31.6	13.3	750
25 or more	12.6	7.7	413	13.8	4.1	492	27.6	10.4	536
Duration since 1st marriage									
0-4	23.7	8.7	808	18.4	6.1	1049	33.7	13.4	863
5-9	25.1	9.7	843	21.3	8.3	979	33.0	13.9	894
10-14	24.4	8.8	905	22.8	6.2	1024	36.7	11.7	836
15-19	26.0	7.7	782	22.7	8.8	929	34.8	13.8	610
20+	27.5	10.2	1493	23.3	8.0	1658	42.1	12.2	981
Consanguinity among parents									
Yes	-	-	-	-	-	-	52.0	14.1	2016
No	-	-	-	-	-	-	21.6	11.9	2168
Total	25.6	9.2	4831	21.8	7.5	5639	36.3	13.0	4184

* Age group 15-24. ** Regions: Algeria 1. Sahel West, 2. Sahel Centre, 3. Sahel East, 4. High Plateau East, 5. High Plateau West, 6. South; Morocco: 1. North West, 2. Centre North, 3. Centre, 4. Eastern, 5. Centre South, 6. Tensift, 7. South; and Tunisia: 1.Tunis, 2. North East, 3. North West, 4. Centre, 5. Sahel, 6. South. – Not available.

Clear differences were observed in consanguinity prevalence according to region in the three countries, however, they were sharper in both Algeria and Tunisia than in Morocco. In Algeria, highest prevalence of consanguinity was observed in the South region (45 percent), followed by the High Plateau West and East regions (32 percent and 30 percent respectively), and it was lowest in the Sahel Centre and West regions (19 percent and 21 percent respectively). In Morocco, consanguinity levels were high in the Centre North, the Eastern, and the South regions (26 percent, 29 percent, and 25 percent respectively). On the other hand, consanguinity was lower among the other regions, ranging from 17 percent to 21 percent. In Tunisia, prevalence of marriages to first cousins ranged from 22 percent in Tunis to 49 percent in both the Centre and the South regions. It worth noting that, in Tunisia, prevalence of marriages to non-related husbands was exceptionally low in the Centre region, 29 percent, compared to a range of 40 percent to 64 percent in the other regions.

Women's education, and to a lesser degree husbands' education, seem to have a strong association with consanguinity in the Maghreb region. For example, in Morocco, consanguinity prevalence drops from 24 percent among non-educated women to only 10 percent among women with at least secondary education. The latter prevalence drops from 24 percent among women with non-educated husbands to 15 percent among women with husbands with at least secondary education. The same pattern holds true in the other two countries. The results suggest that both working for cash before marriage and education decreases the chances of consanguinity unions. In Algeria, consanguinity of marriage was 27 percent among women who had not worked for cash while it was only 13 percent among women who had worked for cash before marriage.

We notice that the percentage of women reporting being married to non-related husbands is almost the same among all age groups, especially if we excluded the youngest cohort, in the three Maghreb countries. The same was observed in relation to duration since first marriage, suggesting a constant trend in the tendency towards inter-family marriages.

On the other hand, prevalence of consanguinity was lowest among women who had married for the first time at relatively old age in all three countries. This pattern is particularly noticeable in Algeria, where consanguinity prevalence drops from 32 percent

among women who had married at age younger than 16 years to less than half, 13 percent, among women who had married at age 25 or more.

Table v.5.4 shows that consanguinity is particularly high among women who had their parents in consanguineous unions themselves. The percentage of women married to their first cousins is 52 percent among women with blood-related parents compares to less than half, 22 percent, among women with non-related parents.

Differentials in Consanguinity

To study the differentials in consanguinity, marriage to cross or parallel first cousins, logistic regression analysis was used. A step-wise forward conditional logistic regression model was used and the significantly associated variables with the dependent variable at the last step are presented in the results. The dependent variable is the probability of being in consanguineous unions with current, or last husband, and the independent variables are; current place of residence, childhood place of residence (for Morocco and Tunisia), region, current age, age at first marriage, women's education level, husbands' education level, working for cash before marriage (for Algeria and Tunisia), and consanguinity among parents (for Tunisia only). The results of the three logistic regression models, one for each country, are shown in tables v.5.5 to v.5.7.

The results show that region was significantly associated with the probability of being in consanguineous unions in the three countries. In Algeria, the probability of first cousin marriages was significantly lower in the Sahel West region than in all the other regions, except for the Sahel Centre region where there was no significant difference. Women living in the South region were almost three times more likely to be married to a first cousin than women living in the Sahel West region (OR=2.9. p-value=0.000). In Tunisia women living in the South region had the highest chances of marrying their first cousins, (OR=2.4 and p-value=0.000), when compared to women living in district of Tunis who had the lowest chances of consanguinity. In Morocco, the differentials were not as wide, the probability of consanguinity was significantly highest in the Eastern region (OR=1.4, p-value=0.024), and lowest in the Tensift region (OR=0.7, p-value=0.008) when compared to the North West region, however, on α level less than 0.05.

Table v.5.5 Results, Odds Ratios, of the logistic regression model to study differentials in consanguinity, Algeria PAPCHILD 1993

Variables significantly associated at last step	Sig.	Odds Ratio	95.0% C.I. for OR	
			Lower	Upper
Urban vs. rural	0.032	*0.86^*	0.75	0.99
Region	0.000			
Sahel West[r]	-	1.00	-	-
Sahel Centre	0.064	0.83	0.68	1.01
Sahel East	0.002	*1.48**	1.15	1.91
High Plateau East	0.000	*1.53**	1.25	1.86
High Plateau West	0.000	*1.62**	1.26	2.08
South	0.000	*2.93**	2.31	3.73
Age at 1st marriage	0.000			
Less than 16	0.049	*1.20^*	1.00	1.45
16-19[r]	-	1.00	-	-
20-21	0.305	0.90	0.75	1.09
22-24	0.000	*0.66**	0.53	0.83
25 or more	0.000	*0.43**	0.32	0.60
Worked before marriage	0.001	*0.59**	0.44	0.80
Constant	0.000	0.33		

[r] Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Current place of residence, urban against rural, was significantly associated with the probability of consanguinity only in Algeria and only for α level less than 0.05, where women living in rural areas were 1.2 times more likely to be married to first cousins than women living in urban areas. On the other hand, childhood place of residence turned to be significantly associated with consanguinity in both Tunisia and Morocco (this variable was not available for Algeria). Women who had lived their childhood in the countryside had significantly higher probabilities of being in consanguineous unions when compared to those grown up in the capital, large city or in other cities or towns in both countries.

Information on working for cash before marriage was not available for Morocco. In both Algeria and Tunisia it turned to be significantly associated with consanguinity. Women who had worked for cash before marriage had significantly lower odds ratios to be married to first cousins, (Algeria OR=0.6, p-value=0.001; Morocco OR=0.7, p-value=0.002).

Table v.5.6 Results, Odds Ratios, of the logistic regression model to study differentials in consanguinity, Morocco DHS 1992

Variables significantly associated at last step	Sig.	Odds Ratio	95.0% C.I. for OR	
			Lower	Upper
Region	0.000			
North West[r]	-	1.00	-	-
Centre north	0.081	1.22	0.98	1.53
Centre	0.129	0.86	0.71	1.04
Eastern	0.024	*1.37^*	1.04	1.81
Centre south	0.031	*0.73^*	0.55	0.97
Tensift	0.008	*0.71^*	0.55	0.91
South	0.680	1.05	0.84	1.32
Education	0.000			
None[r]	-	1.00	-	-
Primary	0.026	*0.77^*	0.61	0.97
Secondary+	0.000	*0.45**	0.33	0.62
Childhood residence	0.000			
Capital, LC, Abroad	0.033	*0.73^*	0.55	0.98
City or Town	0.000	*0.56**	0.45	0.70
Countryside[r]	-	1.00	-	-
Constant	0.000	*0.35**		

[r] Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Women's education level was significantly associated with consanguinity in both Tunisia and Morocco for $\alpha<0.005$, where women with no education had higher chances of being in consanguineous unions. However, such significant association was not found in Algeria 1993. Husband's education level was on the border of being significantly associated with first-cousin marriage in Tunisia only (P-value= 0.047). Age at first marriage was significantly associated with consanguinity only in Algeria, where the chance of being married to a first cousin significantly decreases as age at first marriage is 22 or more.

Consanguinity among parents, which was only available for Tunisia, has a strong association with the probability of women being in consanguineous unions. Women who had their parents married in consanguinity are 3.5 times more likely to be married to their first cousins than other women with the same background characteristics.

Table v.5.7 Results, Odds Ratios, of the logistic regression model to study differentials in consanguinity, Tunisia DHS 1988

Variables significantly associated at last step	Sig.	Odds Ratio	95.0% C.I. for OR	
			Lower	Upper
Region	0.000			
Tunis[r]	-	1.00	-	-
North-East	0.030	*1.32*^	1.03	1.70
North-West	0.004	*1.47**	1.13	1.90
Centre	0.000	*1.83**	1.41	2.36
Sahel	0.018	*1.35*^	1.05	1.72
South	0.000	*2.44**	1.90	3.14
Childhood residence	0.000			
City	0.000	*0.63**	0.50	0.80
Town	0.000	*0.69**	0.57	0.82
Countryside[r]	-	1.00	-	-
Working for cash	0.002	*0.73**	0.60	0.89
Respondent's education	0.000			
None[r]	-	1.00	-	-
Primary	0.001	*0.74**	0.62	0.88
Secondary+	0.000	*0.52**	0.38	0.72
Consanguinity among parents	0.000	*3.45**	3.00	3.97
Constant	0.000	0.28		

[r] Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

To sum up, in Algeria, consanguinity is significantly lower among women living in the Sahel West region and those in urban areas. Women living in the South region are at particularly high risk of consanguinity. Women who marry at ages 22 or more and those who had worked for cash before marriage had significantly lower chances of being in consanguineous unions. In Morocco, the probability of consanguinity is significantly, but not largely, different according to region. Non-educated women and those who had lived their childhood in the countryside had significantly higher chances of being married to their first cousins. In Tunisia, women whose parents married in consanguineous unions had the highest chances of following the same experience. Non-educated women, those living in the South region, and those who had lived their childhood in the countryside had significantly higher chances of consanguinity than other women.

V.5.3 Inter-Spousal Age-Gap

Information on current, or last, husbands' age was only available for Algeria PAPCHILD 1993, thus this section focuses on studying inter-spousal age differences in Algeria 1993. Figure v.5.2 presents the distribution of ever-married women by inter-spousal age gap in years, with current or last husbands, in Algeria 1993. Around 40 percent of women 15-49 were married to husbands who were 5 to 9 years and around a quarter

Figure v.5.2 Distribution of ever-married women by inter-spousal age-gap, Algeria PAPCHILD 1993
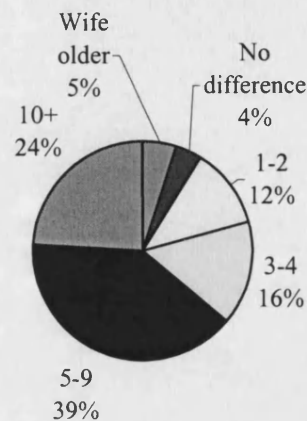
were married to husbands who were at least 10 years older than themselves. Only 5 percent of women were older than their husbands at the time of survey. Another 4 percent of women reported being the same age as their husbands. Around 28 percent of women were married to husbands who were older than themselves by no more than five years (see Figure v.5.2).

Table v.5.8 presents the distribution of women by inter-spousal age gap according to the respondents' background characteristics. In Algeria, women living in the South region had the highest proportion of being married to husbands who were at least 10 years older than themselves, 34 percent, they also had the lowest proportion of being older than their husbands, only 1.8 percent, when compared to women in other regions. Interestingly, older women reported more being older than their husbands. For example, the percentage of women who were older than their husbands was 7 percent among women aged 40-44 in comparison to only 3.6 percent among women age 20-24 at time of survey. The same percentage was quite high among women who had married for the first time at age 25 or more, at 18 percent, when compared to women who married younger.

Table v.5.8 Distribution of ever-married women by age-gap with their current, last, husbands according to some background characteristics, Algeria PAPCHILD 1993

Background characteristics	Wife older	No age difference	Husband older than wife 1-2 years	3-4 years	5-9 years	10 years or more	Number of women	Median inter-spousal age-gap
Place of residence								
Urban	4.6	4.2	11.0	14.3	40.8	25.1	2099	6.0
Rural	5.5	3.7	12.4	16.7	38.6	23.0	2074	6.0
Region								
Sahel West	4.9	3.6	9.7	16.0	40.8	25.0	1114	6.0
Sahel Centre	4.9	3.4	12.8	16.2	40.6	22.1	1164	6.0
Sahel East	8.0	7.5	13.9	14.9	38.4	17.2	424	5.0
High Plateau East	6.0	4.0	12.6	15.3	38.1	24.0	871	6.0
High Plateau West	2.2	4.0	11.7	12.9	40.3	28.9	325	7.0
South	1.8	1.8	9.1	15.6	37.5	34.2	275	7.0
Education level								
No education	5.2	4.1	11.8	15.3	38.4	25.3	3219	6.0
Primary	4.2	3.4	10.9	16.8	43.6	21.0	685	6.0
Secondary+	4.9	4.1	13.1	15.0	45.3	17.6	267	6.0
Working before marriage								
No	4.9	3.9	11.6	15.0	39.6	25.1	3782	6.0
Yes	5.9	4.9	13.3	20.7	40.7	14.6	391	5.0
Current age								
15-19			2.8	8.3	54.2	34.7	72	8.0
20-24	1.3	1.9	8.4	13.4	49.5	25.7	479	7.0
25-29	3.6	3.5	12.0	16.3	43.6	21.0	865	6.0
30-34	4.7	4.3	13.5	16.5	40.0	21.1	855	6.0
35-39	7.4	4.7	11.8	18.2	37.2	20.7	825	5.0
40-44	6.9	4.5	12.7	14.5	32.4	29.1	664	6.0
45-49	6.3	4.8	11.4	11.9	33.9	31.7	413	6.0
marriage duration								
0-4	4.9	4.4	12.1	14.0	44.2	20.4	742	6.0
5-9	5.5	3.0	12.9	16.5	41.8	20.3	729	6.0
10-14	4.7	4.6	11.9	17.6	38.2	23.0	783	6.0
15-19	6.1	3.8	11.2	18.3	39.2	21.3	676	6.0
20+	4.5	3.9	10.9	13.0	37.0	30.7	1243	7.0
Age at first marriage								
Less than 16	2.1	2.0	6.7	10.0	41.7	37.4	609	8.0
16-19	2.7	2.1	8.8	14.9	44.3	27.2	1940	7.0
20-21	4.2	5.0	15.2	18.4	40.5	16.8	686	5.0
22-24	9.0	7.8	19.6	18.7	31.8	13.1	578	4.0
25 or more	17.8	9.2	16.9	17.2	22.8	16.1	360	3.0
Total	5.0	4.0	11.7	15.5	39.7	24.1	4173	6.0

The median age gap in Algeria in 1993 was 6 years and it was the same for both urban and rural areas and was also constant across different wife's educational levels. The

results show that, the median age gap was again constant among all durations since first marriage, except among women who had been married for 20 years or more where it was one year higher. The median age-gap, however, varied a lot according to age at first marriage, where it declined from 8 years among women who had married before age 16 to only 3 years among women who had married at age 25 or more. Women living in the Sahel East region had the lowest median age gap of 5 years, while women living in both the High Plateau West and the South regions had the highest median age gap of 8 years. Women who had worked for cash before marriage and women who were married to husbands with primary or preparatory education had a median age gap that was one year lower, 5 years, than other women. The median age-gap was highest among women age 15-19 and 20-24 and was lowest among women age 35-39 at time of survey.

Differentials in Inter-Spousal Age-Gap

In this section the significance of any observed differentials in the inter-spousal age-gap in Algeria are studied. A multinomial logistic regression model is used to study differentials in the probabilities of having different age gaps against the base category, which is 5-9 years. The inter-spousal age-gap by definition consists of the difference between the husband's and the wife's ages at marriage, and thus both the husband's and wife's ages at marriage are largely associated with the resulted age-gap. Casterline et al (1986), and the in-depth analysis of Egypt DHS 1995 in Chapter VII, both indicated that the effect of the husband's age at first marriage on the inter-spousal age-gap is much larger than that of the wife's. To study the possibility of any existing differentials due to variables other than the husband's and wife's ages at marriage the multinomial regression model excludes both the husband's and wife's age at marriage from the set of independent variables. The independent variables set in this model include: place of residence, region, respondent's education, husband's education, working before marriage, and years since first marriage. The results of the model are presented in table v.5.9.

The results show very small variations in the probability of having different age-gaps due to characteristics other than the husband's and wife's age at marriage. In Algeria, women living in the South region were significantly more likely to have large inter-spousal age gaps of 10 years or more than women living in the Sahel West region, however, on p-

value<0.05 only. On the other hand, women living in the Sahel East region were significantly more likely to marry younger husbands, or to have husbands with the same age, or to have small inter-spousal age-gaps of 1-2 years when compared to women living in the Sahel West. At the same time, Women living in the same region, Sahel East, were less likely to have large age gaps of 10 years or more than the same reference category, however, on p-value<0.05 only.

Table v.5.9 Results of Multinomial regression model to study probability of having different age gaps according to some background variables, Algeria PAPCHILD 1993

Variables included in the model	Wife older	No age difference	Husband older than wife			
			1-2 years	3-4 years	5-9 years[r]	10 years or more
Place of residence: Urban	0.79	1.04	0.84	*0.78^*	1.00	1.14
Region						
Sahel West[r]	1.00	1.00	1.00	1.00	1.00	1.00
Sahel Centre	0.95	1.02	1.28	0.99	1.00	0.87
Sahel East	*1.78^*	*2.30**	*1.58^*	1.00	1.00	*0.67^*
High Plateau East	1.29	1.22	*1.42^*	1.03	1.00	0.97
High Plateau West	0.46	1.19	1.23	0.85	1.00	1.16
South	0.42	0.57	1.02	1.10	1.00	*1.43^*
Respondent's education						
No education[r]	1.00	1.00	1.00	1.00	1.00	1.00
Primary	0.71	0.71	0.75	0.91	1.00	1.03
Secondary+	0.82	0.80	0.87	0.74	1.00	0.96
Working before marriage	1.53	1.53	1.33	*1.61**	1.00	*0.69^*
Yeas since first marriage						
0-4	0.87	1.60	0.89	0.79	1.00	1.00
5-9[r]	1.00	1.00	1.00	1.00	1.00	1.00
10-14	0.94	1.69	1.01	1.18	1.00	1.19
15-19	1.12	1.34	0.92	1.19	1.00	1.05
20+	0.90	1.43	0.97	0.91	1.00	*1.54**
Husband's education						
None[r]	1.00	1.00	1.00	1.00	1.00	1.00
Primary	1.28	0.91	*1.42^*	1.15	1.00	*0.55**
Secondary+	0.72	0.78	0.98	1.06	1.00	0.75

[r] Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

No differentials in the inter-spousal age gap due to respondent's education and very minor variations according to husband's education were encountered. Respondents' with

Husbands with primary education were significantly less likely to have a very large inter-spousal age gap of 10 years or more. However, those married to husbands with at least secondary education were not significantly different, in terms of inter-spousal age-gap, from those married to non-educated husbands.

Women who had worked before marriage were more likely to have an inter-spousal age-gap of 3-4 years and less likely to have a difference of 10 years or more rather than a difference of 5-9 years when compared to women who had never worked.

V.5.4 Inter-Spousal Educational-Gap

In this section the inter-spousal educational gaps in the three countries are investigated. Table v.5.10 presents the cross tabulation between husband's and wife's educational levels in the three Maghreb countries.

Table v.5.10 Distribution of ever-married women by their education level according to their current, last, husbands' educational level, Maghreb countries

Country and respondent's educational level	Husband's educational level			Number of women	Distribution of respondent's education
	None	Primary	Secondary +		
Algeria 1993					
None	80.3	14.6	5.0	3684	78.8
Primary	32.3	44.6	23.1	718	15.3
Secondary +	10.5	32.6	56.9	276	5.9
Total	68.9	20.3	10.9	4678	100.0
Morocco 1992					
None	74.4	18.5	7.1	4270	76.5
Primary	31.3	33.4	35.3	725	13.0
Secondary +	7.6	10.7	81.7	590	10.6
Total	61.8	19.6	18.7	5585	100.0
Tunisia 1988					
None	59.2	31.9	9.0	2266	56.2
Primary	15.5	48.6	35.8	1267	31.4
Secondary +	2.2	20.4	77.4	499	12.4
Total	38.4	35.7	25.9	4032	100.0

It is clear from the table that larger proportions of respondents and their husbands are educated in Tunisia than in the other two countries. It is also notable that larger proportions of non-educated women in Tunisia were married to educated men than in the other two countries. For example, 41 percent of non-educated women in Tunisia were

married to educated husbands compared to 26 in Morocco and 20 percent in Algeria. Another observation that in Tunisia smaller proportions of women with at least secondary education were married to non-educated husbands, 2 percent compares to 8 percent and 10 percent in Morocco and Algeria respectively. In Algeria larger proportions of women with at least secondary education were married to husbands with lower education levels, 43 percent compares to 18 percent in Morocco and 22 percent in Tunisia. However, Algeria had the lowest proportions of respondents and husbands with at least secondary education, 6 percent and 11 percent, compares to 11 percent and 19 percent in Morocco, and 12 percent and 26 percent in Tunisia.

Table v.5.11 presents the distribution of ever-married women according to whether they were more educated than their husbands, were both uneducated, were educated to the same level as their husbands, or were less educated than their husbands. The same distribution of ever-married women according to different background characteristics in the three Maghreb countries are presented in tables v.8.5 to v.8.7 in the appendix.

Table v.5.11 Distribution of ever-married women according to inter-spousal educational-gap in the three Maghreb countries

Background characteristics	Inter spousal education gap				Number of women	Percentage with any education	
	Wife more educated	Both non-educated	Both same education	Husband more educated		Respondent	Husband
Algeria 1993	7.5	63.3	10.2	19.0	4678	21.1	31.1
Morocco 1992	6.0	56.9	13.0	24.1	5585	23.6	38.2
Tunisia 1988	7.7	33.3	24.9	34.2	4032	43.3	61.6

The majority of women in both Algeria and Morocco were non-educated and married to non-educated husbands, 63 percent and 57 percent respectively. However, the same proportion is much lower in Tunisia were only 33 percent of respondents were non-educated and married to non-educated husbands, which is mainly due to the fact that the proportions of educated husbands and wives are higher in Tunisia than the other two countries. In Tunisia, 43 percent of respondents and 62 percent of their husband were educated, compares to 21 percent and 31 percent respectively in Algeria, and 24 percent and 38 percent respectively in Morocco.

In Algeria, the proportion of wives who were more educated than their husbands was higher in urban areas, as well as the Sahel West region. The Sahel West region also has the lowest proportion of non-educated husbands and wives and the highest proportion of couples with the same education. On the other hand, the High Plateau East region had the highest proportion of non-educated couples and that of couples with the same education. That is mainly due to the fact that this region has one of the lowest levels of educated respondents, 14 percent. The percentage of women with higher education than their husbands was clearly higher among women who had worked before marriage and those married at age 22 or more. Note that only 16 percent of respondents who did not work for cash before marriage were educated compared to 74 percent among women who had worked for cash. Women who had married more recently reported more being more educated than the husband, where the percentage of women with more education is 18 percent among women married 0-4 years before the survey compared to only 7 percent among women who had married for 10-14 years. However, the proportion of women married to husbands with more education shows the same pattern, where it was higher among women with smaller durations since first marriage. This reflects the general trend of increased education for both men and women among those who had married more recently in Algeria. It is notable that the majority, 88 percent, of women who married very young, less than 16 years, were non-educated and married to non-educated husbands, and only 1.6 percent were educated the same education as the husband, which is a reflection of the very small proportion of respondents in this category, only 4 percent (see Table v.8.5).

Although the North West and the Eastern regions have almost the same proportions of educated respondents and husbands, the distribution of the inter-spousal educational-gap is different in these two regions. In the North West region, only 26 percent of women were less educated than their husbands compared to 34 percent in the Eastern region. This may reflect a preference for the husband being more educated than the wife in the Eastern region (see Table v.8.6).

The very young age-cohort of women, 15-19 in Morocco, has higher proportions of respondents who were more educated than their husbands, 10 percent, than the older age cohort 30-34, 5 percent, despite the similar proportions of educated respondents and

husbands in the two cohorts. Such observation may suggest that it is more accepted for the wife to be more educated than the husbands among the younger women who are by definition had married more recently. This recent trend is confirmed when we look at the differentials by years since first marriage, where women who had married more recently, 0-4 years before the survey, reported more being more educated than the husbands. No differentials in the proportion of women who were less educated than their husbands were observed according to age at first marriage, however, the proportion of more educated wives increased from 5 percent to 12 percent as the age at marriage increased. It is notable that the proportion of educated women was higher among women who had married later, as it increased from 14 percent among women who had married younger than the age of 16 to 50 percent among women married at age 25 or more (see Table v.8.6).

In Tunisia, the proportion of non-educated women who were married to non-educated husbands was much lower than that in both Algeria and Morocco (33 percent compares to 63 percent and 57 percent respectively). However, the proportion of women who were less educated than their husbands was also higher than that in the other two countries (34 percent compares to 19 percent and 24 percent respectively). Given that the proportion of educated women is highest in Tunisia, we may conclude that educated women in Tunisia seem to prefer to marry husbands with higher education than themselves rather than with the same level of education. Or perhaps the husbands like to choose wives with a lower education level than themselves, in particularly in Tunisia. However, in Tunisia, most observed differentials in the distribution of the inter-spousal educational-gap is a reflection of the variation in the proportions of educated women and their husbands (see Table v.8.7).

V.6 TIMING OF MARRIAGE

As discussed in Chapter II, marriage timing is a very important nuptiality element. It not only indicates the starting of exposure to risk of childbearing, but also announces the start of new responsibilities, especially for girls. Trends in timing of marriage can also indicate whether a nuptiality transition is happening or not. One of the ways to look at early marriages is to study the trends in percentage of women married at exact early ages.

Using life table techniques the percentage of women who were first married by exact ages and the median age at first marriage had been calculated. Table v.6.1 presents the percentages of women who were first married by different ages by age cohorts for women 15-49 at time of survey.

In all three Maghreb countries, a declining trend in the proportion married by younger exact ages is clearly observed when we move from older to younger age cohorts. For example, in Algeria, the proportion of women married by exact age 16 drops dramatically from 26 percent among the age cohort 40-44 to only 4 percent among the age cohort 25-29. Even when relatively higher ages are considered, such as the proportion married by exact age 25, we find the same pronounced trend, where in Tunisia, for example, it falls from 80 percent among age cohort 40-44 to 63 percent among age cohort 25-29 with a substantial difference of 17 percent.

We notice that, Tunisia had the lowest probabilities of marriages by younger ages, (16 and 18 years), for all age cohorts when compared to both Algeria and Morocco. For example, only 26 percent of women age 35-39 were married by exact age 18 in Tunisia compares to 32 percent and 37 percent in Morocco and Algeria respectively. However, we observe that by age 30 almost the same proportion of women 25-49 were married in the three countries. Moreover, the previous proportion was slightly higher in Tunisia, 87 percent, than in Algeria 84 percent, and in Morocco 83 percent. This result suggests that perhaps many women in Tunisia marry later than those in Algeria and Morocco, yet, women in Tunisia catch up with them pretty soon. Again, this emphasis on previous observations that in the Arab region postponing marriage to an older age can occur but cancelling marriage usually does not occur by choice. Moreover, such older age, in the Maghreb region, seem to be around 25-30 years old. However, we still see around 15 percent of women in the three countries still had never been married by age 30, which is relatively high.

One of the ways to measure timing of marriage is to use the median age at first marriage among ever and never married women, for a full discussion of this indicator refer to Section III.1.2.

Table v.6.1 Percentage of women who were first married by exact ages according to current age group in the three Maghreb countries

Age at time of survey	Percentage of women who were first married by exact age						Number of women
	16	18	20	22	25	30	
Algeria 1992							
15-19	0.6	3.3					2339
20-24	1.6	7.1	18.3	26.9			1950
25-29	4.4	14.8	30.7	44.1	58.7		1612
30-34	8.6	28.9	48.3	62.4	75.8	84.1	1193
35-39	13.6	36.5	55.9	69.8	81.6	90.3	1070
40-44	25.6	51.2	68.7	79.6	87.8	93.9	841
45-49	31.5	57.6	77.8	87.8	92.0	95.4	582
20-49	**10.2**	**25.7**	**41.9**	**54.2**	**67.6**	**79.0**	**7248**
25-49	**13.5**	**32.8**	**50.9**	**63.7**	**75.4**	**84.1**	**5298**
Morocco 1992							
15-19	4.3						2145
20-24	6.3	18.4	31.4				1686
25-29	9.3	22.8	36.4	48.8	59.9		1468
30-34	15.4	31.6	50.4	63.7	75.1	84.0	1372
35-39	18.3	36.6	56.2	69.9	80.6	89.4	1173
40-44	23.9	42.9	64.1	79	88.7	96.0	744
45-49	34.9	53.1	73.5	84.1	93.3	98.7	668
20-49	**15.2**	**30.7**	**47.5**	**59.7**	**68.6**	**83.2**	**7111**
25-49	**17.9**	**34.5**	**52.6**	**65.6**	**76.3**	**85.8**	**5425**
Tunisia 1988							
15-19	0.6	3.7					1743
20-24	1.0	9.1	19.6				1640
25-29	2.0	11.3	27.5	43.8	63.4		1269
30-34	2.8	16.5	35.5	56.0	73.6	86.2	1113
35-39	7.9	26.1	43.6	62.0	78.2	91.2	837
40-44	16.8	36.8	53.9	68.8	79.7	92.0	627
45-49	17.1	34.6	54.8	73.0	85.8	94.6	471
20-49	**5.1**	**18.1**	**33.9**	**50.6**	**68.5**	**84.7**	**5722**
25-49	**7.1**	**21.7**	**39.4**	**57.2**	**73.7**	**87.3**	**4120**

N/A = Not applicable

Tables v.6.2 to v.6.4 present the median age at first marriage (MAFM) for women 25-49 years, by age-cohorts and according to place of residence and women's education, for the three Maghreb countries. The results show that median age at first marriage is one year higher in Tunisia than in both Algeria and Morocco (21.1 years compares to 19.7 and 18.8 years respectively). We observe that the median age at first marriage shows an

increasing trend from older to younger age cohorts in all three countries. For example, in Tunisia it increases from 19.4 years among the age cohort 40-44 to nearly 23 years among the age cohort 25-29.

Table v.6.2 Median age at first marriage among women age 25-49 years, by current age and selected background characteristics, Algeria PAPCHILD 1993

Background characteristics	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Place of residence						
Urban	26.2	21.8	20.7	19.0	18.0	21.5
Rural	21.0	19.0	18.0	16.4	16.8	18.7
Region						
Sahel West	23.0	20.2	20.0	17.6	17.1	20.0
Sahel Centre	25.6	20.0	19.0	17.0	16.9	19.9
Sahel East	a	22.7	21.7	21.1	19.7	22.3
High plateau East	23.4	20.1	19.7	18.8	18.0	20.3
High plateau West	19.7	19.8	18.5	16.1	16.1	18.2
South	21.1	19.8	18.0	16.0	16.8	19.0
Education						
None	21.0	19.3	18.7	17.4	17.0	19.0
Primary	24.7	22.7	23.0	20.1	20.0	23.2
Secondary +	a	26.4	24.8	25.7	20.1	30.3
Total	23.1	20.2	19.3	17.9	17.3	19.9

Variations in the median age at first marriage according to region are most apparent in Algeria, where it ranges from 18.2 years in the High Plateau West region to 22.3 years in the Sahel East region (see Table v.6.2). In Morocco, the MAFM was around 19 years in all regions except in the Centre North and Centre South regions region where it was around 18 years (see Table v.6.3).

In Tunisia 1988, the median age at first marriage is highest among women with secondary education or more and those living in Tunis (23.5 years and 22.5 years respectively) and lowest (around 20 years) among women with no education and those living in urban areas or in the South or Centre West regions. However, for younger women 25-29 the differentials are not so high if we excluded those living in Tunis and those with secondary education or more. With the exception of Tunis, regional differentials in the median age at first marriage, for women 25-49, are not so big and range from 20 to 22 years. Women age 25-49 who lives in urban areas had a median age at first marriage of 1.5 years higher than that of women living in rural areas. Excluding

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the oldest age-cohort, 45-49, we find that this difference is almost constant across all age cohorts (see Table v.6.4).

Table v.6.3 Median age at first marriage among women age 25-49 years, by current age and selected background characteristics, Morocco DHS 1992

Background Characteristics	Age at time of survey					Total
	25-29	30-34	35-39	40-44	45-49	25-49
Place of residence						
Urban	20.5	20.2	19.6	18.6	17.0	19.5
Rural	18.6	18.4	18.5	18.3	18.0	18.4
Education						
No education	18.7	18.5	18.5	18.2	17.4	18.3
Primary	20.0	20.6	19.7	18.5	17.7	19.6
Secondary +	23.4	23.9	23.4	21.8	21.5	23.3
Region						
North West	19.6	19.2	19.3	18.4	17.4	18.9
Centre North	18.6	18.6	19.0	17.9	16.2	18.3
Centre	20.1	19.6	19.2	18.5	17.4	19.1
Eastern	18.7	19.9	19.0	19.5	18.1	19.1
Centre South	19.6	18.6	18.2	17.7	17.4	18.2
Tensift	18.9	18.7	18.1	18.9	18.4	18.6
South	20.0	19.3	19.5	18.3	19.0	19.3
Total	19.4	19.2	19.0	18.5	17.6	18.8

Table v.6.4 Median age at first marriage among women age 25-49 years, by current age and selected background characteristics, Tunisia DHS 1988

Background characteristics	Current age					Women age
	25-29	30-34	35-39	40-44	45-49	25-49
Place of residence						
Urban	23.6	22.0	21.2	20.3	20.2	21.8
Rural	21.8	20.5	19.8	18.4	19.4	20.3
Region						
Tunis	24.1	22.5	21.4	20.2	21.1	22.5
North East	22.6	22.0	21.8	20.6	20.8	21.7
North West	22.9	21.1	20.4	18.6	19.3	20.8
Centre West	22.0	19.9	19.6	17.9	18.8	20.1
Centre East (Sahel)	23.0	21.5	21.4	19.7	20.2	21.5
South	22.0	20.0	19.1	18.3	17.8	19.9
Education						
No education	21.7	20.6	19.5	18.8	19.5	20.1
Primary	22.9	21.7	21.5	20.5	23.0	22.2
Secondary +	25.0	22.9	23.0	22.7	22.5	23.5
Total	22.8	21.3	20.6	19.4	19.9	21.1

V.6.1 Determinants of Timing at First Marriage

One of the ways to study the determinants of getting married at different ages is to try to focus on those who marry relatively early and relatively late. Knowing the characteristics of those two groups of women and the association between such characteristics and the probability of being married relatively very early or very late can draw a picture of determinants of age at first marriage. We have seen that the median age at first marriage, in the three Maghreb countries for women 25-49 was around 19 to 21 years old (see Tables v.6.2 to v.6.4), however, more than 25 percent of women age 25-49 had not been married by exact age 25 (see Table v.6.1). Therefore, it is important to study the characteristics of women who marry at different ages especially at considerably young and late ages. To over come the problems of selection bias when dealing with the ever-married women sample, we decided to use the all women sample, including never married women to study differentials in getting married at different age groups. This way allows us to study differentials due to age cohorts, which we were not able to capture correctly using the ever-married sample only. Due to the fact that timing of the event of marriage is clustered around 20-25 years, the younger ever-married women would reflect a very selected sample of the same age group in the whole sample.

Tables v.8.2 to v.8.4, in the appendix, present the distribution of all women 15-49 at the time of survey according to whether married or not, and age at first marriage for all independent variables included in the analyses, for the three countries. Around a quarter of all sampled women were married at age 16-19 in the three countries. The striking difference between Tunisia and both Algeria and Morocco is the very small percent of all women who were married before age 16 (4 percent against 8 percent and 13 percent respectively). Percentages of women who were married at ages 20 or over were higher in Tunisia than in both Algeria and Morocco. The highest proportion of women who were married very early, out of all women, was found in Morocco, and such pattern was true among all age groups. For example, 18 percent of all women aged 35-39 reported being married younger than age 16 in Morocco, compares to 13 percent in Algeria and 8 percent in Tunisia. Differentials due to education, in both the proportions of women who married very early, less than 16 years, and relatively older, 25 years or more, was obvious in the three countries. In Algeria, percentage of women who were married before age 16

out of all women, was obviously higher among women living in both the South and High Plateau West regions (see Table v.8.2). The same percentage in rural areas is double that in urban areas (10.4 percent compares 5.1 percent). In Morocco, the Eastern region had the smallest proportion of women married under the age of 16 (8.5 percent, Table v.8.3). In Tunisia variations in proportion of women married very early is quite low in Tunis, North East and Sahel regions, the same regions were characterised by relatively higher percentage of late marriages, 25 years or more, when compared to other regions (see Table v.8.4). Differentials in the same proportion according to place of residence were not as sharp in Morocco and Tunisia as in Algeria.

To study the determinants of getting married at different age groups, a series of conditional Cox-regression models is used. Like life tables and Kaplan-Meier survival analysis, Cox Regression is a method for modelling time-to-event data in the presence of censored cases. However, Cox Regression is a proportional hazard model that allows us to include predictor variables in the model. For full discussion on proportional hazard models refer to Chapter III. One of the main advantages of the Cox Regression model that it handles the censored cases (women who were never married at time of survey) correctly, it also provides estimated coefficients for each of the covariates, thus, we can assess the impact of multiple covariates in the same model (see Section III.4). The set of independent variables included is restricted to the variables available to all women sample and includes; age at the time of survey, childhood place of residence (for Morocco only), current place of residence, region, and wife's educational level. We used five conditional Cox-regression models, where the dependent variable is getting married at the ages specified in table v.6.5.

The detailed results of the five Cox-regression models for each of the three Maghreb countries are presented in tables v.8.8 to v.8.22 in the appendix. For comparability, the results are summarised in table v.6.6 showing the variables that were significantly associated with the probabilities listed for each country.

Table v.6.5 Description of the logistic regression models performed to study the probability of getting married at different age groups

	Probability of getting married		Eligible women	Number of women included		
	At age	Against		Algeria	Morocco	Tunisia
1st	Less than 16	Married at age 16 or more or never married	All women age 15-49	9271	9208	7460
2nd	16-19	Married at age 20 or more or never married	All women age 16-49 who were single by age 16	8044	7654	6760
3rd	20-21	Married at age 22 or more or never married	All women age 20-49 who were single by age 20	4030	3713	3784
4th	22-24	Married at age 25 or more or never married	All women age 22-49 who were single by age 22	2586	2417	2398
5th	25 or more	Never married	All women age 25-49 who were single by age 25	1241	1280	1085

Table v.6.6 Summary of results of the series of Cox-regression models studying timing of marriage in the Maghreb countries

Model Number	Country		
	Algeria	Morocco	Tunisia
First	Age* Place of residence* Region* Education*	Age* Region* Education* Childhood place of res.*	Age* Region* Education*
Second	Age* Place of residence* Region* Education*	Age* Education* Childhood place of res.*	Age* Region* Place of residence* Education*
Third	Age* Place of residence^ Region* Education*	Age* Education* Childhood place of res.*	Age* Place of residence^ Education^
Fourth	Age* Region* Place of residence*	Age* Region^ Childhood place of res.*	Age*
Fifth	Age* Place of residence* Region* Education*	Age* Region* Education	Age*

* Significant on p-value<0.005, ^ significant on p-value<0.05.

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First Model

The first model studies the association between the dependent variables and the probability of getting married for the first time at age younger than 16 years old, against getting married older or never being married, among all women. The sample included 9271 women in Algeria, 9208 women in Morocco, and 7460 women in Tunisia. As shown in table v.6.6, place of residence was significantly associated with the probability of early marriage (less than 16) in Algeria only. Age, region and education were significantly associated with the probability under study in the three countries, and childhood place of residence (which was only included in Morocco) was also significantly associated. In the three countries women who had at least secondary education had a significantly lower risk of being married very early relative to non-educated women (RR=0.06, 0.17, and 0.11 in Algeria, Morocco, and Tunisia respectively, and p=0.000 in the three countries). Women with primary education also had significantly lower risks of the probability under study relative to non-educated women in the three countries. However, the effect of education on the probability of marrying very early is strongest in Algeria.

Regarding age, the risk of early marriage significantly declines as we move from older to younger age cohorts in the three countries. For example, women aged 40-44 at time of survey, in Algeria had a risk that is 2.4 times higher than that among women age 35-39 at time of survey. However, in Morocco, unlike the other two countries, such trend was only observed for younger age cohorts 15-29 relative to women at the age cohort 35-39.

In Algeria, women living in rural areas had a relative risk of getting married at early ages that is 1.6 times higher than that in urban areas (see Table v.8.8). Women living in both the High Plateau West and South regions had the highest relative risks to marry early, relative to women living in the Sahel West region (RR= 2.0 and 1.9, p=0.000 and 0.000 respectively).

In Morocco, women who lived their childhood in the Capital, large city or abroad were significantly less likely to marry very early when compared to women lived in the countryside (RR=0.43 and p=0.000, see Table v.8.13). No significant differentials were found between women lived in the countryside and in other city or town. In Morocco, women living in the Eastern, Tensift and South regions had significantly lower risks to

marry younger than 16 years old than women living in the North west region (RR= 0.57, 0.72 and 0.61, p=0.000, 0.003 and 0.000 respectively).

In Tunisia, women living in the Centre West and South region had significantly higher relative risks of marrying very early relative to women living in Tunis (RR=1.6 and 1.8, p= 0.03 and 0.006 respectively, Table v.8.18).

Second Model

The second model tests the probability of getting married at age 16-19, against marrying later or not marrying at all. Women who had married by age 16 were excluded from the analysis that resulted on a sample of 8044 women in Algeria, 7654 women in Morocco, and 6760 in Tunisia. Age, and education were significantly associated with the probability under study in the three countries. Place of residence were significant in both Algeria and Tunisia but not in Morocco. Region was significant in both Algeria and Tunisia but not in Morocco, and childhood place of residence is significant in Morocco (see Table v.6.6).

The risk of getting married at age 16-19 was significantly lower among the younger age groups 15-29 relative to that among women 35-39 in the three countries. Only in Algeria we found that the relative risk of the probability under study is higher among older age groups, 40-49, than that among women age 35-39 at time of survey. Again we see that non-educated women had the highest relative risk of marrying at age 16-19 than women with other education levels in the three countries. We also notice that the association between education and marrying at age group 16-19 is strongest in Algeria (see Tables v.8.9, v.8.14 and v.8.19).

In Algeria, women living in the Sahel East region had significantly the lowest relative risk of marrying at age 16-19 relative to women living in the Sahel West region, while women living in the High Plateau Region had the highest risk (RR= 0.49 and 1.25, p=0.000 and 0.006 respectively, Table v.8.9). In Tunisia, the probability under study was only significantly different, higher, in the Centre West and the South regions relative to Tunis, RR=1.31 and 1.60 and p=0.004 and 0.000 respectively. The differences in the other regions were not significant (see Table v.8.19). In both Algeria and Tunisia women living in rural areas had significant higher risks of marrying in the age group 16-19

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relative to women living in urban areas, RR=1.38 and 1.22 respectively. In Morocco, none of the regions or the current place of residence were significantly associated with the probability under study, however, Childhood place of residence was significantly associated. Women who had lived their childhood in the countryside had significantly higher risk of marrying in the age group 16-19 than women who lived their childhood anywhere else (see Table v.8.14).

Third Model

In the third conditional Cox-regression model we study the probability of getting married for the first time at age 20-21 against getting married later or never married. Women who had already married by age 20 were excluded from the analysis, the included sample was 4030 women in Algeria, 3713 women in Morocco, and 3784 women in Tunisia. The results show that age and education were significantly associated with the probability under study in the three countries. However, in Tunisia, education was significant at α level less than 0.05 only. Place of residence was significantly associated in Algeria and Tunisia only, and at α level less than 0.05 only. Region was significantly associated with the probability under study only in Algeria. In Morocco, childhood place of residence was significantly associated with the probability of marrying for the first time at age 20-21 (see Table v.6.6).

Tables v.8.10, v.8.15 and v.8.20 in the appendix show that, women younger than 30 had significantly lower risks of getting married for the first time at age 20-21 relative to women age 35-39 in the three countries. Such results suggest a recent trend towards later marriages at younger age cohorts in the three countries. Differentials in the probability among women with at least secondary education with comparison to non-educated women were stronger than that between women with primary education and non-educated in both Morocco and Tunisia. In the last two countries, women with at least secondary education had significantly lower risks of being married at age 20-21 relative to non-educated women, (RR= 0.45 and 0.73 and P=0.000 and 0.005 respectively, see Tables v.8.15 and v.8.20). On the other hand, the association between education and the probability under study is much stronger in Algeria, where women with any education had significantly lower risks of getting married at age 20-21 relative to non-educated

women. In Algeria, women with primary education had a risk that is 0.70 times lower than that among non-educated women, while women with at least secondary education women had a risk that is 0.38 times lower than among the same reference category to marry at the age group 20-21 against later or not at all (see Table v.8.10).

Regarding regional differentials, in Algeria, women living in both the High Plateau West and the South regions had significant higher relative risks of getting married at age 20-21 given that they were still single by age 20 relative to women living in the Sahel West region, RR=1.71 and 1.63 and p=0.000 and 0.001 respectively. On the other hand, women living in the Sahel East region had significantly lower risk of the same probability when compared to the reference region, RR=0.72 and p=0.015. No significant differences were found among the Sahel Centre, the High Plateau East and the Sahel West regions (see Table v.8.10). In both Algeria and Tunisia women living in rural areas had a risk that is 1.2 times higher to marry at age 20-21 relative to women living in urban areas (p=0.04 and 0.03 respectively). In Morocco, women who lived their childhood in the countryside had significant higher relative risk to marry at age 20-21 when compared to women living in any other part of the country given that they were single by age 20.

Fourth Model

The fourth conditional Cox-regression model tests the association between the independent variables and the probability of getting married for the first time at age 22-24 against marrying later or never marrying given that they were still single by age 22. After excluding women who had married by age 22 there were 2586 women in Algeria, 2417 women in Morocco, and 2398 women in Tunisia included in the analyses. The results of the Cox-regression models show that, age is the only variable that was significantly associated with the probability under study in the three countries. In addition to age, place of residence, and region in Algeria and region and childhood place of residence in Morocco were also significant. Both the differentials due to education in Algeria and region in Morocco were significant at α level less than 0.05 only (see Table v.6.6).

Again we see significantly higher risks of delayed first marriage after age 24, among the younger two age-cohorts, 20-25 and 25-29, relative to women at the age-cohort 35-39, in the three Maghreb countries. For example in Morocco, women aged 20-24 had a risk of

marrying for the first marriage at age 22-24 that was 0.6 times lower than women aged 35-39 at time of survey. In Algeria, only women living in the Sahel Centre region had a significantly different, lower, risk of marrying at age 22-24 relative to women living in the Sahel West region, RR=0.56 and p=0.000, moreover, women living in rural areas had higher risks relative to women in urban areas (see Table v.8.11). While, in Morocco, only women living in the Eastern region had a significantly different, and lower, risk of the probability under study relative to women living in the North west region, RR=0.61 and p=0.012 (see Table v.8.16) Women who had lived their childhood in the capital of Morocco, large city or abroad had lower relative risk of getting married at age 22-24 against later relative to women who had lived their childhood in the countryside.

Fifth Model

The fifth and last conditional Cox-regression model studies the association between the independent variables and the probability of getting married for the first time at age 25 or more against never marrying given that women were still single by age 25. For this model 1241 women in Algeria, 1280 women in Morocco, and 1085 women in Tunisia were included in the analysis. Age was significantly associated with the probability in the three countries, while region and education were significant in both Algeria and Morocco, and place of residence in Algeria only (see Table v.6.6). Women at the age cohorts 25-29 and 30-34 had higher risks of never marrying relative to women at age cohort 35-39 in the three countries (see Tables v.8.12, v.8.17 and v.8.22). Such results should not be interpreted that these women will never marry, most probably they will but later as they did not had enough time as women in the older age-cohorts. However, such results indicate a clear trend towards later age at first marriage among younger age-cohorts in the three Maghreb countries.

Regarding regional variations, in Algeria, only women living in the Sahel Centre had lower risks of getting married for the first time at age 25 or more relative to women in the Sahel West region, (RR=0.51 and p=0.000, Table v.8.12). On the other hand, in Morocco, women living in the Centre North region had significantly lower risks of getting married for the first time at age 25 or more relative to women in the North West region, however

on α level less than 0.05 only. No significant differences were found in the probability under study in the other regions relative to the reference region (see Table v.8.17).

Education level was significantly associated with the probability of getting married for the first time at age 25 or more in both Algeria and Morocco, however, the association was much stronger in Algeria than in Morocco. For example, no significant difference was found in the probability under study among women with no education and women with primary education in Morocco, while in Algeria women with primary education had a risk of getting married at age 25 or more that was 1.5 more times than that among women with no education (see Table v.8.12 in appendix). Such results suggest that when marriage is delayed, educated women had significantly higher chances to marry later rather than never marry relative to non-educated women, especially in Algeria.

Summary of the Five Models

To sum up, a clear trend towards delayed age at first marriage was observed among younger age cohorts in the three countries. Regional variations in the probability of getting married at different ages were very strong in Algeria. In both Morocco and Tunisia regional variations in the probability of early marriages were pronounced. In Tunisia women living in the Centre West and South regions were more likely to marry at younger ages. While in Morocco women living in the Eastern, the Tensift, and the south regions were less likely to marry at very young ages, especially women living in the South region were more likely to marry at relatively older age, however, on p-value<0.05 only. Women's education was strongly associated with timing of marriage, especially in Algeria, followed by Morocco. In Tunisia, education was only associated with the probabilities of early marriages where more educated women were less likely to marry relatively early. In Morocco, childhood place of residence was more important than current place of residence in predicting age at first marriage.

V.7 CONCLUSION

Although that the three Maghreb countries; Algeria, Morocco, and Tunisia, share a common history, religion and population structure yet there are many observed variations in the development levels between and among the three countries. The three countries are

characterised by young population and high population growth as well as high fertility rates. However, Tunisia had the highest literate females' and males' percentages and the highest GNP per capita of the three countries. Both Tunisia and Algeria scored better in the human development index and the human rights score than Morocco (see Tables v.1.1 and v.1.2). In Tunisia, the Tunis region scored best in terms of infant and children mortality rates and other demographic indicators, while the South and Centre West regions scored worst. In Morocco, the Tensift, South and Centre North regions were the least advantageous in terms of some health and demographic indicators described in Section V.1, while the Centre and Centre South regions had better indicators. In Algeria, the High Plateau and South regions were the least fortunate regions in terms of the same indicators, while the Sahel regions (West, Centre, and East) seemed to be in a better position.

Nuptiality patterns were far from identical in the three countries, however, there were some shared elements. Marriage was almost universal in the three countries, although the prevalence of marriage was slightly lower in Algeria (see Table v.7.1). Morocco in 1992 had the lowest median age at first marriage for women 25-49, 18.8 years, followed by Algeria, 19.9 years, then Tunisia, 21.1 years. Both Algeria and Morocco had the same polygyny rates and consanguinity rates. On the other hand, the proportion of all women who marry at younger ages, younger than 16, was clearly higher in Morocco than the other two countries, 13 percent compares to 8 percent in Algeria and 4 percent in Tunisia. While the proportion of women who marry relatively later, 25 years or more, out of all women was higher, but not dramatically higher, in Tunisia, 7 percent against 4 percent in Algeria and 5 percent in Morocco. Morocco had the highest levels of first marriage dissolution as well as remarriage afterwards. One fifth of Moroccan women had their first marriage dissolved compared to 14 percent in Algeria and only 7 percent in Tunisia. Out of the women who had their first marriage dissolved 65 percent remarried in Morocco, 59 percent in Algeria and only 44 percent in Tunisia. On the other hand, Tunisia had the highest prevalence of consanguineous marriages, 37 percent compares to 26 percent in Algeria and 22 percent in Morocco. The majority of spouses in the three countries were either both non-educated or the husbands were more educated than the wives. Even in Tunisia where education levels of both the husbands and wives are higher, the prevalence

of more educated husbands is higher than that of both with the same education. This implies that it is more preferable for women to marry husbands with higher educational levels than themselves irrespective of their level of education.

It is observed that the three countries, as most of the Arab countries, perceive marriage as an important and essential event for women's life and should not be delayed too much. However, Tunisian women tend to marry at older ages than in the other two countries, especially Morocco. The results suggests that the norms of marriage in Morocco seem to include a preference for adolescent marriage and to be more accepting of divorce and remarriage than in the other two countries, while marriages between relatives are more preferable in Tunisia.

Table v.7.1 presents variations in different marriage elements according to region of residence in the three Maghreb countries. In Algeria, the High Plateau West and South regions had the highest prevalence of early marriage, less than 16 years, and the lowest of late marriage, 25 years or more. The same regions also had significantly higher prevalence of consanguineous marriages. Prevalence of marriage, which is the percentage of women 40-44 never married, was lowest in the Sahel East and High Plateau East regions, and the prevalence of late marriages was relatively higher in the same two regions. The last two regions as well as the High Plateau West region have significantly lower prevalence of marriage dissolution and the Sahel East region has the lowest percentage of women remarried. At the same time, the Sahel East region also records the lowest prevalence of early marriages, 2.4 percent, and highest median age at first marriage, 22.3. It worth mentioning that the same region had the lowest fertility rates and was one of the best regions in Algeria in terms of demographic and health indicators (see Section V.1.4).

In Morocco, the Eastern region had clear distinguished marriage elements. This region was characterised by the lowest prevalence of marriage, lowest proportion of early marriage, and women in this region were nearly 3 times more likely to be in polygynous unions and 1.4 more times to be in consanguineous unions than women in the North West region. At the same time, the Eastern region is characterised by relatively low infant and under five mortality rates, and high percentage of women 15-49 with any education when compared to other regions in Morocco (see Table v.1.2). The higher prevalence of

educated women and the better child health profile in the Eastern region may point to a higher level of enlightenment among women living in this region and explains the observed low prevalence of early marriages. However, the link between the demographic indicators of this region and the higher prevalence of polygynous and consanguineous unions is not easily observed. Such observations can be linked to a different set of marriage norms that applies in this region due to, for example, the population characteristics of this region. The Centre North region shared the observation of higher polygynous marriages, yet it was characterised by high marriage prevalence and low prevalence of late marriage.

In Tunisia, Tunis the Capital had the lowest prevalence of early marriage and highest prevalence of late marriage, 2.6 percent and 9.4 percent respectively, and highest median age at first marriage, 22.5. However, despite the relatively later timing of marriage in Tunis, marriage was universal where nearly all women 40-44 were ever married at time of survey. Women living in Tunis were significantly less likely to be in consanguineous marriages than those living in other regions. This follows with the observation that Tunis the Capital is the most advantageous region in Tunisia in terms of education and health. On the other hand, the South region had the lowest prevalence of late marriage, lowest median age at first marriage, 19.9, and women were significantly more likely to experience dissolution and to be in consanguineous unions.

Table v.7.1 Some marriage indicators for the three Maghreb countries according to region

Country and Region	% ever-married at age 40-44	% of all women married at age <16	% of all women married at age 25+	Median age at first marriage 25-49	% with first marriage dissolved	Differentials in marriage dissolution RR	% remarried after 1st marriage dissolved	% Currently in polygyny	Differentials in % polygyny OR	% Consanguinity	Differentials In Cons. OR	Median age-gap
Algeria	**92.5**	**7.6**	**4.3**	**19.1**	**14.2**		**58.7**	**5.2**		**25.6**		**6.0**
Sahel West	97.4	6.3	4.9	20.0	17.2	1.00ʳ	52.3	5.1	1.00ʳ	21.0	1.00ʳ	6.0
Sahel Centre	92.4	8.5	3.3	19.9	13.8	0.74*	63.5	4.2	0.8	19.3	0.8	6.0
Sahel East	88.0	2.4	6.1	22.3	6.5	0.33*	43.3	3.0	0.52^	25.8	1.48*	5.0
High Plateau East	88.1	7.9	5.1	20.3	12.1	0.67*	63.4	6.6	1.3	29.5	1.53*	6.0
High Plateau West	90.9	11.7	3.3	18.2	17.3	1.06	59.9	5.5	1.2	32.1	1.62*	7.0
South	95.7	10.5	2.7	19.0	15.9	0.94	53.1	7.3	1.6	44.5	2.93*	7.0
Morocco	**97.4**	**12.6**	**5.3**	**18.8**	**20.0**		**64.6**	**5.1**		**21.8**		**na**
North West	98.6	14.4	5.7	18.9	18.9	nsd	64.5	3.3	1.00ʳ	21.5	1.00ʳ	na
Centre North	98.7	13.7	3.5	18.3	17.9	nsd	65.3	8.0	2.38*	26.4	1.2	na
Centre	96.2	12.1	6.4	19.1	22.0	nsd	64.7	5.5	1.64^	19.8	0.9	na
Eastern	90.5	8.5	5.1	19.1	15.8	nsd	56.4	8.5	2.81*	28.7	1.37^	na
Centre South	100.0	14.7	4.4	18.2	25.5	nsd	59.3	4.8	1.5	17.2	0.73^	na
Tensift	98.9	12.4	4.7	18.6	16.2	nsd	69.0	3.5	0.9	18.6	0.71^	na
South	97.7	10.5	5.4	19.3	20.9	nsd	68.5	4.6	1.4	25.0	1.1	na
Tunisia	**96.6**	**4.2**	**7.2**	**21.1**	**6.7**		**43.8**	**na**	**na**	**36.6**		**na**
Tunis	99.1	2.6	9.4	22.5	5.6	1.00ʳ	39.5	na	na	22.0	1.00ʳ	na
North East	94.5	2.9	8.7	21.7	4.9	0.98	27.8	na	na	32.1	1.32^	na
North West	93.1	4.9	6.5	20.8	7.1	1.53	50.0	na	na	40.0	1.47*	na
Centre West	98.2	6.0	5.7	20.1	6.4	1.42	53.8	na	na	48.7	1.83*	na
Centre East (Sahel)	96.4	3.5	7.5	21.5	5.7	1.13	40.9	na	na	31.2	1.35^	na
South	99.0	6.5	4.3	19.9	11.2	2.11*	46.6	na	na	48.2	2.44*	na

ʳ Reference category. * significant on p-value<0.005, ^ significant on p-value<0.05, na not available, nsd not significantly different.

V.8 APPENDIX

Table v.8.1 Percentage of women who had ended their first marriage in divorce or widowhood and the percentage of those remarried following divorce or widowhood according to some background characteristics, Morocco DHS 1992

Background characteristics	First marriage dissolved				Percent remarried after			Total number of ever-married women
	Divorce	Widow-hood	Total*	No. exposed to remarriage	Divorce	Widow-hood	Total	
Current age								
15-19	7.1	0.7	7.8	21	--	--	--	269
20-24	11.7	0.9	13.2	98	39.1	--	40.6	741
25-29	14.5	1.2	16.5	159	55.7	--	57.7	964
30-34	14.3	3.1	17.9	211	72.2	(48.6)	68.6	1181
35-39	17.0	4.1	21.9	240	83.3	(33.3)	74.4	1094
40-44	17.8	6.8	24.8	180	82.9	(42.9)	71.9	725
45-49	18.6	13.4	32.8	218	84.7	31.5	63.1	665
Region								
North west	14.0	4.6	18.9	216	72.5	39.6	64.5	1143
Centre north	13.6	3.7	17.9	125	73.7	(30.8)	65.3	700
Centre	16.7	4.3	22.0	360	67.5	49.3	64.7	1640
Eastern	11.5	4.3	15.8	55	(62.5)	--	56.4	349
Centre south	19.3	6.0	25.5	123	68.8	(27.6)	59.3	482
Tensift	12.6	3.4	16.2	100	75.6	--	69.0	617
South	16.1	3.7	20.9	148	75.4	(30.8)	68.5	708
Type of place of residence								
Urban	16.7	4.5	21.7	550	60.6	35.1	55.8	2539
Rural	13.9	4.1	18.6	577	80.9	43.3	73.0	3100
Childhood place of residence								
Capital, LC	14.6	3.4	18.6	111	49.4	--	46.3	597
City or Town	17.0	3.8	21.1	240	53.1	(32.6)	49.8	1139
Country city	14.7	4.5	19.9	771	80.0	42.0	71.7	3882
Duration since 1st marriage								
0-4	9.6	0.5	10.4	109	19.8	--	22.6	1049
5-9	13.6	1.3	15.3	150	52.6	--	53.0	979
10-14	14.1	2.2	16.9	173	72.9	--	69.0	1024
15-19	16.6	5.6	22.8	212	83.8	48.1	75.4	929
20+	19.4	8.9	29.1	483	87.3	34.5	71.2	1658
Education level								
No education	15.8	4.9	21.2	915	78.2	42.9	70.5	4310
Primary	14.4	3.0	17.7	130	41.5	(13.6)	37.7	734
Secondary+	11.4	1.5	13.8	82	42.6	--	40.3	595
Age at first marriage								
Less than 16	24.4	8.3	33.6	392	87.7	44.3	77.2	1166
16-19	12.6	3.6	16.8	417	68.5	38.2	62.6	2484
20-21	10.9	3.1	14.3	124	60.6	(22.2)	52.8	866
22-24	12.2	2.7	15.5	98	55.8	--	56.3	631
25 or more	17.1	2.2	19.5	96	47.6	--	45.3	492
Total	15.1	4.3	20.0	1127	70.8	39.4	64.6	5639

* Includes those missing reason for first marriage dissolution. – Omitted because less than 25 cases in denominator. ( ) 25-50 cases in denominator.

Table v.8.2 Distribution of all women age 15-49 by whether married or not and age at first marriage according to some background characteristics, Algeria PAPCHILD 1993

Background Characteristics	Never Married	Married at age					Number of women
		<16	16-19	20-21	22-24	25+	
Place of residence							
Urban	52.9	5.1	20.4	8.7	7.6	5.3	5120
Rural	45.9	10.4	27.4	7.5	5.8	3.2	4467
Region							
Sahel West	46.8	6.3	26.3	7.8	7.9	4.9	2412
Sahel Centre	53.6	8.5	22.3	7.3	5.0	3.3	2836
Sahel East	55.0	2.4	17.1	8.8	10.5	6.1	1025
High Plateau East	50.2	7.9	21.4	8.5	6.9	5.1	1889
High Plateau West	39.0	11.7	32.5	9.4	4.1	3.3	690
South	44.2	10.5	27.1	9.0	6.5	2.7	735
Education level							
No education	34.9	11.9	33.0	9.5	6.5	4.1	5846
Primary	70.7	0.9	11.6	6.2	6.8	3.9	2515
Secondary +	76.6	0.2	3.7	5.3	8.1	6.0	1208
Current age							
15-19	96.6	0.5	2.9				2339
20-24	72.6	1.6	16.3	6.6	3.0		1950
25-29	38.8	4.2	25.2	12.8	14.0	4.9	1612
30-34	18.4	8.2	37.7	13.4	12.7	9.6	1193
35-39	11.3	13.0	40.4	13.3	11.2	10.8	1070
40-44	7.5	24.5	41.1	10.5	7.8	8.6	841
45-49	9.1	29.2	43.0	9.3	4.0	5.5	582
Total	49.6	7.6	23.7	8.1	6.7	4.3	9587

Table v.8.3 Distribution of all women age 15-49 by whether married or not and age at first marriage according to some background characteristics, Morocco DHS 1992

Background Characteristics	Never married	Married at age					Number of women
		<16	16-19	20-21	22-24	25+	
Type of place of residence							
Urban	44.2	10.2	21.9	8.9	7.8	7.0	4550
Rural	34.1	14.9	31.6	9.8	5.9	3.7	4706
Region							
North west	35.9	14.4	27.0	9.3	7.7	5.7	1783
Centre north	40.9	13.7	27.6	8.7	5.7	3.5	1185
Centre	42.4	12.1	23.5	8.9	6.8	6.4	2845
Eastern	43.1	8.5	28.7	9.5	5.2	5.1	613
Centre south	41.5	14.7	25.2	8.4	5.8	4.4	824
Tensift	35.7	12.4	31.5	9.6	6.2	4.7	959
South	32.4	10.5	30.7	12.0	9.0	5.4	1047
Childhood place of residence							
Capital, LC, Abroad	56.5	4.5	14.7	7.3	7.4	9.6	1372
City or Town	47.0	8.8	19.2	9.1	8.6	7.3	2148
Country city	31.8	15.9	32.7	10.0	6.0	3.6	5688
Education level							
No education	26.5	17.1	34.5	10.9	6.7	4.2	5866
Primary	53.0	8.3	20.4	7.4	5.5	5.4	1561
Secondary+	67.5	1.7	7.8	6.0	8.4	8.7	1829
Age at survey							
15-19	87.5	4.1	8.5				2145
20-24	56.0	6.3	25.1	9.4	3.2		1686
25-29	34.3	9.3	27.1	12.4	11.1	5.8	1468
30-34	13.9	15.4	35.0	13.3	11.4	11.0	1372
35-39	6.7	18.3	37.9	13.7	10.7	12.7	1173
40-44	2.6	23.9	40.2	14.9	9.7	8.7	744
45-49	0.4	34.9	38.6	10.6	9.1	6.3	668
Total	39.1	12.6	26.8	9.4	6.8	5.3	9256

Table v.8.4 Distribution of all women age 15-49 by whether married or not and age at first marriage according to some background characteristics, Tunisia DHS 1988

Background Characteristics	Never married	Married at age					Number of women
		<16	16-19	20-21	22-24	25+	
Place of residence							
Urban	44.9	3.5	19.8	12.0	11.5	8.4	4454
Rural	42.7	5.4	26.7	11.8	7.9	5.4	3006
Region							
Tunis	47.0	2.6	17.7	11.5	11.8	9.4	1456
North East	42.0	2.9	19.4	13.9	13.1	8.7	1256
North West	46.0	4.9	22.4	11.8	8.4	6.5	1188
Centre West	40.3	6.0	28.8	10.9	8.3	5.7	1015
Centre East (Sahel)	44.3	3.5	20.9	12.3	11.3	7.5	1394
South	43.2	6.5	29.0	10.9	6.1	4.3	1151
Education							
None	29.7	8.0	31.4	13.8	9.2	7.9	3368
Primary	48.0	1.6	20.5	11.5	11.4	6.9	2499
Secondary+	68.0	0.3	7.4	8.5	9.6	6.1	1593
Current age							
15-19	96.3	0.5	3.2				1738
20-24	66.2	1.0	18.6	9.7	4.5		1602
25-29	29.6	2.0	25.5	16.3	19.6	6.9	1218
30-34	11.8	2.8	32.7	20.5	17.6	14.6	1074
35-39	4.5	7.9	35.7	18.4	16.1	17.3	793
40-44	3.4	16.8	37.1	14.9	10.8	16.9	590
45-49	1.1	17.1	37.8	18.2	12.8	13.0	445
Total	44.0	4.2	22.6	11.9	10.0	7.2	7460

Table v.8.5 Distribution of ever-married women according to inter-spousal educational-gap and some background characteristics, Algeria PAPCHILD 1993

Background characteristics	Inter spousal education gap				Number of women	Percentage with any education	
	Wife more educated	Both non-educated	Both same education	Husband more educated		Respondent	Husband
Place of residence							
Urban	9.9	50.6	16.3	23.1	2322	31.8	42.1
Rural	5.1	75.7	4.2	15.0	2356	10.5	20.3
Region							
Sahel West	9.5	56.5	13.4	20.7	1234	26.5	36.3
Sahel Centre	8.4	60.0	11.1	20.5	1269	21.9	34.6
Sahel East	7.1	63.2	9.3	20.4	451	21.0	30.8
High Plateau East	5.1	74.1	6.0	14.8	927	14.4	22.1
High Plateau West	4.7	65.3	10.6	19.3	404	18.8	30.5
South	7.6	67.4	7.6	17.3	393	19.5	25.7
Worked before marriage							
No	5.9	67.8	7.4	19.0	4258	15.9	27.5
Yes	24.0	17.6	38.6	19.8	420	74.1	67.8
Age at survey							
15-19	12.2	45.9	10.8	31.1	74	27.5	45.9
20-24	14.3	44.7	15.1	25.8	523	34.1	44.5
25-29	12.1	47.0	16.3	24.7	952	34.5	44.8
30-34	6.1	62.7	11.0	20.1	944	20.4	32.7
35-39	6.0	66.9	7.4	19.7	922	16.0	28.2
40-44	4.0	77.5	7.0	11.5	748	12.5	19.1
45-49	1.7	88.5	2.1	7.6	515	5.3	9.9
Years since first marriage							
0-4	18.1	35.6	20.9	25.4	780	45.7	53.4
5-9	10.2	49.4	15.7	24.7	822	31.2	42.3
10-14	6.7	61.1	10.4	21.8	872	21.5	33.4
15-19	4.8	70.0	6.0	19.3	756	11.9	26.0
20+	2.2	83.8	3.4	10.6	1448	6.7	14.0
Age at first marriage							
Less than 16	1.4	88.4	1.6	8.7	704	3.6	10.4
16-19	5.1	67.6	7.0	20.3	2197	14.8	27.9
20-21	10.3	51.9	14.2	23.6	754	28.2	39.7
22-24	15.1	43.8	19.6	21.5	623	41.5	46.4
25 or more	14.3	47.3	21.0	17.5	400	41.4	45.5
Total	7.5	63.3	10.2	19.0	4678	21.1	31.1

Table v.8.6 Distribution of ever-married women according to inter-spousal educational-gap and some background characteristics, Morocco DHS 1992

Background Characteristics	Inter spousal education gap				Number of women	Percentage with any education	
	Wife more educated	Both non-educated	Both same education	Husband more educated		Respondent	Husband
Region							
North west	6.1	50.6	17.5	25.7	1134	29.5	44.7
Centre north	6.1	61.0	9.2	23.8	694	19.3	34.1
Centre	7.3	56.3	15.3	21.1	1624	28.0	37.9
Eastern	7.3	46.0	12.6	34.0	341	25.2	46.9
Centre south	7.1	45.7	16.4	30.8	477	27.8	48.0
Tensift	3.7	73.0	6.7	16.6	615	13.0	23.9
South	3.4	63.1	7.3	26.1	700	13.5	34.3
Type of place of residence							
Urban	9.7	34.4	25.0	30.9	2512	43.2	58.2
Rural	3.0	75.3	3.1	18.6	3073	7.5	21.9
Childhood place of residence							
Capital, LC, Abroad	16.7	19.4	39.6	24.3	588	68.5	68.2
City or Town	12.0	23.6	33.2	31.2	1124	56.5	67.5
Country city	2.6	72.3	3.0	22.1	3852	7.0	25.1
Age at survey							
15-19	10.1	47.8	11.2	31.0	268	29.0	43.7
20-24	7.6	49.8	16.1	26.5	733	29.3	44.3
25-29	5.7	49.8	14.3	30.2	951	24.8	46.4
30-34	5.0	51.1	15.4	28.4	1175	25.9	45.1
35-39	6.4	55.2	14.2	24.2	1081	24.8	39.0
40-44	6.4	67.2	9.8	16.6	716	20.0	27.0
45-49	3.6	80.5	5.4	10.4	661	11.0	16.2
Age at first marriage							
Less than 16	4.6	66.6	5.3	23.4	1160	13.8	29.2
16-19	5.1	61.6	8.9	24.4	2459	18.5	34.0
20-21	6.8	53.6	15.7	23.9	853	26.0	41.0
22-24	6.1	43.2	25.2	25.5	627	37.9	53.0
25 or more	12.3	33.5	30.9	23.3	486	49.6	57.2
Years since first marriage							
0-4	11.3	40.2	21.8	26.7	1036	39.7	51.8
5-9	5.6	47.2	18.1	29.1	972	30.0	48.4
10-14	4.6	54.5	12.7	28.1	1014	21.2	41.6
15-19	4.2	58.4	10.4	27.0	922	19.2	38.1
20+	4.8	73.9	5.9	15.5	1641	13.5	21.6
Total	6.0	56.9	13.0	24.1	5585	23.6	38.2

Table v.8.7 Distribution of ever-married women according to inter-spousal educational-gap and some background characteristics, Tunisia DHS 1988

Background Characteristics	Inter spousal education gap				Number of women	Percentage with any education	
	Wife more educated	Both non-educated	Both same education	Husband more educated		Responde nt	Husband
Region							
Tunis	9.9	18.7	36.2	35.2	744	63.0	74.9
North-East	8.7	30.6	27.2	33.5	702	48.1	63.0
North-West	5.9	50.6	12.4	31.1	623	23.8	45.3
Centre West	4.3	42.0	15.8	37.9	581	25.4	54.0
Centre East	8.3	23.5	28.6	39.6	745	50.1	72.8
South	8.0	39.7	25.1	27.2	637	42.7	54.3
Type of place of residence							
Urban	9.6	21.2	34.4	34.9	2375	59.5	73.2
Rural	5.0	50.6	11.2	33.2	1657	20.1	44.9
Childhood place of residence							
City	11.3	8.8	47.2	32.7	761	78.2	85.7
Town	10.7	19.1	33.7	36.5	1138	61.5	74.5
Countryside	4.8	49.6	12.1	33.5	2133	21.3	46.1
Worked before marriage							
No	6.9	38.3	19.9	35.0	3270	36.5	56.6
Yes	11.3	11.8	45.9	31.0	762	73.0	82.8
Age at marriage							
Less than 16	3.9	68.6	8.1	19.4	309	14.5	27.5
16-19	8.1	38.7	19.6	33.6	1633	37.4	55.3
20-21	6.8	28.0	29.7	35.6	855	47.7	67.1
22-24	9.4	20.5	34.6	35.5	722	58.7	75.1
25 or more	7.6	21.4	29.8	41.1	513	50.4	73.9
Parent in consanguineous union							
Yes	7.2	37.8	22.3	32.7	1943	37.5	56.9
No	8.2	29.0	27.2	35.6	2089	48.7	65.9
Age at survey							
15-24	7.8	13.4	33.4	45.4	590	56.5	83.9
25-29	8.6	11.0	35.9	44.4	824	61.4	83.5
30-34	10.6	26.1	26.2	37.0	922	50.1	66.4
35-39	8.3	43.8	23.7	24.2	726	37.7	49.4
40-44	5.3	57.1	12.1	25.5	545	23.2	38.3
45-49	1.4	70.8	6.8	20.9	425	10.9	28.2
Years since first marriage							
0-4	8.2	11.0	37.2	43.6	838	62.2	85.3
5-9	8.7	14.3	32.1	44.9	862	57.9	81.1
10-14	10.2	26.9	27.0	35.9	803	47.2	64.8
15-19	9.0	43.5	20.8	26.6	586	35.6	49.5
20+	3.3	69.5	7.8	19.4	943	14.8	27.5
Total	7.7	33.3	24.9	34.2	4032	43.3	61.6

Table v.8.8 Results of the first conditional Cox regression model to study the probability of women to get married at age less than 16 years against age 16 or more or never married among all women, Algeria PAPCHILD 1993

Variables significantly associated at the last step of the first model	Sig.	Relative Risk	95.0% CI for RR	
			Lower	Upper
Age at time of survey	0.000			
15-19	0.000	*0.06**	0.03	0.11
20-24	0.000	*0.16**	0.11	0.24
25-29	0.000	*0.40**	0.30	0.53
30-34	0.001	*0.66**	0.51	0.85
35-39ʳ	-	1.00	-	-
40-44	0.000	*2.08**	1.68	2.58
45-49	0.000	*2.40**	1.92	3.01
Rural vs. urban	0.000	*1.63**	1.39	1.91
Region	0.000			
Sahel Westʳ	-	1.00	-	-
Sahel Centre	0.021	*1.27^*	1.04	1.57
Sahel East	0.000	*0.36**	0.24	0.56
High Plateau East	0.110	1.20	0.96	1.51
High Plateau West	0.000	*2.01**	1.53	2.63
South	0.000	*1.91**	1.45	2.51
Respondent's education	0.000			
Noneʳ	-	1.00	-	-
Primary	0.000	*0.22**	0.14	0.33
Secondary+	0.000	*0.06**	0.02	0.19

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

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Table v.8.9 Results of the second conditional Cox regression models to study the probability of women to get married at age 16-19 years against age 20 or more or never married among all women, Algeria PAPCHILD 1993

Variables significantly associated at last step of the second model	Sig.	Relative Risk	95.0% CI for RR	
			Lower	Upper
Age at survey	0.000			
16-19	0.000	*0.18**	0.14	0.23
20-24	0.000	*0.34**	0.29	0.39
25-29	0.000	*0.56**	0.49	0.65
30-34	0.054	0.88	0.77	1.00
35-39 r	-	1.00	-	-
40-44	0.000	*1.36**	1.18	1.57
45-49	0.000	*1.54**	1.32	1.80
Rural vs. urban	0.000	*1.37**	1.26	1.50
Region	0.000			
Sahel West r	-	1.00	-	-
Sahel Centre	0.018	*0.87^*	0.78	0.98
Sahel East	0.000	*0.49**	0.42	0.58
High Plateau East	0.000	*0.72**	0.64	0.82
High Plateau West	0.000	*1.49**	1.28	1.73
South	0.006	*1.25^*	1.07	1.47
Respondent's education	0.000			
None r	-	1.00	-	-
Primary	0.000	*0.50**	0.44	0.57
Secondary+	0.000	*0.12**	0.09	0.17

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.10 Results of third conditional Cox regression model to study the probability of women to get married at age 20-21 years against age 22 or more or never married among all women, Algeria PAPCHILD 1993

Variables significantly associated at last step of the third model	Sig.	Relative Risk	95.0% CI for RR	
			Lower	Upper
Age at survey	0.000			
20-24	0.000	*0.35**	0.27	0.45
25-29	0.000	*0.62**	0.50	0.77
30-34	0.180	0.86	0.68	1.07
35-39ʳ	-	1.00	-	-
40-44	0.370	1.13	0.86	1.48
45-49	0.011	*1.51^*	1.10	2.07
Rural vs. urban	0.040	*1.17^*	1.01	1.37
Region	0.000			
Sahel Westʳ	-	1.00	-	-
Sahel Centre	0.896	0.99	0.81	1.20
Sahel East	0.015	*0.73^*	0.57	0.94
High Plateau East	0.815	0.97	0.79	1.20
High Plateau West	0.000	*1.71**	1.29	2.28
South	0.001	*1.64**	1.23	2.17
Respondent's education	0.000			
Noneʳ	-	1.00	-	-
Primary	0.000	*0.70**	0.58	0.84
Secondary+	0.000	*0.38**	0.29	0.50

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

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Table v.8.11 Results of the fourth conditional Cox regression model to study the probability of women to get married at age 22-24 years against age 25 or more or never married among all women, Algeria PAPCHILD 1993

Variables significantly associated at last step of the fourth model	Sig.	Relative Risk	95.0% CI for RR	
			Lower	Upper
Age at survey	0.000			
22-24	0.000	*0.35**	0.27	0.45
25-29	0.000	*0.63**	0.50	0.79
30-34	0.560	0.93	0.73	1.18
35-39 r	-	1.00	-	-
40-44	0.755	1.05	0.78	1.42
45-49	0.284	0.78	0.50	1.22
Rural vs. urban	0.000	*1.51**	1.27	1.79
Region	0.000			
Sahel West r	-	1.00	-	-
Sahel Centre	0.000	*0.56**	0.45	0.69
Sahel East	0.512	0.92	0.73	1.17
High Plateau East	0.075	0.81	0.65	1.02
High Plateau West	0.381	0.84	0.56	1.25
South	0.069	1.34	0.98	1.84

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.12 Results of the fifth conditional Cox regression model to study the probability of women to get married at age 25 years or more against never married among all women, Algeria PAPCHILD 1993

Variables significantly associated at last step of the fifth model	Sig.	Relative Risk	95.0% CI for RR	
			Lower	Upper
Age at survey	0.000			
25-29	0.000	*0.48**	0.35	0.65
30-34	0.017	*0.72^*	0.56	0.94
35-39[r]	-	1.00	-	-
40-44	0.341	1.16	0.86	1.57
45-49	0.708	0.92	0.61	1.40
Rural vs. urban	0.000	*1.54**	1.23	1.93
Region	0.000			
Sahel West[r]	-	1.00	-	-
Sahel Centre	0.000	*0.51**	0.38	0.67
Sahel East	0.436	0.88	0.65	1.21
High Plateau East	0.876	1.02	0.78	1.34
High Plateau West	0.882	1.03	0.66	1.62
South	0.323	1.27	0.79	2.06
Respondents' education	0.001			
None[r]	-	1.00	-	-
Primary	0.001	*1.52**	1.18	1.95
Secondary+	0.002	*1.56**	1.17	2.07

*p-value <0.005, ^p-value<0.05, r Reference category.

Table v.8.13 Results of the first conditional Cox regression model to study the probability of women to get married at age less than 16 years against age 16 or more or never married among all women, Morocco DHS 1992

Variables significantly associated at last step of the first model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
15-19	0.000	*0.28**	0.21	0.36
20-24	0.000	*0.38**	0.30	0.48
25-29	0.000	*0.53**	0.43	0.66
30-34	0.091	0.85	0.70	1.03
35-39ʳ	-	1.00	-	-
40-44	0.025	*1.26^*	1.03	1.53
45-49	0.000	*1.89**	1.57	2.28
Region	0.000			
North Westʳ	-	1.00	-	-
Centre north	0.267	0.89	0.73	1.09
Centre	0.766	0.98	0.83	1.15
Eastern	0.000	*0.57**	0.42	0.77
Centre south	0.628	1.06	0.85	1.31
Tensift	0.003	*0.72**	0.58	0.89
South	0.000	*0.61**	0.48	0.76
Respondent's education	0.000			
Noneʳ	-	1.00	-	-
Primary	0.002	*0.73**	0.59	0.89
Secondary +	0.000	*0.17**	0.12	0.25
Childhood residence	0.000			
Capital, LC, Abroad	0.000	*0.43**	0.32	0.58
City or Town	0.088	0.85	0.70	1.02
Countrysideʳ	-	1.00	-	-

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.14 Results of the second conditional Cox regression models to study the probability of women to get married at age 16-19 years against age 20 or more or never married among all women, Morocco DHS 1992

Variables significantly associated at last step of the second model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
16-19	0.000	*0.66**	0.55	0.79
20-24	0.000	*0.58**	0.51	0.67
25-29	0.000	*0.64**	0.56	0.73
30-34	0.114	0.90	0.79	1.03
35-39[r]	-	1.00	-	-
40-44	0.176	1.11	0.96	1.28
45-49	0.015	*1.21^*	1.04	1.41
Respondent's education	0.000			
None[r]	-	1.00	-	-
Primary	0.000	*0.71**	0.62	0.81
Secondary +	0.000	*0.26**	0.22	0.32
Childhood residence	0.000			
Capital, LC, Abroad	0.000	*0.56**	0.47	0.67
City or Town	0.000	*0.73**	0.64	0.83
Countryside[r]	-	1.00	-	-

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.15 Results of third conditional Cox regression model to study the probability of women to get married at age 20-21 years against age 22 or more or never married among all women, Morocco DHS 1992

Variables significantly associated at last step of the third model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
20-24	0.000	*0.59**	0.48	0.74
25-29	0.000	*0.62**	0.50	0.76
30-34	0.233	0.88	0.71	1.09
35-39[r]	-	1.00	-	-
40-44	0.043	*1.29^*	1.01	1.64
45-49	0.578	1.08	0.82	1.44
Respondent's education	0.000			
None[r]	-	1.00	-	-
Primary	0.006	*0.73^*	0.58	0.91
Secondary +	0.000	*0.45**	0.35	0.58
Childhood residence	0.000			
Capital, LC, Abroad	0.000	*0.55**	0.41	0.73
City or Town	0.019	*0.77^*	0.62	0.96
Countryside[r]	-	1.00	-	-

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.16 Results of the fourth conditional Cox regression model to study the probability of women to get married at age 22-24 years against age 25 or more or never married among all women, Morocco DHS 1991

Variables significantly associated at last step of the fourth model	Sig.	Relative Risk	95% CI for RR Lower	Upper
Age at survey	0.000			
22-24	0.002	*0.60^*	0.43	0.83
25-29	0.000	*0.56**	0.45	0.71
30-34	0.267	0.87	0.69	1.11
35-39[r]	-	1.00	-	-
40-44	0.069	1.31	0.98	1.76
45-49	0.001	*1.67**	1.22	2.27
Region	0.007			
North West[r]	-	1.00	-	-
Centre north	0.200	0.82	0.61	1.11
Centre	0.070	0.81	0.64	1.02
Eastern	0.012	*0.61^*	0.41	0.90
Centre south	0.190	0.80	0.57	1.12
Tensift	0.372	0.87	0.64	1.18
South	0.154	1.22	0.93	1.60
Childhood residence	0.000			
Capital, LC, Abroad	0.000	*0.54**	0.39	0.73
City or Town	0.164	0.84	0.65	1.08
Countryside[r]	-	1.00	-	-

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.17 Results of the fifth conditional Cox regression model to study the probability of women to get married at age 25 years or more against never married among all women, Morocco DHS 1992

Variables significantly associated at last step of the fifth model	Sig.	Relative Risk	95% CI for RR Lower	Upper
Age at survey	0.000			
25-29	0.000	*0.60**	0.45	0.79
30-34	0.011	*0.74^*	0.59	0.93
35-39ʳ	-	1.00	-	-
40-44	0.047	*1.35^*	1.00	1.82
45-49	0.000	*2.45**	1.72	3.50
Region	0.001			
North Westʳ	-	1.00	-	-
Centre north	0.035	*0.67^*	0.46	0.97
Centre	0.174	0.84	0.65	1.08
Eastern	0.076	0.69	0.46	1.04
Centre south	0.678	0.92	0.62	1.36
Tensift	0.940	1.01	0.71	1.46
South	0.011	*1.55^*	1.11	2.18
Respondent's education	0.003			
Noneʳ	-	1.00	-	-
Primary	0.569	0.92	0.68	1.23
Secondary +	0.013	*1.39^*	1.07	1.81

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

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Table v.8.18 Results of the first conditional Cox regression model to study the probability of women to get married at age less than 16 years against age 16 or more or never married among all women, Tunisia DHS 1988

Variables significantly associated at last step of the first model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
15-19	0.000	*0.10**	0.05	0.20
20-24	0.000	*0.16**	0.09	0.28
25-29	0.000	*0.30**	0.18	0.48
30-34	0.000	*0.39**	0.25	0.60
35-39ʳ	-	1.00	-	-
40-44	0.000	*1.95**	1.42	2.68
45-49	0.001	*1.82**	1.30	2.55
Region	0.001			
Tunisʳ	-	1.00	-	-
North East	0.367	0.81	0.51	1.29
North West	0.308	1.25	0.81	1.94
Centre West	0.030	*1.62^*	1.05	2.51
Centre East (Sahel)	0.710	1.08	0.70	1.67
South	0.006	*1.76^*	1.18	2.62
Respondent's education	0.000			
Noneʳ	-	1.00	-	-
Primary	0.000	*0.46**	0.32	0.65
Secondary+	0.000	*0.11**	0.05	0.28

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

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Table v.8.19 Results of the second conditional Cox regression models to study the probability of women to get married at age 16-19 years against age 20 or more or never married among all women, Tunisia DHS 1988

Variables significantly associated at last step of the second model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
16-19	0.000	*0.19**	0.14	0.26
20-24	0.000	*0.49**	0.42	0.58
25-29	0.000	*0.65**	0.55	0.76
30-34	0.061	0.86	0.73	1.01
35-39[r]	-	1.00	-	-
40-44	0.080	1.17	0.98	1.40
45-49	0.433	1.08	0.89	1.31
Region	0.000			
Tunis[r]	-	1.00	-	-
North East	0.128	0.87	0.73	1.04
North West	0.604	0.95	0.79	1.15
Centre West	0.004	*1.31**	1.09	1.58
Centre East (Sahel)	0.843	1.02	0.86	1.21
South	0.000	*1.60**	1.36	1.89
Rural vs. Urban	0.001	*1.22**	1.09	1.37
Respondent's education	0.000			
None[r]	-	1.00	-	-
Primary	0.001	*0.81**	0.72	0.92
Secondary+	0.000	*0.35**	0.29	0.43

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.20 Results of third conditional Cox regression model to study the probability of women to get married at age 20-21 years against age 22 or more or never married among all women, Tunisia DHS 1988

Variables significantly associated at last step of the third model	Sig.	Relative Risk	95% CI for RR Lower	95% CI for RR Upper
Age at survey	0.000			
20-24	0.000	*0.40**	0.32	0.51
25-29	0.000	*0.68**	0.54	0.84
30-34	0.825	0.98	0.79	1.20
35-39[r]	-	1.00	-	-
40-44	0.846	0.97	0.75	1.27
45-49	0.183	1.21	0.91	1.59
Rural vs. urban	0.030	*1.20^*	1.02	1.41
Respondent's education	0.019			
None[r]	-	1.00	-	-
Primary	0.181	0.89	0.76	1.05
Secondary+	0.005	*0.73^*	0.59	0.91

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.21 Results of the fourth conditional Cox regression model to study the probability of women to get married at age 22-24 years against age 25 or more or never married among all women, Tunisia DHS 1988

Variables significantly associated at last step of the fourth model	Sig.	Relative Risk	95% CI for RR Lower	95% CI for RR Upper
Age at survey	0.000			
22-24	0.000	*0.37**	0.28	0.50
25-29	0.043	*0.80^*	0.64	0.99
30-34	0.561	0.93	0.75	1.17
35-39[r]	-	1.00	-	-
40-44	0.247	0.84	0.62	1.13
45-49	0.365	1.16	0.84	1.59

r Reference category. * significant on p-value<0.005. ^ significant on p-value<0.05.

Table v.8.22 Results of the fifth conditional Cox regression model to study the probability of women to get married at age 25 years or more against never married among all women, Tunisia DHS 1988

Variables significantly associated at last step of the fifth model	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Age at survey	0.000			
25-29	0.000	*0.47**	0.35	0.62
30-34	0.003	*0.71**	0.56	0.89
35-39ʳ	-	1.00	-	-
40-44	0.778	1.04	0.80	1.35
45-49	0.060	1.35	0.99	1.85

r Reference category. * significant on p-value<0.005.

CHAPTER VI : MARRIAGE PATTERNS IN EGYPT

VI.1 BACKGROUND

VI.1.1 Geography and Population

Egypt is located in the north-eastern corner of the African continent. It is bounded by the Mediterranean in the north, by Sudan in the south, by the Red Sea and Gulf of Aqaba in the east, and by Libya in the west. The total area of Egypt is around one million square kilometres, but only 6 percent of this area is inhabited (CAPMAS, 1996).

Map vi.1.1 Egypt Regional

Egypt

The population of Egypt was estimated to be 60,236,000 (excluding persons living abroad) in January 1996. The majority of the population is densely distributed around the River Nile, which flows from the south to the north of the country. Youth population (15-24) in Egypt was 18.6 percent in 1995, and median age of population was 21.1 in the same year (UN 1997).

URBAN GOVERNORATES	LOWER EGYPT	UPPER EGYPT	FRONTIER GOVERNORATES
1 Cairo	5 Damietta	14 Giza	22 New Valley
2 Alexandria	6 Dakahlia	15 Beni Suef	23 Matrouh
3 Port Said	7 Sharkia	16 Fayoum	24 North Sinai
4 Suez	8 Kalyubia	17 Menya	25 South Sinai
	9 Kafr El-Sheikh	18 Assiut	26 Red Sea
	10 Gharbia	19 Souhag	
	11 Menoufia	20 Qena	
	12 Behera	21 Aswan	
	13 Ismailia		

Administratively, Egypt is divided into 26 governorates, see map vi.1.1. The four Urban Governorates have no rural population. Each of the other 22 governorates is subdivided into urban and rural areas. The population is distributed rather unevenly across the major administrative divisions. Around one fifth of the population live in the Urban Governorates, 43
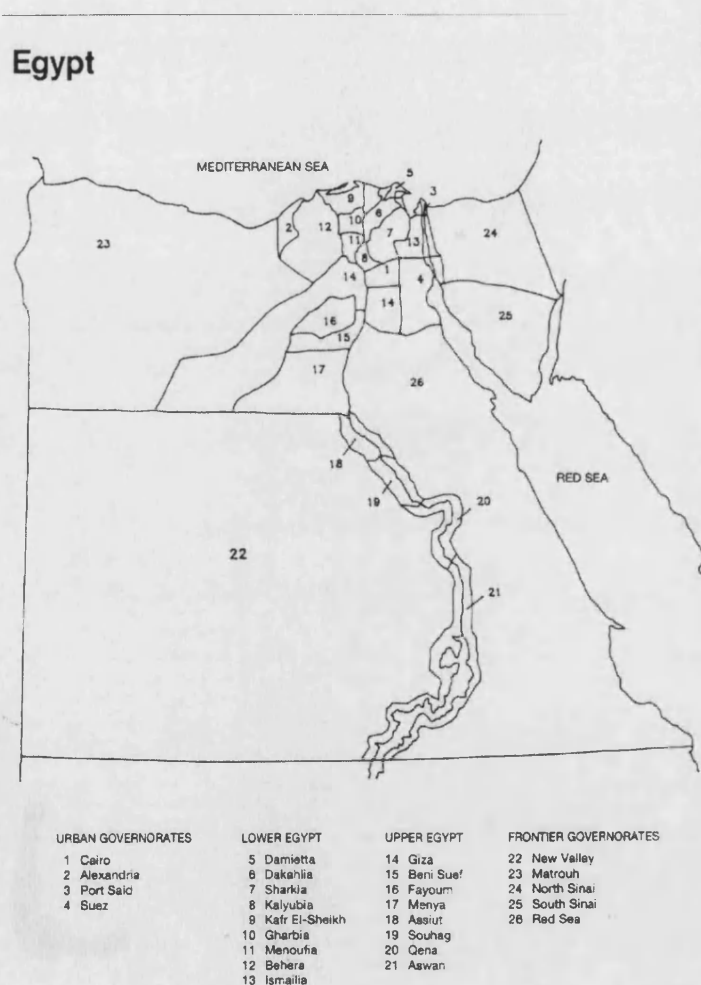
percent live in Lower Egypt, and 35 percent in Upper Egypt. Only one percent of the population live in the Frontier Governorates.

Egypt has experienced a rapid rate of urbanization since the 1930's. The percentage of urban population increased from 28 percent in 1937 to 44 percent in 1995 (CAPMAS, 1995). Much of the inhabited area in Egypt is densely settled: the population density for the whole country was estimated in 1996 to exceed 1,000 persons per square kilometre of inhabited area (CAPMAS, 1996). This figure varies sharply between governorates. For example, in Cairo the population density exceeds 33,000 persons per square kilometre.

The majority of the population are Muslims with around 5 percent Coptic Christians. However, the percentages of Christians are much higher in some regions. For example, the proportion Christian is 11 percent in Urban Upper Egypt while it is less than 1 percent in Rural Lower Egypt. In some governorates, for example in Menya in Upper Egypt, one third of the population are Christians.

VI.1.2 Regional Variations in Development indices

Egypt scored 0.613 out of one in the Human Development Index (HDI) in 1995. This index is based on life expectancy at birth, literacy rate, and GNP per capita and accounts for mortality decline and over all social and economic development (UNDP, 1995). Egypt in 1990 was found to follow six out of major international legal instruments related to human rights, (UN, 1990b). The variations in human development indices according to region in Egypt are striking. Upper Egypt, and especially rural areas, had a much lower development profile than the rest of the country. For example, the data presented in table vi.1.1 shows that around 34 percent of the population in Upper Egypt are poor compared to only 16 percent in Urban Governorates region and 17 percent in Lower Egypt. The same table shows that 32 percent of the poor of Egypt live in the Upper Egypt Rural region.

Not only does the Upper Egypt Rural region have the highest percentage of poor people in Egypt, it also scores relatively much lower than the other regions, even other rural areas, on many human development indices. For example, only 6 percent of the population 25 or more had at least secondary education in 1986 in Upper Egypt Rural, compared to 10 percent in Lower Egypt Rural and 29 percent in Urban Governorates regions.

Table vi.1.1 Percentage of poor and ultra poor in Egypt in 1995/96 by region

Region	Percent poor in 1995/96	Percent ultra poor in 1995/96	Relative share of poor	Total population in '000 in 1995/96
Urban Governorates	16.0	5.2	13.4	11,236
Lower Egypt Urban	21.7	6.7	11.2	6,612
Lower Egypt Rural	15.4	3.4	25.1	18,433
Upper Egypt Urban	35.0	13.4	16.8	6,372
Upper Egypt Rural	33.7	11.9	31.8	14,519
Total	22.9	7.4	100.0	57,172

Source: Nassef and Osman 1996.

Table vi.1.2, shows that the Upper Egypt Rural region scores the worst in terms of socio-economic, demographic, and health indicators relative to other regions in Egypt. Moreover, Upper Egypt Rural region has the highest fertility and under five mortality rates, 5.2 and 142.8 respectively.

Table vi.1.2 Some health and demographic indices in Egypt by region

Demographic and health indices	Region					Total
	UG	LEU	LER	UEU	UER	Percentage
10+ literate 1996[1]	76.4	73.4	56.6	70.2	43.7	61.4
Households with access to piped water 1995[1]	99.0	98.2	79.8	90.7	55.8	83.3
Households with access to sanitation 1995[1]	98.9	97.7	81.1	93.1	57.1	84.3
Ever-married women 15-49 with any education 95[2]	54.9	55.6	27.7	50.1	14.2	33.6
Females 15-49 who live in households with electricity 1995[2]	99.3	99.3	95.6	97.8	87.0	95.5
Female 15+ on labour 1995[1]	18.4	24.7	24.8	23.2	20.9	22.5
Under five mortality 1995[2]	56.9	50.3	89.6	90.3	142.8	95.9
Total Fertility Rate 1995[2]	2.8	2.7	3.4	4.7	5.2	3.6
Children 12-23 months with 3 DPT vaccinations 1995[2]	88.9	93.1	81.9	86.8	75.6	83.0

Source: 1 Nassef and Osman 1996. 2 El-Zanaty et al 1995.. UG Urban Governorates. LEU Lower Egypt Urban. LER Lower Egypt Rural. UEU Upper Egypt Urban. UER Upper Egypt Rural.

Urban areas in general, and Urban Governorates in particular, have a much better socio-economic and demographic profile than rural areas in Egypt. For example, while the proportion of ever-married women 15-49 who had any education in 1995 was 50 percent or more in all urban areas, it was 28 percent or less in rural areas and only 14 percent in Upper Egypt Rural.

VI.1.3 Socio-Economic Conditions of Women in Egypt

Despite the fact that Egypt introduced public education for girls in the mid nineteenth century, female illiteracy in Egypt is among the highest in the Middle East. For example, in 1994 the illiteracy rate in Egypt was as high as 61 percent for females aged 15 years or more while it was 35 percent among males in the same age group (UNESCO, 1996). Various indicators of female educational status clearly reveal the vulnerability of women as a result of poor educational levels. Although the proportion of girls in primary education increased from 38 percent in 1972/73 to 44.2 percent in 1985/86 it had increased only to 46.2 percent in 1994/95. Females in higher education tend to enter traditionally female fields such as humanities, the social sciences, education and medicine, which is reflected on their occupations in the labour market. Expanding education led to more women being active in the formal sector. Middle class educated and employed women are all prone to more progressive social changes (Nassef and Osman, 1996).

A significant proportion of female work in Egypt is unpaid and is not taken into consideration in the national income accounts. Work, especially for poor women, is not regarded as a source of empowerment but rather as a source of income for their families. Moreover, in many cases work over-burdens the women. According to the Egypt Human Development Report 1996, Egyptian women in the labour market suffer from discrimination as well as role conflict due to social expectations with regard to their household responsibilities. The question of whether work for females is a source of empowerment or not has been tackled in several studies. A field study in the Gwaber Village in Lower Egypt indicated that the work of relatively poor women did not entail any empowerment in their position in the family (Nasser, 1995).

VI.1.4 Family Formation in Egypt

Marriage and childbearing are very important elements of the life cycle in Egypt. The idea of remaining single by choice is not accepted almost by all Egyptian men and women (Rugh, 1984 and 1997, and Hoodfar 1997). It is through marriage and childbearing that achievements are recognized, especially for women. Moreover, the cultural and religious structure of the society does not accept any sexual activity and parenthood outside marriage.

Marriage in Egypt is more of a process than an event. The gap between the initiation of marriage and the union of the couple may take several years. Typically, the process starts

with an agreement between the two families and the initiation of the proposed offer (*Kera't El Fat'ha)* then the engagement celebration. Following this, the two families start preparing the necessary material needs for the marriage then the marriage contract is signed (*Katb El Kitab)*, however this doesn't guarantee the beginning of the union. Usually there is some time between signing the contract and the wedding celebration that announces the start of the marriage union (*El Dokhla)*.

Marriage in Egypt is usually not viewed as a partnership between individuals but rather as an association between two families. Families usually play the major part in the marriage process starting from choosing the partner to the tiniest details of the marriage arrangements such as the wedding and choosing the furniture.

VI.2 DATA AND VARIABLES DESCRIPTION

The aim of the current research is to study the profile and determinants of different nuptiality elements in Egypt. The proposed framework is used in trying to understand the effect of different prior variables on marriage elements.

Chapter IV showed that both Egypt DHS 1992 and 1995 data sets fall in the acceptable range of age and age at first marriage reporting quality and that PAPCHILD 1991 has, in general, a poorer data quality than the previous two. Moreover, the Egypt DHS 1995 includes an additional section that had been answered by a sub-sample of over 7000 ever-married women, which included several questions studying, in addition to others, partner selection processes as well as other women's autonomy and attitude indices. Thus, the Egypt Demographic and Health Survey 1995 (DHS) has been chosen to be used in this research. The Egypt DHS 1995 survey interviewed 15,567 households; within these households 14,779 eligible women, ever married and aged 15-49, completed the individual questionnaire. Out of the ever-married women aged 15-49 at time of survey, 7,223 women completed the women's status questionnaire.

Based on the analytical framework, which is described in Chapter II, a set of micro-variables is selected in order to study their relations with different nuptiality elements in this chapter. Year of marriage is used to reflect the event position in time regardless of the age of woman at marriage or the survey. Thus, variations in age at marriage according to year of marriage will show the period effects on the prevalence of marriage at certain ages.

Type of place of residence, urban versus rural, has a significant association with many demographic phenomena. The differentials in marriage patterns are expected to be large between urban and rural settings. This is mainly due to the different kinship structures, including the prevalence and value of the extended family, in the two settings. However, rural-urban migration can diffuse many of the rural norms into the city, in fact, rural migrants usually carry with them their kinship values (Abu-Lughod, 1961 and Atran, 1985). Also, in Egypt, rapid urbanization and the quick, and in many cases unplanned, expansion of cities made it sometimes not easy to separate urban and rural residence. Therefore, even though some areas are registered as rural that is not a guarantee that they actually reflect typical rural residence.

Childhood place of residence may reflect some of the woman's background characteristics; the culture and norms of this place can play a part in her and her family's marriage decisions.

Region in Egypt is a very important variable since, as described in Section VI.1.2, large variations in socio-economic and demographic characteristics exists according to region. However, due to the relatively small number of women, especially ever-married women, living in the Frontier Governorates, the analysis of different marriage elements in this region will be omitted.

The majority of Egyptians are Moslems constituting around 95 percent of the population. As mentioned before the distribution of Christians is not consistent across the country. However, the importance of family formation and the prohibition of sexual activities outside marriage are emphasised equally by the two religions. One of the main factors that may explain any differential in the marriage patterns between the two groups is the availability of partners. Since the Christians are not as large in number as the Muslims, the choice pool of Christian men and women is smaller than that for Muslims.

Respondents' education may expand or reduce the number of marriage options seriously considered. Moreover, schooling facilitates cultural changes, as it tends to diffuse Western middle class values (Basu, 1999). However, it should be kept in mind that most women in the region do not stay in school long enough so that schooling competes with marriage. In many cases in Egypt, higher education is sought when marriage cannot be organised due to any other reason. Thus education is expected to affect marriage timing through disrupting traditional power relationships and identifying new options. The

effect of education on marriage elements can be significant because of the new values and autonomy it provides to women.

Having ever worked for cash before marriage can affect marriage elements mainly through the empowerment of women. Theoretically, working for cash may increase women's autonomy and empowerment and therefore increase their ability to break traditional norms and resist family interference in their decisions. However, especially in the context of Egypt, type and frequency of work as well as control over the earnings can critically affect the relationship between working experience and empowerment.

Whether the respondent had been circumcised or not may reflect the woman's family's attitude towards following or opposing the traditions. This variable may not be a very good indicator of lack of acceptance of traditional practices as the majority of sampled ever-married women, 95 percent, had been circumcised. Thus this variable may not provide enough number of women in the category of not being circumcised. However, those who had not been circumcised may be a very selective group and need to be studied.

VI.3 PREVALENCE OF MARRIAGE

Table vi.3.1 shows the distribution of all women aged 15-49 at the time of survey by current marital status. The table shows that marriage is nearly universal in Egypt. Only 5 percent of women age 30-34 had never been married; This proportion is only 1 percent when women age 45-49 are considered. Only 1.5 percent of all women were divorced at the time of survey; which shows that either divorce is a rare event or the remarriage rates are high or both. More than double the previous percentage, 3.5 percent reported being widowed at the time of survey.

Table vi.3.2 shows that nearly 95 percent of women aged 30-49 have been ever married by the young age of 30. The variation comes only in timing of marriage rather than the prevalence of marriage it self. This result is well supported in the literature; women and men in Egypt regard marriage as an essential part of their life cycle. The Egyptian society values family highly, and usually women's academic or career achievements are not very well appreciated if she has not succeeded in forming a family.

Table vi.3.1 Percent distribution of women by current marital status, according to age at time of survey, Egypt DHS 1995

Age	Marital status					Number of women
	Never married	Married	Widowed	Divorced	Total	
15-19	85.7	14.1	0.0	0.2	100.0	4700
20-24	41.9	56.7	0.3	1.1	100.0	3677
25-29	13.4	84.3	0.6	1.7	100.0	3174
30-34	5.1	89.8	2.8	2.3	100.0	2745
35-39	2.6	90.5	4.9	2.0	100.0	2642
40-44	1.9	86.5	8.9	2.6	100.0	2099
45-49	1.2	80.4	16.2	2.2	100.0	2007
Total	29.8	65.1	3.5	1.5	100.0	21045

Table vi.3.2 shows some clear differentials in the proportion of women married by age 25 according to almost all the variables included. However, these variations diminish when the proportion of women married by age 30 is considered which supports the conclusion that most women will catch up and get married almost regardless to their background variables.

In total, 84 percent of all women aged 30-49 had been married by age 25. Ever working for cash and accomplishing at least secondary education have the largest association with low probability of getting married by age 25. But differentials according to place of residence (whether urban against rural or region) are also notable. The proportion of all women who had married by age 25 drops from 90 percent among women who had never worked for cash to 64 percent among those who had ever worked for cash. The proportion of women married by age 25 drops steadily as women's educational level increase. It drops by nearly 2 percent as women acquire some primary education then by a further 4 percent as women complete their primary education and acquire some secondary then it drops by 27 percent among women who had completed at least their secondary education.

When considering place of residence we find that 92 percent of women who live in rural areas had been married by age 25 compared to 77 percent among those who live in urban areas with a difference of 15 percent.

The proportion of women who are married by exact age 30 is lowest (91 percent) among those who live in Urban Governorates and highest (97 percent) among those who live in Rural Upper Egypt.

Although more women are married by age 30, however, the differences among these proportions are still clear according to education and ever working for cash. Around 90 percent of women who had worked for cash or who completed their secondary education have

Table vi.3.2 Proportions of women aged 30-49 who had first married by exact ages 25 and 30 according to selected background characteristics, Egypt DHS 1995			
Background Variables	Proportion First Married by Age		Number of Women
	25	30	
Region			
Urban Governorates	74.3	91.2	2408
Lower Egypt Urban	77.7	93.4	1339
Lower Egypt Rural	90.8	96.2	2717
Upper Egypt Urban	81.6	95.2	1001
Upper Egypt Rural	93.4	97.1	1944
Type of place of residence			
Urban	76.9	92.8	4805
Rural	91.9	96.7	4690
Ever worked for cash			
No	89.9	95.9	7403
Yes	64.0	90.8	2091
Education level			
No education	92.2	96.0	4413
Some primary	90.5	95.6	2053
Some secondary	86.1	96.4	1058
Secondary +	59.3	90.0	1973
Total	84.2	94.4	9494

been married by age 30 compared to 96 percent of those who had not worked for cash or have no education.

VI.4 TIMING OF MARRIAGE

From the previous section we conclude that marriage in Egypt is nearly universal and the question is not whether people get married or not, but when they get married. Alterations of timing of marriage can be an indicator of changes occurring in nuptiality patterns in the country.

Using life table techniques the percentage of women who were first married by exact ages and the median age at first marriage were calculated. Table vi.4.1 presents the percentages of all women who were first married by different ages as well as the median age at first marriage by age cohorts. The table suggests that larger proportions of older cohorts, especially women age 45-49, first married at younger ages such as

15, 16 and 18. However, it should be considered that women in this particular age group are the most ones prone to have recall errors when reporting their age at first marriage. For a more reliable picture we can compare between the three middle age groups, 25-29, 30-34 and 35-39. When we compare between these three cohorts we find almost no differences between the 30-34 and 35-39 age-cohorts in the proportions ever married at all exact ages considered and also between the median ages at first marriage. However, we notice that the proportions married by each exact age among the age-cohort 25-29 are consistently lower than that among the two older age-cohorts by 2 to 5 percent. This shows that the younger cohorts are experiencing more delays of their marriages when compared to women age 30 or more.

Table vi.4.1 Percentage of women who were first married by exact age 15, 16, 18, 21, 23, and 25, and median age at first marriage, according to current age, Egypt DHS 1995

Current age	Percentage of women who were first married by exact age						Percentage who had never married	Number of women	Median age at first marriage
	15	16	18	21	23	25			
15-19	2.3	4.7	11.5	N/A	N/A	N/A	85.7	4,700	a
20-24	7.8	12.9	26.8	48.4	55.9	N/A	41.9	3,677	21.3
25-29	10.5	17.5	33.7	55.5	69.4	80.3	13.4	3,174	20.2
30-34	12.1	21.8	38.7	60.4	71.6	82.2	5.1	2,745	19.4
35-39	12.1	20.7	38.3	64.7	76.1	84.0	2.6	2,642	19.2
40-44	12.8	20.5	39.4	63.5	74.7	83.4	1.9	2,099	19.0
45-49	20.5	31.9	50.1	71.7	80.6	86.5	1.2	2,007	18.0
20-49	12.0	19.9	36.5	59.2	69.9	77.4	13.7	16,345	19.7
25-49	13.2	21.9	39.3	62.4	73.9	83.0	5.5	12,668	19.3

N/A = Not applicable
a Less than 50 percent of the women in the age group x to $x+4$ were first married by age x

Table vi.4.2 presents the median age at first marriage among women 25-49 by current age and according to some background characteristics. The MAFM has not dramatically increased according to women's age-cohort, it almost remained around 19 years for all age-groups except for women age 25-29 it was one year older, 20 years. Table vi.4.2 shows a clear difference in the median age at first marriage according to both education and working for cash before marriage for all age-cohorts. For example, among women age 25-29 there is a difference in median age at first marriage of around five years between women with no education and women who completed at least their secondary education. Women (25-49) who never worked for cash before their marriage tend to marry on average five years earlier than those who

had. The gap in the median age at first marriage according to working for cash or not decreases from six years to around four years when we move from older to younger age cohorts.

Table vi.4.2 Median age at first marriage among women age 20-49 years, by current age and selected background characteristics, Egypt DHS 1995

Background characteristics	Age at time of survey					Women age 20-49	Women age 25-49
	25-29	30-34	35-39	40-44	45-49		
Place of residence							
Urban	22.0	21.7	20.9	20.7	19.0	a	21.0
Rural	18.7	17.7	17.8	17.8	17.2	18.3	17.9
Region							
Urban Governorates	22.6	22.0	21.7	20.8	19.3	a	21.5
Lower Egypt Urban	22.4	21.1	21.1	21.7	19.4	a	21.2
Lower Egypt Rural	19.7	18.6	18.2	18.2	17.6	19.1	18.6
Upper Egypt Urban	20.4	21.5	19.6	19.2	17.6	a	19.8
Upper Egypt Rural	17.3	16.6	17.1	17.0	16.7	17.2	16.9
Education							
No education	17.5	17.3	17.8	17.7	17.0	17.5	17.5
Some primary	18.3	18.0	18.3	18.6	17.6	18.2	18.2
Primary thru sec.	18.9	19.2	19.7	20.0	19.3	19.6	19.4
Comp. Sec. +	23.1	23.6	24.1	24.8	24.8	a	23.7
Working for cash							
Ever	23.6	22.7	23.2	23.8	23.8	a	23.3
Never	19.4	18.6	18.5	18.4	17.6	19.0	18.5
Total	20.2	19.4	19.2	19.0	18.0	19.7	19.3

a Less than 50 percent of the women in the age group x to $x+4$ were first married by age x

The median age at first marriage is lower in rural areas than urban areas by at least two years among all age cohorts. Upper Rural Egypt in particular has the lowest median age at first marriage among all age cohorts when compared to the other regions and even other rural regions. For example, the median age at first marriage in rural Upper Egypt for the age cohort 25-29 is 17.3 years compared to 19.7 for women at the same age group but who live in rural Lower Egypt.

It is well documented that people in rural areas tend to marry earlier than those in urban areas. Some of the explanations are that the costs of marriage in rural areas are much less than that in urban areas as well as the greater prevalence of extended families in rural areas. Also, in most rural areas in Egypt marriage means extra work force for the husband's family including the new wife and the expected off springs, thus rural families encourage early marriage. However, the big variation in median

age at first marriage between two rural areas in Egypt needs more investigation to explain it.

The high poverty rates and low health profile in Upper Rural Egypt when compared to other regions in Egypt is obvious. For example, the percentage of households with access to piped water in 1996 in Upper Rural Egypt is 56 percent compared to 80 percent in Lower rural Egypt. The same variations can be seen in many other health and development indices, for example percentage of literate females aged 10 or more is 28 percent in Upper rural Egypt compared to 41 percent in Lower rural Egypt. In fact urban and rural areas in Upper Egypt have the highest prevalence rate of poverty, as 35 percent and 34 percent respectively of the population are poor and 13 percent and 12 percent respectively are ultra-poor (see Table vi.1.1).

It is clear that Upper Egypt in particular has a lower development profile than any other region in the country, however, the relation between such profile and low age at marriage is not as clear. It could be simply because the traditions of early marriage are more established in this region and could not be easily changed due to the lack of exposure to new ideas and life styles. However, it is more difficult to explain the relationship between poverty and age at marriage as one can assume that the more financial hardship it is the more difficult to get married. Yet the marriage norms can solve this dilemma, where the groom is not expected to get a new household for the new bride and the assets required are very low.

The women's status questionnaire in Egypt DHS 1995 provides some more detailed information about marriage expenses and arrangements. Table vi.4.3 shows that more than 70 percent of rural women, who had completed the women status module, had started their marriage in their husbands' households. Unexpectedly, this proportion is slightly higher in rural areas in Lower Egypt than in Upper Egypt.

Only one quarter of women living in rural areas had started their marital life in their own household. This table suggests that there are no clear differences between rural areas in Upper or Lower Egypt in terms of arranging the marital household. Thus the suggestion that the norms in Rural Upper Egypt may facilitate the marriage arrangement by allowing the new couple to move in with the groom's family more than other rural areas in Egypt is not valid.

Table vi.4.3 Distribution of ever-married women, who completed the women status questionnaire, by place of living at beginning of their first marriage according to region, Egypt DHS 1995 WS module

Region	Living at beginning of marriage				Number of women
	Wife's family	Husband's family	Someone else	On their own	
Urban Governorates	3.0	28.8	0.2	68.0	1623
Lower Egypt Urban	2.2	35.6	0.7	61.6	922
Lower Egypt Rural	1.0	73.1	0.4	25.5	2122
Upper Egypt Urban	2.2	43.4	0.1	54.3	724
Upper Egypt Rural	2.9	71.0	0.1	26.0	1667
Frontier Governorates	4.6	53.8	0.0	41.5	65
Total	2.2	54.5	0.3	43.1	7123

Another question in the women's-status module asks the woman to report all the costs of their first engagement and marriage that they or their families had to spend. Table vi.4.4 presents these costs in Egyptian pounds by region. It should be noted that in Egypt the groom and his family provide most of the marriage requirements and the bride's share of expenses is much lower than that of the groom's. However, the amount of expenses spent by the bride is likely to be associated to that spent by the groom in a positive direction. Around 41 percent of ever-married women report that they did not know the costs that their families had paid. As expected, women in rural areas reported the lowest marriage expenses with no big difference between those living in Upper or Lower Egypt (29 percent and 24 percent respectively).

Table vi.4.4 Wife's family marriage and engagement expenses in Egyptian pounds by region for ever-married women who completed the woman-status module, Egypt DHS 1995 WS module

Region	Wife's family expenses				Number of women
	<500	500-2999	3000 or more	Do not know	
Urban Governorates	11.7	19.5	21.0	47.8	1623
Lower Egypt Urban	17.7	25.1	21.7	35.6	922
Lower Egypt Rural	23.7	28.9	16.9	30.5	2122
Upper Egypt Urban	15.1	21.0	17.3	46.6	723
Upper Egypt Rural	28.7	20.7	4.1	46.5	1667
Frontier Governorates	20.0	23.1	16.9	40.0	65
Total	20.4	23.5	15.5	40.6	7122

From tables vi.4.3 and vi.4.4 we see that both living arrangements after marriage and marriage expenses do not vary much between rural areas in Upper and Lower Egypt. One of the explanations for the very young age at marriage in rural Upper Egypt when

compared even to other rural areas in Lower Egypt can be the variation in the proportion of women with higher education or those who had been exposed to new ideas across the regions. Diffusion theory can be used in an attempt to explain these differentials; it suggests that women living in an environment with new ideas can change the tradition more easily even if they are themselves are not educated or had not been exposed directly to these new ideas. Table vi.4.5 presents the distribution of all ever-married women by their education level and working before marriage according to region. Table vi.4.5 shows that the proportion of ever-married women with secondary or more education is the lowest among women living in rural Upper Egypt, same as the proportion of those who had worked for cash before marriage.

Table vi.4.5 Distribution of ever-married women by highest education level and working for cash before marriage according to region, Egypt DHS 1995

Region	Highest education level			Working for cash before marriage	Total number of women
	No/some primary	Primary/ some preparatory	Secondary or more		
Urban Governorates	45.1	19.4	35.5	29.8	3312
Lower Egypt Urban	44.5	16.6	39.0	23.7	1830
Lower Egypt Rural	72.2	9.8	17.9	20.1	4377
Upper Egypt Urban	49.9	15.5	34.6	24.0	1582
Upper Egypt Rural	85.8	8.0	6.2	11.5	3543
Frontier Governorates	54.8	14.1	31.1	22.2	135
Total	63.4	13.0	23.6	21.1	14779

The results suggest that the relatively very low age at marriage observed in rural areas in Upper Egypt can be mostly due to the effect of macro-level characteristics of this region in particular. The low development profile and high poverty rates combined with low proportion of women who had been exposed to new ideas and opinions seem to form an environment that can sustain the norms of very early marriages much more easily than in any other region in Egypt.

VI.4.1 Differentials in the Probability of Getting Married at Younger and Older Ages

One of the ways to study differentials of getting married at different ages is to try to focus on those who marry relatively early and relatively late. Knowing the characteristics of those two groups of women and the association between such

characteristics and the probability of being married relatively very early or very late can provide a picture of determinants of age at first marriage.

Unlike the Maghreb surveys the Egypt DHS 1995 individual questionnaire included many background characteristics of the women, such as religion, ever been circumcised, childhood place of residence, and work experience in addition to others. These information were not available in the household questionnaire. Thus, using the all women sample would result in restricting the explanatory variables set to a very limited number of variables. To make most use of the available background variables in the DHS 1995 individual questionnaire it was decided to use the ever-married sample to study differentials in early and late marriages. In this way we can test differentials in timing of marriage according to a wider set of background variables rather than being restricted to only few variables. However, the use of ever-married sample can produce selection biases because younger ever-married women 15-24 do not represent the sample of all married women due to the fact that they are a selected group with a different age distribution. To avoid such selection bias, only ever-married women aged 25 or over at time of survey were included in the analysis. We have seen that the median age at first marriage in Egypt for women 25-49 was 19 years old, therefore, we can consider that marriages occurred younger than the age 16 were relatively early marriages and those occurred at age 21 or more were relatively late marriages. However, for enhancing the quality of the results based on the ever married sample, the analysis is restricted to those who had married for the first time by age 25. Such restriction will not result in losing large numbers of women since marriage in Egypt is almost universal and most women were married by age 25, and will allow testing both the probability of getting married younger than age 16 and at age 21 to 24. Therefore, the sub-sample used to examine differentials in early and late marriages included 10,553 ever-married women aged 25-49 at the time of survey who had been married by age 25. By this way we avoid selection biases and also allow examining differentials in timing of marriage according to age cohorts without loosing many important explanatory variables.

Two step-wise forward conditional logistic regression models were constructed. The first model studies possible variables that are associated with the probability of getting married for the first time at ages younger than 16 years old compared to getting married at age 16 or more among the selected sub-sample of ever-married women. The second conditional logistic regression model is to study variables associated with

the probability of getting married at ages 21-25 against getting married at age 16 to 20 on the condition that women were still single at age 16, i.e. excluding those who had married younger than 16 years of age.

The independent variables in the two logistic regression models are: age at time of survey, year of marriage, place of residence, childhood place of residence, region, religion, education, ever working for cash before marriage, and ever been circumcised. The logic behind choosing those variables is described in Section VI.2 and based on the proposed framework in chapter II.

Table vi.4.6 presents the distribution of ever-married women aged 25 or more who had married by age 25 by age at first marriage (dependent variable) according to the explanatory variables. The table shows that less than 2 percent of women included who had married during the period 1986-95 had married before age 16 while 57 percent had married at age 21-25. On the other hand, around 40 percent of those married before 1976 had married before they were 16 years old. Younger women 25-29 have the lowest proportion of getting married before age 16 and the highest one at age 21-25 when compared to other age groups.

Around 33 percent of ever-married women who had lived their childhood in the country-side reported being married at ages less than 16 years old compared to only 14 percent among those who had lived in the Capital or a large city. Women currently living in rural areas reported more being married at age earlier than 16 years old when compared to those living in urban areas. Women living in rural areas in Upper Egypt were, in particularly, more likely to report being married for the first time at age younger than 16 years old (41 percent) when compared to women living in any other area in Egypt, even rural areas in Lower Egypt (27 percent).

The proportion reporting being married younger than 16 nearly halved among ever-married women who had worked for cash before marriage when compared to those who had not (16 percent compared to 29 percent respectively). Women's education level shows a clear relation with the distribution of age at first marriage. For example, the proportion of women married earlier than age 16 drops monotonically from 34 percent among women with no education or some primary to only 2 percent among women who had completed at least their secondary education. The proportion married at age 21-25 shows a positive relationship with level of education. Women with higher education tend to report more being married at age 21-25.

Table vi.4.6 Distribution of ever-married women aged 25 or more and who had married for the first time by age 25 by age at first marriage according to background variables, Egypt DHS 1995

Background variables included in the logistic regression model	Age at first marriage grouped			Number of women
	Less than 16	16-20	21-25	
Year of living together				
86-95	1.9	41.4	56.7	2083
76-85	25.4	51.9	22.7	4351
Before 76	39.6	48.9	11.5	4122
Current age				
25-29	21.7	47.3	31.0	2561
30-34	26.5	46.8	26.6	2265
35-39	24.6	52.1	23.2	2229
40-49	30.6	48.5	20.8	3504
Childhood place of residence				
Capital/ large cite/abroad	13.6	47.4	39.0	1547
City/town	18.8	46.9	34.3	2832
Country side	32.9	49.7	17.3	6170
Type of place of residence				
Urban	18.1	47.6	34.3	4790
Rural	33.2	49.5	17.3	5767
Region				
Urban Governorates	16.2	47.5	36.3	2328
Lower Egypt Urban	16.3	47.4	36.3	1312
Lower Egypt Rural	27.2	51.1	21.7	3269
Upper Egypt Urban	24.1	48.2	27.7	1090
Upper Egypt Rural	41.2	47.3	11.5	2460
Worked for cash before marriage				
No	28.6	50.8	20.6	8649
Yes	16.0	38.7	45.3	1909
Highest education level				
None	33.9	51.4	14.7	7417
Primary	20.1	54.7	25.1	1158
Secondary +	1.7	34.7	63.5	1983
Religion				
Moslem	26.6	48.7	24.7	10012
Christian	20.6	48.3	31.2	545
Ever circumcised				
No	3.5	31.6	64.8	256
Yes	26.9	49.1	24.1	10297
Total	26.3	48.7	25.0	10553

Around 21 percent of Christian women reported being married at age younger than16 and 31 percent at age 21-25, compared to 27 percent and 25 percent respectively among Moslems. The distribution of age at first marriage is clearly different among

women who had ever been circumcised and those who had not. Less than 4 percent of women who had not been circumcised were married younger than 16 years old compared to 27 percent among those who had.

Differentials in the Probability of Getting Married Relatively Early

The first question of interest is which women's characteristics increase their probability of getting married early. In an attempt to answer this question the first logistic regression model as described before was performed. However, current age and year of first marriage were found to be highly correlated and could not be included at the same time in one model. Thus, two models were performed using the same set of independent variables except that in one current age is used while year of marriage is excluded and vice versa. Table vi.4.7 presents the results of the first logistic regression model; only the independent variables that turned to have significant relation with the probability of getting married early are listed.

The results show that all independent variables included in the analysis are significantly related with the dependent variable with, at least, a significance level $p < 0.05$. However, on a significance level of $p < 0.005$, both religion (sig. 0.005) and having been circumcised (sig. 0.029) were not significantly associated with early marriage. Moreover, the significance of the association of childhood place of residence and early marriage lies on the border of $p < 0.005$ (sig. .004). Note that place of residence did not appear in the results because it is redundant when region is included.

Table vi.4.7 shows that women living in Upper Egypt, both in urban and rural areas (OR 1.3 and 1.7 respectively), were more likely to get married before age 16 than those living in rural areas in Lower Egypt (the reference category). Women living in urban areas in Lower Egypt were significantly less likely to marry younger than age 16 when compared to those living in rural Lower Egypt (OR 0.8). The probability of early marriage was not significantly different between women living in Urban Governorates when compared to women living in rural areas in Lower Egypt.

Those who lived their childhood in the capital or a large city or other city or town were significantly less likely to be married very young than those lived in the countryside. Christians are 0.7 times less likely to get married younger than 16 when compared to Moslems in the sample.

Table vi.4.7 Results of the first logistic regression model examining variables affecting the probability of getting married before or at age 16 for ever-married women aged 25 or more and who had married by age 25 including age and excluding year of marriage, Egypt DHS 1995

Variables significantly associated at last step of the analysis	Sig.	Odds Ratio	95% CI for OR	
			Lower	Upper
Childhood place of residence	0.004			
Capital/large city	0.001	*0.72**	0.59	0.88
City/town	0.037	*0.86^*	0.74	0.99
Countryside[r]	-	1.00	-	-
Region	0.000			
Urban Governorates	0.043	*0.84^*	0.71	0.99
Lower Egypt Rural[r]	-	1.00	-	-
Lower Egypt Urban	0.013	*0.78^*	0.64	0.95
Upper Egypt Urban	0.003	*1.34**	1.10	1.62
Upper Egypt Rural	0.000	*1.68**	1.50	1.89
Current age	0.000			
25-29	0.132	1.12	0.97	1.29
30-34	0.001	*1.27**	1.11	1.47
35-39[r]	-	1.00	-	-
40-49	0.000	*1.33**	1.17	1.50
Had not been circumcised	0.029	*0.45^*	0.22	0.92
Worked for cash before marriage	0.000	*0.73**	0.64	0.84
Education level	0.000			
None[r]	-	1.00	-	-
Primary	0.000	*0.61**	0.52	0.72
Secondary +	0.000	*0.05**	0.03	0.07
Christians	0.005	*0.72**	0.57	0.91
Constant	0.000			

[r] Reference category. * Significant on p-value<0.005, ^ significant on p-value<0.05

The results also show that both the younger women (25-34) and older women (40-49) are more likely to get married younger than 16 when compared to the reference category, women age 35-39. This result could be due to not including other independent variables, which can affect the probability under study.

Table vi.4.7 shows that the association between working for cash and marrying at age younger than 16 years is not as strong as that of education, especially acquiring secondary or higher education. Women who did not work for cash before marriage were only 1.4 times more likely to get married younger than 16 when compared to those who did work for cash. On the other hand, women with no education were 20 times more likely to marry that young when compared to those with secondary education or more. There is a lot of debate on the quality of work, especially among

the relatively poor, in Egypt and whether it provides women with the required elements that can empower them and enhance their autonomy or not. This can explain that the association between working for cash and breaking the norms of early marriage is not as strong as one can theoretically expect.

In an attempt to study the change in the probability of getting married younger than 16 years old by calendar period, the last regression model is repeated but year of marriage is included as an independent variable and current age is removed from the analysis. This change did not affect the results for the other variables; however, some of the odds ratios changed. The results of the new model show that the year of marriage is significantly associated with the probability of getting married before age 16 (p=0.000, see Table vi.4.8).

Table vi.4.8 Results of the first logistic regression model examining variables affecting the probability of getting married before or at age 16 for ever-married women aged 25 or more and who had married by age 25, excluding age and including year of marriage as an independent variable, Egypt DHS 1995

Variables significantly associated at last step of the analysis	Sig.	Odds Ratio	95% CI for OR	
			Lower	Upper
Childhood place of residence	0.001			
Capital/large city	0.001	*0.70**	0.57	0.85
City/town	0.011	*0.82^*	0.70	0.96
Countryside[r]	-	1.00	-	-
Region	0.000			
Urban governorates	0.012	*0.80^*	0.67	0.95
Lower Egypt Rural[r]	-	1.00	-	-
Lower Egypt Urban	0.004	*0.74**	0.61	0.91
Upper Egypt Urban	0.014	*1.28^*	1.05	1.57
Upper Egypt Rural	0.000	*1.74**	1.54	1.97
Year of marriage	0.000			
86-95	0.000	*0.08**	0.06	0.12
76-85[r]	-	1.00	-	-
Before 76	0.000	*1.78**	1.62	1.97
Had not been circumcised	0.017	*0.41^*	0.20	0.85
Worked for cash	0.001	*0.77**	0.67	0.90
Education level	0.000			
None[r]	-	1.00	-	-
Primary	0.000	*0.65**	0.55	0.77
Secondary or more	0.000	*0.10**	0.07	0.15
Christians	0.012	*0.73^*	0.58	0.93
Constant	0.000			

[r] Reference category. * Significant on p-value<0.005, ^ significant on p-value<0.05

Ever-married women who had started their marital life during the period 1986-95 were 13 times less likely to get married very young when compared to those who married during the period 1976-85. The same relationship with time holds true for those married longer ago but is not as strong. Women who were married before 1976 were 1.8 times more likely to marry younger than 16 than those married during the reference period 1976-85.

Notice that the strong association between acquiring secondary education and early marriage is reduced when year of marriage is included. The odds ratio for women with secondary education to marry earlier is now 0.10 when compared to women with no education (i.e. doubled from the previous model).

In sum, there was a clear association between time of marriage and the probability of getting married younger than 16 years old. Those married more recently were less likely to marry very young. Women's level of education has a strong negative association with the probability of marrying early, especially when acquiring at least secondary education. Region also shows a strong relation with the probability considered, where women living in rural areas in Upper Egypt appear to be most prone to marry relatively very young.

Differentials in the Probability of Getting Married Relatively Late

In this section the second logistic regression model is performed to study the characteristics of the group of women who tend to marry relatively late. For the same reasons explained in the previous section only women aged 25 and over who were married by age 25 are included in the analysis. Those who had married for the first time at age 21 or more are considered to have married relatively late when compared to the median age at marriage in Egypt. The current logistic regression model examines the probability of getting married at age 21-25 against age 16-20 given that all women included in the analysis were still single by age 16. Again, because of the association between year of marriage and current age, two models are used to study the probability of getting married relatively late. One model includes current age and excludes year of marriage and the opposite in the other model.

Table vi.4.9 shows that all independent variables turned out to be significantly related to the probability of getting married late except religion. However, childhood place of residence is not significantly related to the probability of getting married late at a significance level of $p < 0.005$.

Table vi.4.9 Results of the second logistic regression model examining the probability of getting married at age 21 to 25 years against at age 16-20 for ever-married women aged 25 or more and who had married by age 25, including age and excluding year of marriage, Egypt DHS 1995

Variables significantly associated at last step of analysis	Sig.	Odds Ratio	95% CI for OR	
			Lower	Upper
Childhood place of residence	0.043			
Capital/large city	0.559	1.06	0.87	1.28
City/town	0.020	*1.21^*	1.03	1.42
Countryside ʳ	-	1.00	-	-
Region	0.000			
Urban Governorates	0.013	*1.25^*	1.05	1.50
Lower Egypt Rural ʳ	-	1.00	-	-
Lower Egypt Urban	0.149	1.15	0.95	1.40
Upper Egypt Urban	0.194	0.87	0.70	1.07
Upper Egypt Rural	0.000	*0.74**	0.63	0.87
Had not been circumcised	0.002	*1.60**	1.19	2.16
Worked for cash	0.000	*1.99**	1.76	2.25
Education level	0.000			
None ʳ	-	1.00	-	-
Primary	0.000	*1.37**	1.16	1.61
Secondary or more	0.000	*4.65**	4.09	5.29
Constant	0.000	-	-	-

ʳ Reference category. * Significant on p-value<0.005, ^ significant on p-value<0.05

Regarding region, only women living in both urban governorates and rural Upper Egypt had a probability of marrying relatively late that is significantly different from that of women living in rural Lower Egypt (p=0.013 and 0.000 respectively). Only women living in rural areas in upper Egypt had a significantly lower probability (p<0.005) of marrying relatively late when compared to those living in rural Lower Egypt (OR=0.74).

Not being circumcised, working for cash before marriage and acquiring any level of education all increase the probability of women marrying in the age group 21-25. The highest association is found with completing at least secondary education.

Again the same model is repeated but year of marriage is included and current age is excluded. The results are shown in table vi.4.10.

Table vi.4.10 shows that those who married more recently during the period 86-95 were 2.4 more times likely to marry at the age group 21-25 when compared to those married in the period 76-85. Notice that when year of marriage is included the odds ratios of the association between education and marrying relatively late have declined from 4.7 to 3.1. The two models show the strong association between education and

timing of marriage, where more educated women are more likely to marry later than other women.

Table vi.4.10 Results of the second logistic regression model examining variables affecting the probability of getting married at age 21 to 25 years against at age 16-20 for ever-married women aged 25 or more and who had married by age 25, excluding age and including year of marriage as an independent variable, Egypt DHS 1995

Variables significantly associated at last step of the analysis	Sig.	Odds Ratios	95% CI for OR	
			Lower	Upper
Childhood place of residence	0.018			
Capital/large city	0.340	1.10	0.90	1.34
City/town	0.006	1.26^	1.07	1.48
Countryside[r]	-	1.00	-	-
Region	0.000			
Urban Governorates	0.001	1.35*	1.13	1.62
Lower Egypt Rural[r]	-	1.00	-	-
Lower Egypt Urban	0.011	1.29^	1.06	1.58
Upper Egypt Urban	0.330	0.90	0.72	1.12
Upper Egypt Rural	0.000	0.71*	0.60	0.84
Year of marriage	0.000			
86-95	0.000	2.44*	2.15	2.77
76-85[r]	-	1.00	-	-
Before 76	0.000	0.63*	0.55	0.72
Had not been circumcised	0.000	1.88*	1.39	2.56
Worked for cash before marriage	0.000	1.91*	1.69	2.18
Education level	0.000			
None[r]	-	1.00	-	-
Primary	0.004	1.28*	1.08	1.51
Secondary or more	0.000	3.14*	2.74	3.59
Constant	0.000			

[r] Reference category. *Significant on p-value<0.005, ^ significant on p-value<0.05

Although the differentials in marriage timing according to respondents' education are quite significant, Section VI.3 shows that it is not the same regarding prevalence of marriage. For example, table vi.3.2 shows that 90 percent of women 30-49 with at least secondary education were married by age 30 while the same proportion is 96 percent among non-educated women. Moreover, Egypt DHS 95 data shows that the percentage of celibacy among Egyptian women 30 to 39 is slightly, but not significantly, higher among women with at least secondary education and non-educated women, 5.4 percent and 3.4 percent respectively.

VI.5 MARRIAGE CHARACTERISTICS

VI.5.1 Inter-Spousal Age Gap

The Egypt DHS 1995 individual questionnaire provides information on the age of current, or last, husband of the respondent. To be able to observe any differentials in the inter-spousal age-gap by husbands' characteristics the analysis in this section will be restricted to respondents who had married only once. To avoid recall errors as much as possible a sub-sample of ever-married women who had married for the first time during the 20 years before the survey is used. The sub-sample used provides information on 10,183 ever-married women; out of them 3.1 percent did not provide either the age or the year of birth of current or last husband. Thus, the analysis is performed on the 9862 ever-married women who had married only once and married less than 20 years before the survey and provided the age or year of birth of their current, or last, husband.

Table vi.5.1 provides the distribution of the chosen sub-sample of ever-married women by inter-spousal age gap and median age gap according to some of the respondents' and husbands' background variables. In total, less than 4 percent of the 9,854 women reported being older than their husbands even by one month. On the other hand, 40 percent of women reported that their current, or last, husbands were older than themselves by 5 to 9 years, and nearly one quarter had their husbands older by at least 10 years. It is obvious from the results that the most affecting variable in the inter-spousal age gap is the husbands' age at first marriage. The median age-gap increased monotonically from 2.5 years among women who were married to husbands who were less than 20 years at time of marriage to a huge median of 15.8 years among those who were married to husbands aged 35 or more at time of marriage. The distribution of age-gap between spouses hardly changes by many of the background variables; for example, by current place of residence, religion, and ever been circumcised. Slight differentials in the distribution are observed according to respondents' and husbands' education level. Women, and husbands, with at least secondary education show lower prevalence of a very large inter-spousal age gap, which might be linked to the higher chances of these groups to marry later. However, the percentage of women reporting being older than their husbands changed markedly by whether women had worked for cash before marriage. Respondents who were older when married, and husbands who were younger, reported the wife being older than their husbands more frequently than their counterparts

The distribution of the sub-sample of ever-married women by age gap shows clear differentials according to region. Women living in rural areas in Upper Egypt have the lowest proportion of women reporting being older than their husbands and those being younger by a maximum of two years (2 percent and 7 percent respectively). On the other hand, rural areas in Upper Egypt have the highest proportion of women reporting being younger than their husbands by at least ten years (29 percent).

In Egypt the median inter-spousal age gap is 6.3 years. Almost no differences in the median age gap are observed between Moslem or Christian women, those living in urban or rural areas, and those who had or had not been circumcised.

However, table vi.5.1 shows some differences in the median age gap when the region is considered. Those living in rural areas in Upper Egypt reported the highest median inter-spousal age gap while those living in rural Lower Egypt and Urban Governorates regions reported the lowest gap (7.1 years and 5.9 years respectively). However, the difference in the median age gap according to region was one year or less. The same difference of one year is observed according to childhood place of residence.

The results show that the median age gap between spouses remained almost the same for all periods before the survey. The median age gap between spouses declined steadily from 8 years among women married younger than 17 years old to only 3.3 years among women married at age 25 or more. More pronounced the median inter-spousal age gap increased from 3.1 years among men married at ages 20-24 years to 7.7 years among men married at ages 35 or more.

The differentials of the probability of having different age gaps is studied in Chapter VII using the women's status sample as it provides more background characteristics using a multinomial regression model.

Table vi.5.1 Distribution of ever-married women who had married only once and married less than 20 years before the survey by age-gap between their current (last) spouses and median age-gap according to selected background variables

| Background characteristics | Inter-spousal age-gap | | | | | Number of women | Median age-gap |
| | Wife older | Husband older by | | | | | |
		<2	2-4	5-9	10+		
Year of marriage							
93-95	2.5	9.1	23.4	38.8	26.2	1720	6.7
90-92	4.1	8.4	23.4	42.7	21.3	1612	6.3
87-89	3.5	10.5	23.7	41.3	21.0	1574	6.2
84-86	3.9	9.8	21.5	40.5	24.4	1421	6.4
75-83	3.7	10.2	23.1	37.8	25.1	3535	6.1
Respondent's age at marriage							
Less than 17	0.5	3.9	19.7	42.0	33.8	2577	8.0
17-19	1.3	6.8	19.3	44.9	27.6	2794	7.2
20-21	3.5	10.7	23.6	42.0	20.1	1523	5.9
22-24	4.7	13.7	29.4	38.7	13.6	1686	5.1
25 or more	13.1	21.3	29.1	22.5	14.0	1281	3.3
Husband's age at marriage*							
<20	9.5	27.2	50.3	13.0		787	2.5
20-24	5.3	14.3	31.7	45.7	3.0	2737	4.8
25-29	2.4	7.6	21.1	47.0	21.8	3718	6.9
30-34	2.0	3.6	10.7	39.9	43.8	1805	9.2
35+	0.3	0.5	4.6	12.0	82.6	816	15.8
Respondent's education							
None	3.7	9.3	22.7	37.7	26.7	5370	6.3
Primary	2.5	7.0	19.0	40.7	30.7	1336	7.9
Secondary +	3.7	11.5	25.5	42.9	16.4	3156	5.8
Husband's education*							
None	3.0	7.6	21.5	36.7	31.2	2161	7.0
Primary	3.8	10.0	22.5	38.1	25.5	2611	6.3
Secondary +	3.6	10.5	24.1	41.9	20.0	5080	6.1
Worked for cash							
No	2.8	8.0	21.6	41.0	26.6	7490	6.7
Yes	5.8	15.2	27.7	35.7	15.6	2372	5.1
Region							
Urban Governorates	4.4	10.8	24.3	39.5	21.0	2268	5.9
Lower Egypt Urban	4.2	11.8	21.4	39.7	22.9	1255	6.4
Lower Egypt Rural	4.1	10.0	24.7	38.8	22.4	2736	5.9
Upper Egypt Urban	3.2	10.0	23.3	40.2	23.2	1123	6.2
Upper Egypt Rural	1.9	7.2	20.9	40.8	29.2	2384	7.1
Place of residence							
Urban	4.1	10.8	23.3	39.7	22.1	4709	6.2
Rural	3.1	8.7	22.9	39.8	25.6	5153	6.4
Childhood residence							
Capital/ large city	4.7	11.9	26.4	39.1	17.8	1690	5.6
City/town	3.9	10.3	22.8	40.5	22.5	2773	6.3
Country side	3.0	8.7	22.2	39.4	26.6	5385	6.7
Religion							
Moslem	3.5	9.7	22.8	40.0	24.1	9292	6.3
Christian	4.5	10.5	28.0	35.7	21.3	567	5.6
Ever Circumcised							
No	4.9	10.6	18.4	41.5	24.7	353	6.7
Yes	3.5	9.7	23.2	39.7	23.9	9501	6.3
Total	3.6	9.7	23.0	39.8	23.9	9854	6.3

* Excluding missing cases.

VI.5.2 Inter-spousal Educational Gap

A total of 14,021 ever-married women who had reported their husband's education level were included in the analysis. Table vi.5.2 presents the cross tabulation between wife's and husband's highest educational level. The table shows that the large majority of women reported being married to husbands with at least the same level of their education. However, those with primary or preparatory education were more likely to report being married to husbands with a lower education level than those with secondary education or more. For example, 35 percent of ever-married women who had completed only their preparatory education reported that their current, or last, husbands had a lower education level. On the other hand, only 13 percent of ever-married women with university education or more reported that their husbands had lower education level than themselves.

Table vi.5.2 Distribution of ever-married women by their education level according to their husbands' education level, Egypt DHS 1995

Wife's education	Husband's education					Total number of women*
	None	Primary	Preparatory	Secondary/ intermediate	University or more	
None	52.2	32.0	7.1	7.6	0.9	6023
Primary	23.6	42.6	13.6	17.5	2.5	3419
Preparatory	11.2	23.8	16.1	40.5	8.1	970
Secondary/intermediate	1.9	8.3	6.6	58.7	24.4	2672
University or more	0.4	0.6	0.0	11.8	87.2	937
Total	29.4	27.4	8.7	22.3	12.0	14021

* Excluding those who did not know their husbands' education level.

Table vi.5.3 presents the distribution of ever-married women by inter-spousal education gap according to some background characteristics. In total, 37 percent of ever-married women who had married only once had lower education levels than their husbands. Nearly one quarter of the included ever-married women had no education and were married to husbands with no education, and just above one quarter have the same educational level as their husbands. Only 12 percent reported having higher education levels than their husbands.

Table vi.5.3 Distribution of ever-married women by inter-spousal educational gap according to selected background variables

Background characteristics	Wife's education relative to husband's				Number of women
	More	Equal: no education	Equal: some education	Less	
Year of marriage					
93-95	14.5	9.6	38.1	37.8	1750
90-92	15.2	10.6	38.3	35.9	1659
87-89	12.6	16.6	33.3	37.6	1614
84-86	11.3	17.6	31.9	39.2	1463
Before 84	11.2	30.3	22.5	35.9	7535
Respondent's age at marriage					
Less than 17	11.2	35.4	13.7	39.7	4581
17-19	12.6	21.9	24.8	40.7	4049
20-21	12.5	14.7	37.0	35.8	1955
22-24	13.1	11.1	45.8	30.0	2020
25 or more	13.0	9.5	51.1	26.3	1417
Husband's age at marriage*					
<20	9.1	34.9	14.7	41.3	1450
20-24	10.9	27.1	21.4	40.6	4299
25-29	13.3	16.4	33.6	36.6	5096
30-34	13.5	15.2	38.0	33.3	2421
35+	16.4	32.3	25.4	25.9	1298
Respondent's education					
None	0.0	57.3	0.0	42.7	8728
Primary	28.0	0.0	28.8	43.2	1858
Secondary +	14.7	0.0	67.2	18.1	3434
Husband's education					
None	23.5	76.5	0.0	0.0	4125
Primary	11.9	0.0	38.0	50.1	3847
Secondary +	4.8	0.0	42.0	53.2	6049
Worked for cash					
No	12.0	23.9	24.7	39.4	11062
Yes	13.1	17.3	42.8	26.8	2959
Region					
Urban Governorates	15.0	10.9	39.1	35.0	3167
Lower Egypt Urban	13.8	10.1	41.1	35.0	1758
Lower Egypt Rural	10.8	26.9	24.0	38.4	4155
Upper Egypt Urban	15.1	14.0	36.0	34.8	1504
Upper Egypt Rural	9.5	38.5	14.2	37.8	3310
Place of residence					
Urban	14.6	11.4	38.9	35.1	6509
Rural	10.2	32.1	19.6	38.1	7512
Childhood residence					
Capital/ large city	15.1	6.0	46.2	32.8	2181
City/town	16.0	12.6	37.9	33.5	3890
Country side	9.6	31.9	19.2	39.3	7933
Religion					
Moslem	12.3	22.8	27.9	37.1	13233
Christian	12.3	17.3	40.6	29.8	784
Ever Circumcised					
No	5.8	3.8	69.6	20.8	432
Yes	12.5	23.1	27.2	37.2	13581
Total	12.3	22.5	28.6	36.7	14013

* Excluding missing cases. () based on 25-49 cases.

Table vi.5.3 shows an increasing, but not strong, trend with time in the proportion of women with higher education than their husbands, starting from the period 87-89 onwards. The last proportion increased from 11 percent for marriages occurred during 84-86 to 15 percent among marriages occurred during the period 90-95. However, the percentage of women with lower education levels than their husbands is almost constant over time.

Women married younger than age 20 seems to be more likely to have a lower educational level than their husbands (40 percent drops to 26 percent among those married 25 years or more).

The proportion of women with lower education than their husbands is higher among Moslem women when compared among Christians; while the proportion of Christian women married to husbands with the same educational level is higher than that of Moslems. This can be related to the distribution of women's educational level by religion, where 63 percent of Moslem women are uneducated and 24 percent have at least secondary education, compared to 48 percent and 38 percent respectively among Christian women.

Women living in rural areas or who have spent their childhood in the countryside report less frequent a higher education level than their current or last husbands' when compared to those in other areas. In fact, around 70 percent of women living in rural areas or having grown up in the countryside are either uneducated and married to uneducated husbands or have lower education level than their husbands. It is expected that the majority of those reported having a lower education level than their husbands are also uneducated and married to husbands with, perhaps, only primary education. Such observation is a reflection of the higher proportions of uneducated women, and men, living in these areas.

The highest proportion of ever-married women who are more educated than their husbands is found among women who live in the Urban Governorates or Upper Egypt Urban regions (15 percent). The percentage of women married to more educated husbands does not change by region, or husbands' education, if educated.

The proportion of ever-married women married to husbands with lower education than themselves is higher among women with primary education than among women with at least secondary education. Both those women who had worked for cash before marriage and those who had not been circumcised reported less often being married to more educated husbands than their counterparts. In fact, the distribution of the inter-

spousal education gap is clearly different between those who had or had not been circumcised. The majority of those who had not been circumcised have some education and are married to husbands with the same level of education (70 percent), and only 6 percent have a higher education level than their husbands, while the distribution of the inter-spousal education gap among those who had been circumcised is almost identical to that of the total sample. This is mainly due to the fact that only 3 percent of ever-married who had married only once had not been circumcised.

VI.5.3 Consanguinity

Figure vi.5.1 presents the distribution of ever-married women according to the blood relationship between themselves and their current or last husbands. In Egypt 59 percent of ever-married women reported no blood relationship with their current or last husbands, 23 percent reported a first cousin relationship, 12 percent reported a second cousin relationship and 6 percent reported other relationships.

Figure vi.5.1 Distribution of ever-married women by blood relationship to current or last husband, Egypt DHS 1995
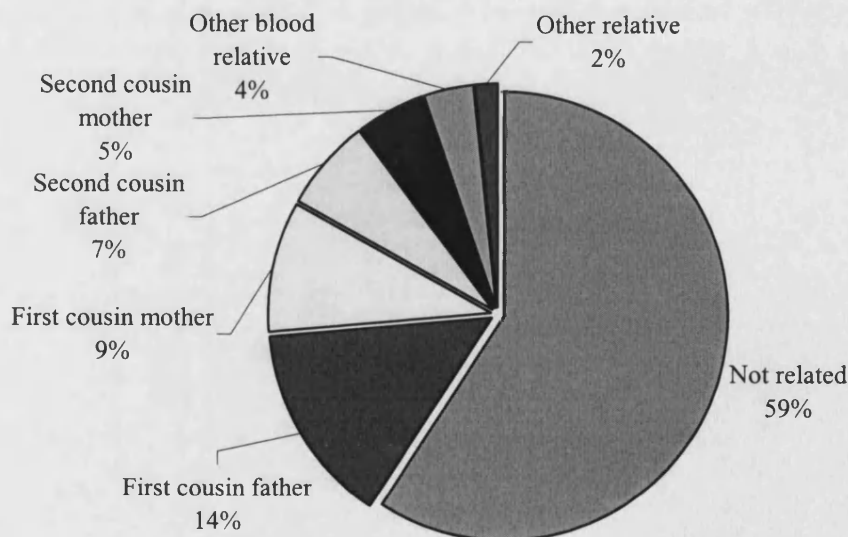
Table vi.5.4 shows the distribution of ever-married women by blood relationship with their husbands according to year of marriage, age at first marriage and current age of women. The table shows a decline in proportion of women who had a first cousin

relationship with their husband among women who had married more recently. Around 25 percent of women who married before 1986 reported having a first cousin relationship with their husbands. The former proportion declines to 21.5 percent among women who married during the period 86-90 and to 20.7 percent among women who married in the period 91-95. The former relationship is not observed as clearly when we consider the current age of women.

Table vi.5.4 presents a clear linear relationship between age at first marriage and being married to a first-degree relative. The proportion of women reporting being in a first-degree consanguinity marriage drops monotonically from 29 percent among women who married at ages younger than 17 years to 13 percent among women who married at age 25 or more. It seems that in Egypt the group who could challenge the norms of young marriage age is the same group that could challenge other marriage norms as well, such as relative marriages.

Table vi.5.4 Distribution of ever-married women by the relation to their husbands according to some selected background characteristics, Egypt DHS 1995

Background characteristics	Relation to husband			Number of women
	No relation	First Cousin	Other relation	
Period of living together				
91-95	62.8	20.7	16.5	2836
86-90	62.1	21.5	16.4	2767
Before 86	57.2	25.4	17.3	9175
Age at first marriage				
Less than 17	51.1	28.9	19.9	4984
17-19	56.4	25.4	18.1	4232
20-21	63.4	21.9	14.7	2032
22-24	67.9	17.4	14.6	2070
25 or more	76.7	13.2	10.1	1460
Current age				
20-29	58.7	24.3	16.9	4886
30-39	60.7	22.9	16.4	5177
40-49	59.1	24.4	16.5	4042
Total	59.2	23.8	17.0	14778

Table vi.5.5 presents the distribution of ever-married women by the relationship with their husbands according to some socio-demographic variables. The table shows almost no differences in the distribution according to religion, with the proportion of Christians married to first cousin a little higher than that of Moslems. The proportion married to first cousin is higher in rural areas, 27 percent, when compared to urban areas, 18

percent, in particular in rural areas in Upper Egypt, where 35 percent of sampled women in these areas are married to their first cousins.

Table vi.5.5 Distribution of ever-married women by the relation to their husbands according to some selected background characteristics, Egypt DHS 1995

Background variables	Relation to husband			Number of women
	No relation	First Cousin	Other relation	
Religion				
Moslem	59.3	23.6	17.1	13982
Christian	57.8	26.4	15.8	796
Childhood place of residence				
Capital/ large cite/abroad	72.6	13.9	13.5	2289
City/town	67.5	18.6	13.9	4037
Country side	51.6	29.0	19.4	8434
Region				
Urban Governorates	67.8	17.8	14.4	3312
Lower Egypt Urban	74.4	15.6	10.1	1829
Lower Egypt Rural	62.3	23.2	14.5	4375
Upper Egypt Urban	60.4	21.3	18.3	1582
Upper Egypt Rural	39.3	35.3	25.3	3542
Type of place of residence				
Urban	67.7	18.1	14.2	6809
Rural	52.0	28.6	19.4	7969
Highest education level				
None	53.6	27.7	18.7	9371
Primary	62.0	21.1	16.9	1932
Secondary +	72.7	14.8	12.5	3483
Ever worked before marriage				
No	56.1	25.5	18.5	11658
Yes	71.0	17.6	11.4	3120
Ever been circumcised				
No	79.5	10.0	10.5	439
Yes	58.6	24.2	17.2	14331
Total	59.2	23.8	17.0	14770

The differences in the proportion married to their first cousins seem to be related to the women's childhood place of residence. This proportion drops from 29 percent among women who lived their childhood in the countryside to 14 percent among those who lived their childhood in the Capital, large city or abroad. Both level of education and ever working for cash before marriage seem to be related to the probability of being married to a husband of a first-degree relation. The proportion of women married to their first cousins drops from 28 percent among women with no education or some primary to

15 percent among women with secondary education or more. Table vi.5.5 also shows a clear difference (a difference of 15 percent) in the proportion under consideration according to whether the woman had been circumcised or not.

Differentials in Consanguinity

To study the association between different background characteristics and the probability of first-degree cousin marriages, a logistic regression model is built. A forward conditional step-wise model is used, where only the significantly associated variables at the last step are presented in the results. The dependent variable in the model is the probability of being married, or having been married, to a first-degree cousin and the explanatory variables are: period of marriage, respondent's age at marriage, region, childhood place of residence, religion, respondents' education, respondent worked for cash before marriage, and ever being circumcised. The results of the logistic regression model are presented in table vi.5.6.

The results show that women who married for the first time relatively late, 25 years or more, those with at least secondary education, those had worked for cash before marriage, and those live in Lower Egypt were significantly less likely to be married to their first cousins. On the other hand, Christian women and those lived their childhood in the countryside was more likely to be in consanguineous unions. Women living in Upper Egypt, and in particular rural areas, have the highest odds ratios of having married, to first cousins. The higher probability of Christian women to be in consanguineous marriage can be related to the fact that they are a minority in Egypt and, as explained before in Section VI.2, the pool of possible partners among Christians is not as wide as among Moslems and therefore they may tend more to chose related husbands.

Table vi.5.6 Results of Logistic regression model, Odds Ratios, of the probability of being married in consanguineous unions on some background variables, Egypt DHS 1995

Variables significantly associated at last step of the analysis	Sig.	Odds Ratio	95.0% C.I. OR	
			Lower	Upper
Respondent's age at 1st marriage	0.000			
<17	0.249	1.08	0.95	1.23
17-19	0.382	1.06	0.93	1.21
20-21^r	-	1.00	-	-
22-24	0.098	0.87	0.75	1.02
25+	0.000	*0.71**	0.58	0.86
Christian	0.016	*1.24^*	1.04	1.47
Respondent's Education	0.000			
None^r	-	1.00	-	-
Primary	0.074	0.89	0.79	1.01
Secondary +	0.000	*0.76**	0.67	0.86
Worked for cash before marriage	0.011	*0.87^*	0.78	0.97
Region	0.000			
Urban Governorates	0.034	*1.17^*	1.01	1.35
Lower Egypt Urban	0.066	0.85	0.72	1.01
Lower Egypt Rural^r	-	1.00	-	-
Upper Egypt Urban	0.001	*1.30**	1.11	1.53
Upper Egypt Rural	0.000	*1.66**	1.50	1.83
Not circumcised	0.002	*0.59**	0.43	0.83
Childhood residence	0.000			
Capital	0.000	*0.52**	0.44	0.62
City/Town	0.000	*0.75**	0.66	0.85
Countryside^r	-	1.00	-	-
Constant	0.000	-	-	-

^{r} Reference category. ^ Significant on p-value<0.05. * Significant on p-value <0.005.

VI.5.4 Polygyny

Unfortunately, the Egypt DHS 1995 does not include any information about polygyny. However, the Egypt Pan Arab Project survey 1991 (PAPCHILD) does include some information. A sample of 8406 currently married women were included in the survey and were asked whether their husbands keep other wives or not. Table vi.5.7 presents the percentage of currently married women in polygynous unions by age and selected background variables. Only 3.6 percent of the sampled women reported being in a polygynous union. The last proportion increases from 1.9 among women 20-24 to 5.6 among women 40-44. This age pattern may reflect a decline in the prevalence of polygyny among younger age cohorts, or more probably a life-cycle

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effect where the transition from monogamy to polygyny is more common among older couples, when husbands take extra wives.

Table vi.5.7 Percentage of currently married women in a polygynous union, according to current age and selected background characteristics, Egypt PAPCHILD 1991

Background Characteristics	Age							Total Percent
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Place of residence								
Urban	0.0	0.9	2.2	3.5	3.5	5.9	4.6	3.5
Rural	1.8	2.4	2.6	4.6	5.0	5.3	4.8	3.7
Region								
Urban Governorates	0.0	1.6	1.3	3.6	4.4	4.3	6.7	3.8
Lower Egypt Urban	0.0	0.0	3.4	3.2	3.3	9.3	1.0	3.5
Lower Egypt Rural	0.7	2.0	2.1	4.6	5.4	4.9	4.8	3.5
Upper Egypt Urban	0.0	0.9	2.0	3.7	1.9	5.6	4.2	3.1
Upper Egypt Rural	2.7	2.9	3.3	4.6	4.5	5.9	4.8	4.0
Education								
No schooling	2.6	2.5	2.8	5.9	5.1	7.7	5.2	4.6
< Primary	0.0	1.8	3.6	4.0	6.2	5.6	4.1	4.1
Primary/Prep.	0.0	2.1	1.4	2.2	2.5	3.0	3.0	2.1
Secondary +	0.0	0.4	1.4	0.9	1.1	1.2	3.7	1.2
Total	1.6	1.9	2.4	4.1	4.7	5.6	4.7	3.6

Source: Abd-Azeem et al. (1993).

No large differentials are observed according to both place of residence or region. However, the proportion of women in polygynous unions declines sharply from 4.6 percent to 1.2 percent as the women's educational level increases from no schooling to at least secondary. This relationship holds true for all age groups.

VI.6 MARRIAGE STABILITY

Egypt DHS 1995 individual questionnaire provides information on whether the ever-married women had married once or more as well as their current marital status. Using these two pieces of information one can calculate the proportion of first marriage dissolution, irrespective to how it was ended, and proportions remarried out of those who had their first marriage dissolved. Table vi.6.1 presents the distribution of ever-married women 15-49 who had their first marriage dissolved and percentage remarried out of those who had their first marriage dissolved.

In total, 11.4 percent of ever-married women had their first marriage dissolved due to either divorce or widowhood; out of these, 43 percent had remarried. As expected, the percentage of first marriage dissolution increases with duration since first marriage.

The former percentage increases from 1.3 among those married two years or less before the survey, during 1993-95, to 7.5 percent among those married 9 to 11 years before the survey, during the period 1984-86. Percentage of remarriage also increased steadily as duration since first marriage increased, from 28 percent to 49 percent between those married during 1993-95 and 1984-86 respectively.

The percentage of first marriage dissolution is highest among women who had married for the first time younger than age 17; however, the percentage of remarriage is highest among the same group of women. Such observations can be linked to either higher widowhood rates, due to larger inter-spousal age gaps, or to higher divorce rates, due to the possibility of more polygyny or other factors, among this group of women. However, women who had married for the first marriage relatively older, at age 25 years or more, have higher prevalence of first marriage dissolution than those married at age 22-24, while they have the lowest prevalence of remarriage. The high prevalence of first marriage dissolution among women who married at age 25 or more can be linked to higher divorce rates through polygyny, if they were taken as second wives, or related to their autonomy status where they are suspected to be a more empowered group of women who can seek divorce more easily than other women. Similar results were obtained for the analysis of polygyny in Algeria 1992, where women who had married relatively very early or very late were significantly more prone to the risk of polygyny (see Section V.5.1).

Prevalence of first marriage dissolution is highest among women living in the Upper Egypt Rural region, where it reaches 14 percent. However, the prevalence of remarriage is almost the same in all regions except Lower Egypt, especially urban areas, where it is lower. Although the prevalence of dissolution is higher among women who had lived their childhood in the countryside, the percentage remarried is much lower than among women who lived their childhood in the capital or another large city.. Due to high rates of rural-urban internal migration in Egypt, many of those who had lived their childhood in the countryside currently live in other areas. Due to the strong kinship structure of rural areas in Egypt, this group of women tend to marry from their countryside childhood place of residence and to husbands with large inter-spousal age gaps, and thus when dissolution occurs finding a new partner from the same background may not be easy.

Table vi.6.1 Distribution of ever-married women who had their first marriage dissolved and percentage remarried according to some background characteristics, Egypt DHS 1995

Background characteristics	% First marriage dissolved	Number exposed to remarriage	% Remarried	Total number of women
Year of marriage				
93-95	1.3	24	(28.2)	1759
90-92	4.7	80	28.1	1681
87-89	6.3	105	54.3	1675
84-86	7.5	113	49.2	1520
Before 84	16.7	1360	43.2	8143
Age at first marriage				
Less than 17	15.2	757	52.1	4985
17-19	9.9	419	42.4	4232
20-21	9.4	191	34.3	2032
22-24	7.7	159	31.1	2069
25 or more	10.7	156	27.2	1460
Education				
None	14.7	1373	45.2	9372
Primary	8.7	167	37.0	1923
Secondary	4.1	142	33.4	3483
Worked for cash				
No	11.7	1362	42.0	11660
Yes	10.3	320	49.5	3119
Region				
Urban Governorates	9.4	312	45.9	3312
Lower Egypt Urban	10.4	190	34.7	1830
Lower Egypt Rural	11.6	508	41.8	4377
Upper Egypt Urban	10.4	165	47.2	1583
Upper Egypt Rural	13.9	494	45.3	3543
Place of residence				
Urban	9.9	674	43.2	6809
Rural	12.6	1008	43.5	7970
Childhood residence				
Capital/ large city	8.9	203	52.3	2289
City/town	9.7	392	36.5	4037
Country side	12.9	1086	44.2	8435
Religion				
Moslem	11.6	1617	44.5	13981
Christian	8.1	65	15.5	794
Ever Circumcised				
No	6.8	30	(21.8)	438
Yes	11.5	1652	43.8	14332
Total	11.4	1682	43.4	14771

() Based on number on cases between 25-50.

The women's status questionnaire provides us with information on how the first marriage was dissolved and whether this was due to divorce or widowhood. It also

provides richer set of respondent background characteristics. The differentials in first marriage ending in divorce are studied in Chapter VII using the women-status data set in relation to the partner selection process.

VI.7 CONCLUSION

Family formation had been, and still is, one of the most important achievements in the Egyptian's life. The results show that marriage in Egypt is almost universal, for example, only 3 percent of women in the age group 35-39 had never been married (see Table vi.3.1), and 95 percent of women age 30-49 have been ever married by age 30 (see Table vi.3.2). Almost all Egyptian women will get married at some point in their lives. However, the results show clear differentials in the timing of marriage. Egypt's marriage pattern is characterised by a relatively large inter-spousal age-gap in favour of the husband; husbands are preferred to be more educated among most sectors of the society; there is high prevalence of consanguineous marriages, and a low prevalence of polygyny. Marital dissolution is not very high in Egypt, 11 percent, and nearly half of those who had their first marriage dissolved had remarried by time of survey.

The Upper Egypt Rural region is the region with the most traditional norms of marriage in Egypt: very early age at marriage, large age-gaps, and higher prevalence of consanguinity even when compared to other rural areas in Egypt. The analysis suggests that the reason behind such marriage characteristics in this region can be due to the relatively lower development level of this region as well as the lower proportions of educated women and those who ever worked for cash (see Tables vi.1.1 and vi.4.5). This creates an environment that is less exposed to new ideas and can more easily sustain its traditions and norms than other regions in Egypt. Diffusion theory can be used in an attempt to explain these results: it suggests that women living in an environment with new ideas can avoid tradition more easily even if they are themselves are not educated or had not been exposed directly to these new ideas. The results suggest that the high prevalence of relatively more traditional marriage norms observed in rural areas in Upper Egypt can be mostly due to the effect of macro-level characteristics of this region in particular. The low development profile and high poverty rates combined with low proportion of women who had been exposed to new ideas and opinions seem to form an environment that can sustain the norms of very early marriages much easier than in any other region in Egypt. Ever working for cash

and completing higher levels of education are some of the important variables that appeared to be associated with timing of marriage. For example, the proportion of all women who had married by age 25 drops from 90 percent among women who never worked for cash to 64 percent among those who had ever worked for cash (see Table vi.3.2). However, the causality between working for cash and delaying marriage is not very clear; thus one should carefully interpret the association between them. Working for cash could be a result of not finding the right partner, i.e. because of delayed marriage, or vice versa, where working for cash actually competes with marriage. We cannot apply the same theory to the relation between education and delayed marriage, because the age of completing secondary education in Egypt is as young as 18 years old. Both education and working for cash can theoretically enhance women's autonomy and empower them, as well as diffuse new ideas and priorities. However, working for cash in Egypt, especially among relatively poor women, does not necessarily empower women. It seems that a combination of high education and selected work experience are required to achieve certain degree of empowerment and autonomy. Work, especially for poor women is not regarded as a source of empowerment but rather as a source of income for their families. Moreover, in many cases work over-burdens the women and leaves them more prone to the risk of divorce.

In total, around 39 percent of all Egyptian women aged 25-49 were married by age 18 in 1995. The results show that smaller proportions of younger women (25-29) get married at relatively young ages when compared to women aged 30 or more. However, there were almost no differences in the proportions married by exact ages among age groups older than 30 (see Table vi.4.1). The median age at first marriage was 19.7 years in 1995 for women aged 20-49, and 19.3 years for women aged 25-49. Differentials in age at first marriage were very clear according to region; women living in rural areas in Upper Egypt in particular were found to have a much younger median age at first marriage when compared to women living in other regions (see Table vi.4.2). For example, the median age at first marriage in Rural Upper Egypt for the age cohort 25-29 is 17.3 years compared to 19.7 for women at the same age group but who live in Rural Lower Egypt.

The median inter-spousal age-gap is 6.3 years, and around 64 percent of ever-married women, who had married only once and during the 20 years before the survey, reported that their husbands are at least five years older than themselves. Ever

working for cash had a clear relation with the age gap between spouses. In Egypt the large majority of women reported being married to husbands with at least the same level of their education. However, those with primary or preparatory education were more likely to report being married to husbands with a lower education level than those with secondary education or more (see Table vi.4.9). Nearly one-quarter of Egyptian women were married to a first-degree cousin. Another 17 percent of them had some other blood relation with their husbands. Women who had married relatively old, 25 years or more, and those with at least secondary education were significantly less likely to be married to their first cousins. On the other hand, women living in the Upper Egypt Rural region were significantly more likely to be in consanguineous unions. Although polygyny is allowed in Egypt, only 3.5 percent of the PAPCHILD 1991 sample of ever-married women who were married at time of survey reported being in polygynous unions. The last proportion did not vary by region but large differentials where observed according to women's education level.

CHAPTER VII : AN IN-DEPTH ANALYSIS OF NUPTIALITY PATTERNS IN EGYPT

VII.1 DATA AND VARIABLES DESCRIPTION

This chapter focuses on the in-depth analysis of some of nuptiality elements in Egypt. The analyses in this chapter are based mainly on the data from the Egypt DHS 1995 women's status module in addition to some information from the main questionnaire. The focus of this chapter is mainly on the partner selection process and its relation with some post-marital relations as well as some marriage elements. Egypt DHS 1995 women's status module provides a rich and detailed information on husband selection process, women's autonomy, and several indicators inter-spousal relationships, and many other background variables. A nationally represented sample of 7123 ever-married women age 15-49 had completed the women's status module. Among others, the following topics were covered: information on parents' education and work status, the husband's selection process for first and last husband (if different), husband's age, post-marital residential arrangements, inter-household relationships and decision making, education, domestic violence, and respondent's attitudes on several topics including gender roles, women's and men's right to seek divorce, and circumstances under which husbands are justified to beat their wives.

This data is used to study some of the proposed intermediate variables in the framework, namely the husband selection process and residence arrangement at beginning of marriage. The data also provides us with more information on pre-marital characteristics of the women and their parents in addition to the ones used in Chapter VI. Also the data will be analysed to study the relation between the degree of involvement in the husband selection process and the post-marital inter-spousal relations. Chart vii.7.1, in appendix, presents a flow diagram of the proposed framework and following is a list of variables to be included in each category. A list of variables presenting different characteristics is given below.

Family Characteristics

Childhood place of residence; as it may reflect a different set of marriage preferences than the current place of residence.

Father's literacy; this variable is included for its potential associations with different decisions taken by the parents, and especially the father in the patriarchal society of Egypt, towards their daughters' marital life and preferences.

Mother literacy and whether the mother ever worked for cash before respondent first married; mother's characteristics and degree of autonomy, which is very well affected by her education and work experience, have theoretically a very pronounced effect in shaping her daughter's opinions towards marriage and life in general and therefore ways of setting priorities in marriage.

Respondent being circumcised; this variable may reflect the woman's family autonomy towards following or opposing the traditions. However, we should keep in mind that around only 5 percent of sampled ever-married women had never been circumcised.

Personal Characteristics

Age at first marriage; which reflects the age of respondent at time of event of marriage and thus may well affect her input in any marriage related decisions.

Education and working before marriage for cash and degree of control over earning; as some pre marital autonomy indices.

Other individual characteristics; such as religion and region of residence are included in the prior variable set based on the framework described in Chapter II.

Partner Selection Process

After using several combinations of variables in attempts to reflect the most detailed and accurate degree of involvement in the husband selection process we noticed that the blood relation with the husband highly interacts with the reported degree of involvement. It is thought that it will be more useful to separate different degree of involvement in the selection process and whether the husband was related to the wife or not. Related is defined as having any blood relation with husband and not necessarily first cousins. Thus, we used a variable that reflects both the reported degree of respondent involvement in the husband selection process and the fact the whether she was related to her first husband or not. This variable, which is used to reflect the degree of involvement in the husband selection process, takes the following categories:

1 Related and not met before marriage.

2 Related and met before engagement or marriage.

3 Not related and not met before marriage.

4 Not related and met before engagement or marriage.

5 Related and chose husband.

6 Not related and chose husband.

The degree of involvement in the selection process can reflect some pre-marital autonomy. The degree of involvement is highest among women who were not related to their husbands and reported choosing them. The other extreme group, with the least degree of autonomy, are those who were related to their husbands and have never met them before marriage. The four middle categories cannot be ordered very accurately according to the degree of involvement they reflect, however, the correlation between each level of involvement and post-marital autonomy indices may give a better picture.

Inter-spousal Relationships and Post-Marital Autonomy Indices

These indices are studied in relation to both the degree of involvement in the husband selection process and some of the marriage elements. The following indices are included:

Decision index; whether the respondent alone or jointly with the spouse has the last word on: budget, visits, food cooked, children's education, medical attention for children, and use of family planning methods. It ranges from 0; respondent does not have the final say on any, to 7, where respondent has the final say, alone or jointly, on all seven.

Index of spousal communication (for currently married women only); reflects to what degree husband regularly discusses different issues with his wife. Whether husband regularly discusses the following with the respondent: events at work, future plans, financial matters, gossip/news, and children's activities. The variable ranges from 0, never or only sometimes discusses any of the five subjects, to 5, regularly discusses all five subjects.

Whether respondent had been beaten; 34.4 percent of women reported being beaten against 65.6 had not.

Index of acceptance of wife beating; where respondent feels that a husband is justified in beating his wife for the following reasons; burning the food, neglecting the children, answering him back, talking to another man, wasting his money,

refusing him sex, or any other reason. The variable ranges from 0 (husband is not justified in beating his wife for any reason) to 7 (husband is justified in beating his wife for all seven reasons).

Gender role index; reflects the degree of the respondent's acceptance of traditional gender roles. The variable is a sum of respondent agreement on the following 4 statements: women should be allowed to work, husband should help at home if wife has a job, if a wife disagrees with her husband she should speak up; *and* disagreement with the following 3 statements: men and women should not do each other's work, a woman with a full-time job cannot be a good mother, and women unmarried by age 25 with a good job should be pitied. The variable ranges from 0 (gives traditional response to all) to 7 (gives non-traditional response to all).

Freedom of movement index; number of the following places where respondent is allowed to go to alone: just outside the house, local market, health centre, in the neighbourhood for recreation, homes of friends and family. It ranges from 0, cannot go alone to any, to 5, can go alone to all five.

Divorce equality index; reflects to what degree the wife and husband have identical right to request divorce for different reasons. These reasons are; disrespectful to spouse's family, unable to have children, did not listen/ disobedient, talked to other men/women, sexually unfaithful. The variable ranges from 0, all responses are different, to 5, all responses are the same.

Index of direct access to money; where respondent can take money without seeking permission or has own money to buy the following items; daily food, long lasting food items, cloths for self, and medicine. It ranges from 0, has to ask permission for all items, to 4, has access to money for all items.

VII.2 HUSBANDS' SELECTION PROCESS

In Egypt, around 41 percent of all women interviewed in the women-status module (7123 women) reported that they did not know their first husbands before marriage at all. Just less than one quarter of women reported that they had chosen the first husband themselves. However, more than their half, 56 percent, knew their husbands through their family or husband was a relative or a neighbour, thus, the dynamics of their choice came within the family context. Out of those reported choosing their first husbands themselves, 87 percent had their family's immediate approval for their marriage while 3.6 percent never had their approval. Such observations suggest that even the

respondents who report the full choice of the husband, their decisions, most probably, had come within the family context and with the approval of their family. As discussed in Chapter II, marriage in Egypt, and in the Arab region in general, is viewed not as a partnership between individuals but rather as a union between two families.

The women's-status module provides rich information on whether the respondent had met or spoken or chosen her husband and contains many variables that allow different ways of measuring the degree of involvement of the respondent in the husband selection process. Using most of these variables several indicators measuring the degree of involvement in the first husband selection process were tested. However, because kin marriages were quite prevalent and the fact that the process of selecting a relative or a non-relative husband is expected to be widely different, the element of the husband being a relative or not is included in measuring the degree of the respondent's involvement in the selection process. One of the ways to summarise the husband choice process is to use a variable that reflects different aspects of the selection process including the relation of the spouses, as described in Section VII.1.

Table vii.2.1 and Figure vii.2.1 present the distribution of ever-married women according to the degree of involvement in the husband selection process and the prior variables, which includes some of the family as well as the respondent characteristics. Figure vii.2.1 shows clear differences in the distribution of involvement in the husband selection process, as mentioned in Section VII.1, among women who had and had not been circumcised. Around 36 percent of sampled ever-married women who had not been circumcised were not related to their first husbands and reported choosing them. The former percentage compares to only 12 percent among those who had been circumcised. On the other hand, only 3 percent of women who had not been circumcised were related and not even met their husbands before marriage compared to 11 percent among those who had been circumcised. It is interesting to notice that the proportion of women who were married to a relative, irrespective whether they met or chose or not, is much lower among women who had not been circumcised when compared to those who had been, 17 percent compares to 43 percent.

Almost the same pattern is observed when comparing the distribution between women with mothers who can read and those with mothers who cannot read. Around one quarter of women with mothers who can read were not related and had chosen the husbands, this proportion drops to only 10 percent among those with illiterate mothers. Only 6 percent of women with mothers who can read were related and had not even

met their husbands compared to 11 percent among women with mothers who cannot read.

Figure vii.2.1 Distribution of ever-married women by degree of involvement in the husband selection process according to some background variables, Egypt DHS 1995 WS module
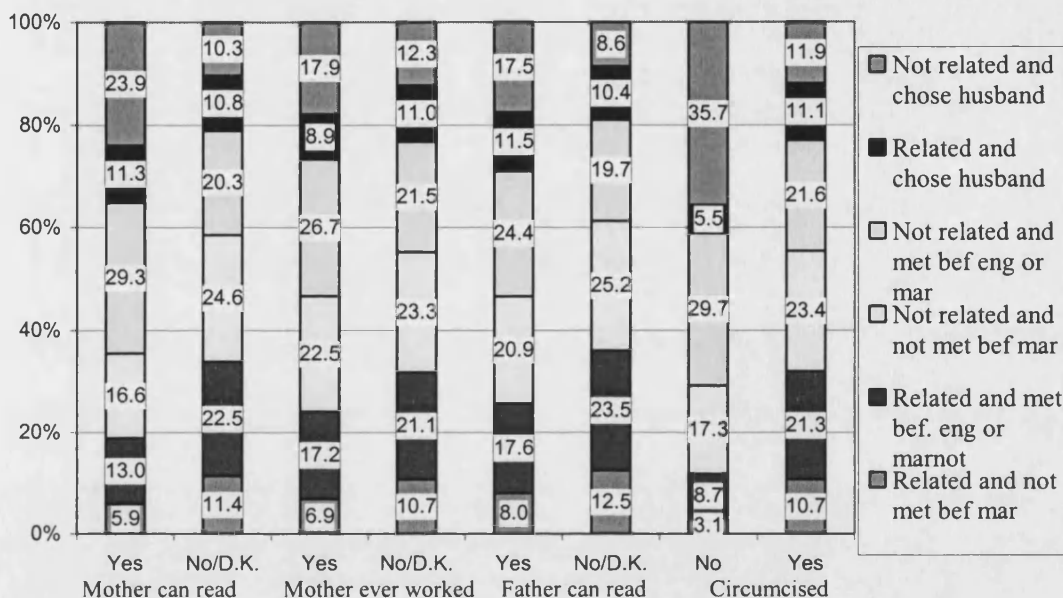
No large differences in the distribution according to whether the mother had ever worked for cash or not are observed. Women with illiterate fathers reported more being related but not choosing their husbands than those with literate fathers, 36 percent compared to 26 percent, while the proportion of women who were related and chose their husbands were almost the same among the two groups. Figure vii.2.1 points to the fact that women with mothers who have more autonomy, who were literate or worked for cash, and those who had not been circumcised, reported less being married to relatives and more involved in the selection process. This may reflect the unseen role of the mothers in breaking the traditional patriarchal form of marriage that is widely spread in Egypt.

Table vii.2.1 presents differentials in the degree of involvement in the husband selection according to former and current place of residence, religion, age at first marriage, and year of marriage. Both proportions of women who were related and never met their husbands or related and met their husbands but did not choose declines as age at first marriage increases and the opposite with the proportion of women who were not related and chose the husband themselves. No large

differentials in the proportion of women who were not related and never met their husbands were observed except among those who had married relatively very early or very late. The high proportion of women who were married very young and married to non-relatives and never met them before marriage may reflect a part of more general pattern of the non-involvement of this group in the spouse selection process. However, the high proportion of being non relative and never met among women who had married relatively late may reflect their relative weak position on the marriage market due to the fact that, according to the Egyptian culture, they have reached an age where they have to compromise to get married and satisfy their families' requests irrespective to their choices.

Regarding time of marriage, the bivariate analysis, shown in table vii.2.1, suggests that women who had married more recently were more likely to be not related and choose the husbands and less likely to be related and never meet their husbands than women married longer ago. However, the differentials are not very dramatic between the two most recent periods, 86-95 and 76-85.

The bivariate analysis shows clear differentials in the degree of women's involvement in the selection process according to childhood and current place of residence. The proportion of women who were related and had not met their husbands before marriage was much lower among women who lived in the capital or large cities when compared to women lived in either city/town or the countryside. Women who lived their childhood in the countryside had the highest proportion of being married to a relative and not choosing him, which may again reflects a more traditional type of marriage arrangement that does not involve the bride much. Both the proportions of women being not related and chose the husbands, and not related and met the husbands are highest among women lived their childhood in the capital or other large cities and lowest among women lived their childhood in the countryside.

The proportion of women who were related and chose the husband themselves was almost the same regardless of the women's childhood place of residence. Again, women currently living in rural areas reported more being married to relatives and not choosing them than women living in urban areas, 38 percent compares to 24 percent. The former proportion is highest among women living in rural Upper Egypt, where it reaches 49 percent. While the proportion of women who were not related and chose their husband among rural women is less than half that among urban women, 8

percent compares to 18 percent, and reaches only 5 percent among women living in rural Upper Egypt.

Table vii.2.1 Distribution of ever-married women by degree of involvement in the husband selection process according to some background characteristics, Egypt DHS 1995 WS module

Background characteristics	Relation and degree of involvement						
	Related and not met before marriage	Related and met before marriage	Not related and not met	Not related and met	Related and Chose husband	Not related and chose	Number of women
Age at first marriage							
Less than 16	16.6	22.7	28.4	16.8	8.6	7.0	1634
16-19	11.9	24.2	21.7	19.8	12.4	10.1	2775
20-21	7.5	21.3	20.9	25.5	9.3	15.6	998
22-24	3.3	16.1	20.2	27.8	13.9	18.7	1011
25 or more	5.5	10.0	25.3	28.1	8.6	22.4	705
Year of marriage							
86-95	7.3	17.4	19.4	24.5	13.5	17.9	2641
76-85	10.3	21.1	22.7	22.4	10.8	12.7	2517
Before 76	15.1	25.3	29.1	17.5	7.5	5.4	1965
Childhood place of residence							
Capital/ large cite	4.1	14.0	19.2	30.5	10.8	21.4	1103
City/town	8.5	16.2	22.9	24.3	10.3	17.7	1966
Country side	13.2	25.0	24.5	18.3	11.2	7.7	4050
Type of place of residence							
Urban	7.9	16.1	23.1	25.2	9.8	17.9	3309
Rural	12.7	25.1	23.4	18.9	11.9	8.0	3814
Region							
Urban Governorates	8.4	17.3	19.8	25.6	9.9	19.1	1623
Lower Egypt Urban	5.8	13.8	28.2	25.7	7.6	18.8	922
Lower Egypt Rural	9.7	19.1	25.5	23.9	11.1	10.7	2122
Upper Egypt Urban	9.7	16.1	24.4	24.1	12.0	13.6	723
Upper Egypt Rural	16.5	32.5	20.7	12.8	12.8	4.7	1668
Religion							
Moslem	10.5	20.9	23.2	21.8	10.8	12.7	6756
Christian	9.7	20.4	23.5	23.2	13.2	10.0	367
Total	10.5	20.9	23.3	21.8	10.9	12.6	7123

Although there is no difference in the proportion of women who chose their husbands among Moslems and Christians (23 percent), the proportion of women who were related and chose their husbands was slightly higher among Christians.

Table vii.2.2 presents the distribution of ever-married women by degree of involvement in the husband selection process according to women's education, whether worked for cash before marriage and had control over their earnings.

Table vii.2.2 Distribution of ever-married women by degree of involvement in the husband selection process according to some of the respondents' background characteristics, Egypt DHS 1995 WS module

Respondent background variables	Relation and degree of involvement						
	Related and not met before marriage	Related and met before marriage	Not related and not met	Not related and met	Related and Chose husband	Not related and chose	Number of women
Highest education level							
No	14.1	24.2	26.2	17.8	10.3	7.4	4560
Primary	7.4	20.7	20.9	23.3	10.6	17.1	944
Secondary or more	2.2	11.6	16.3	32.5	13.0	24.5	1619
Worked for cash before marriage							
Did not work	11.8	23.0	24.1	20.1	11.3	9.7	5708
Worked - no control	10.7	16.5	29.6	23.1	7.1	13.0	351
Worked- with control	3.6	11.0	16.6	30.5	10.4	27.9	1055
Total	10.5	20.9	23.3	21.8	10.9	12.6	7123

The proportion of women who were related and never met their husbands is much lower among women with at least secondary education compared to women with no or primary education, the percentage drops from 14 percent to only 2 percent. On the other hand, the proportion of women who were non-related and chose the husband themselves is highest among women with at least secondary education. The differentials due to education were not only observed on those two extreme groups but for all degrees of involvement. The results suggest that educated women have a different pattern of involvement in the selection process being more involved in general and having more choices when compared to non-educated or even partly educated women. The same pattern of differentials is observed according to whether women had worked for cash before marriage or not. Those who worked before marriage reported more being married to non-relative and choosing the husband and less being married to relative and not meeting the husband before marriage than those who did not work. Such profile was stronger among women who worked and had some or main control over their earnings.

Table vii.2.3 presents the distribution of ever-married women who had chosen their first husbands and were not related, according to family approval of marriage and wife's education level, whether she worked before marriage or not, and what control over earning she had.

Table vii.2.3 Distribution of ever-married women who were not related and chose their first husbands according to family approval on marriage and some of the respondents' characteristics, Egypt DHS 1995 WS module

Wife's Characteristics	Family approval of husband			Number of women
	Approved at beginning	Approved later	Never approved	
Highest education level				
None	78.6	13.8	7.6	339
Primary	73.4	21.5	5.1	162
Secondary or higher	87.6	9.5	2.9	396
Work for cash before marriage				
Did not work	81.8	12.6	5.6	554
Worked- with no control	85.4	9.9	4.8	46
Worked- with some or main control	80.6	15.3	4.1	295
Mother can read				
Yes	82.4	12.1	5.4	287
No	81.2	13.9	4.9	610
Mother ever worked				
Yes	79.1	12.3	8.6	75
No	81.9	13.4	4.7	822
Circumcised				
No	96.2	2.8	0.0	72
Yes	80.4	14.1	5.5	825
Total	81.6	13.3	5.1	897

Table vii.2.3 shows that the proportions of women who had their families' immediate approval on their marriages were highest among women who had at least secondary education. No differentials were found between women who had worked before marriage and who had not. These results suggest that women with more pre-marital autonomy indicators, especially who were more educated, had a higher degree of involvement in the husband selection process and were allowed more choices. This group of women might be a privileged group who had both the opportunities of meeting and choosing suitable partners and the knowledge and autonomy to decide for themselves even if such decisions might be in conflict with their family preferred choices. Such group of women could be more capable of convincing their families with their choices.

VII.2.1 Association Between Prior variables and Husband Selection Process

In this section we study the associations between different family and personal characteristics and the degree of involvement of the respondent in the husband

selection process. One of the ways to do that is to use a Multinomial logistic regression model to study the associations of different independent variables with the probability of different degrees of involvement relative to a specified degree of involvement, a reference category, simultaneously. The group of women who were married to relatives and had not even met their husbands before marriage was used as the reference category, thus, the results will be relative to this group with the least degree of involvement in the husband selection process.

The independent variables set includes the respondent's and the family's background variables, as well as both duration of marriage and age at first marriage. Although that the last two variables can be regarded as marriage elements, however, they are associated with the involvement in husband selection in different ways. The purpose of including duration of marriage in the model is to study the change in the degree of involvement over time when controlling for other characteristics. The relation between age at marriage and degree of involvement in the selection process is very important as it reflects the age of the woman at the time the decision was taken and reveals the association between age of women at time of event and the process of husband selection. Thus, the independent variables included are: duration of marriage, age at first marriage, father and mother literacy, mother ever worked, childhood place of residences, current region of residence, respondent's education, respondent worked for cash before marriage and whether she had any control over her earning, respondent being circumcised, and respondent religion. The results of the multinomial regression model are shown in table vii.2.4.

The results show that women who had married more recently, with duration of marriage 0-4 years, had significantly higher chances of getting married to a non-related husband and meeting them before engagement or marriage, than being married to relatives and never met them before marriage, than those who had duration of marriage 5-9 years. On the other hand, women who had married longer before the survey, with duration of marriage 15-19 or 20 years or more, were less likely to choose their husbands, whether related or not, than being married to relatives and never met before marriage when compared to the same reference group who had married 5-9 years before the survey.

Women who were married very young, younger than 16 years old, were significantly more likely to be related and not met than related and met or not related and met than women who married at the age group 20-21. On the other hand, women who were

married at age 22-24 years have much more involvement in the selection process than those married at age 20-21. The results show that women married relatively late, 25 years or more, do not seem to have more involvement in the husband selection process than women married at age 20-21, in contrast to women married at the age group 22-24.

Table vii.2.4 shows that ever-married women with mothers who had ever worked were significantly more likely to be married to non-relatives and either met them before marriage or chose them than being married to relatives and never met them before marriage when compared to women with mothers who had never worked. In contrast to the results from the bivariate analysis, no significant differentials were found according to mother or father literacy or whether women had been circumcised or not.

Women who lived their childhood in the capital or another large city or abroad had significantly higher chances of being more involved versus getting married to relatives and never meet them than women who had lived their childhood in the countryside. The differentials in chances of other degrees of involvement against getting married to relatives and never meeting them between women who had lived in other cities or towns, and the countryside were not significant. Except for the probability of getting married to non-relatives and choosing them against relatives and never met them, where women who lived in city or towns had significantly higher chances than women who had lived in the countryside.

The multivariate analysis, shown in table vii.2.4, shows that women living in Upper Egypt were less likely to be not related and not met before marriage, on the other hand, they were more likely to be related and not meet their husbands, however, those living in Upper Egypt urban areas were less likely to meet their related husbands than those in rural areas. In summary the results reflect a picture of high relative marriage in Upper Egypt but those living in rural areas were more likely to meet their related husbands than in urban areas. This is can be mainly due to the nature of life in rural areas where women and men are more easily to meet in the fields or in the markets and not due to more autonomy of Upper Egypt rural women in comparison to Upper Egypt urban women.

Table vii.2.4 Results of the Multinomial Logistic Regression Model, (Odds Ratios), of degree of involvement in the selection on prior variables, Egypt DHS 1995 WS module

Prior variables	Involvement in Husband selection process					
	Related and not met[r]	Related and met	Not related and not met	Not related and met	Related and chose	Not related and chose
Duration of marriage						
0-4	1.00	1.24	1.05	*1.64**	0.87	1.33
5-9[r]	1.00	1.00	1.00	1.00	1.00	1.00
10-14	1.00	1.25	1.04	1.20	0.88	0.83
15-19	1.00	1.07	0.80	0.93	*0.54**	*0.61**
20+	1.00	1.05	0.88	*0.72^*	*0.40**	*0.28**
Age at marriage						
<16	1.00	*0.56**	0.87	*0.71^*	0.78	0.76
16-19	1.00	0.78	0.77	*0.74^*	1.15	0.73
20-21[r]	1.00	1.00	1.00	1.00	1.00	1.00
22-24	1.00	*1.63^*	*1.91^*	*1.69^*	*2.69**	1.47
25+	1.00	*0.56^*	1.32	0.80	0.86	0.71
Father can read	1.00	0.93	0.92	0.84	0.98	1.05
Mother can read	1.00	0.79	0.77	1.06	1.01	1.30
Mother ever worked	1.00	1.40	1.30	*1.71^*	1.30	*1.97**
Childhood place of residence						
Capital/large city	1.00	*1.67^*	*2.27**	*3.73**	*2.53**	*3.67**
City/Town	1.00	0.93	0.96	1.26	1.10	*1.50^*
Countryside[r]	1.00	1.00	1.00	1.00	1.00	1.00
Region						
Urban Governorates	1.00	0.74	1.23	*1.45^*	0.78	*2.22**
Lower Egypt Urban	1.00	0.93	*3.14**	*2.87**	1.01	*4.51**
Upper Egypt Urban	1.00	*0.64^*	*1.48^*	1.34	0.85	*1.72^*
Lower Egypt Rural	1.00	0.91	*1.99**	*2.72**	*1.32^*	*3.07**
Upper Egypt Rural[r]	1.00	1.00	1.00	1.00	1.00	1.00
Education						
None[r]	1.00	1.00	1.00	1.00	1.00	1.00
Primary	1.00	*1.59**	1.28	*1.73**	*1.55^*	*2.28**
Secondary +	1.00	*2.77**	*2.48**	*5.17**	*4.54**	*4.98**
Work before marriage						
Never worked[r]	1.00	1.00	1.00	1.00	1.00	1.00
Paid in kind or No control	1.00	0.77	1.39	1.29	0.75	*1.82^*
Some or main control	1.00	1.04	1.10	*1.65^*	1.23	*2.64**
Not circumcised	1.00	0.85	1.38	1.27	0.50	2.24
Christian	1.00	0.90	1.02	0.87	1.05	*0.45**

[r] Reference category. ^ Significant on p-value<0.05. * significant on p-value <0.005.

The results show no significant differentials due to the region on the probability of the woman being related and chose her husband against related and not met. However, women living in Upper Egypt were significantly less likely to be not related and meet the husband and, in particular, those living in rural areas were less likely to be not related and choose their husbands.

Respondent's education level was significantly associated with the degree of involvement in the husband selection process. Women with any education were more likely to have some degree of involvement than marry a relative and never meet when compared to non-educated women. Especially women with at least secondary education had much higher chances to marry non-relatives and to choose their husbands. For example, women with secondary education were 5 times more likely to marry non-relatives and meet then before marriage.

The results suggest that women who had worked for cash before marriage and had some control over their earnings were more likely to be not related and meet or choose their husbands than being related and never meet their husbands before marriage (OR= 1.65 and 2.64 respectively).

Christian women were significantly less likely to be not related and choose their husbands than being related and not meet them when compared to Muslim women. Such result might be due to the fact that Christians are a minority in Egypt and they tend to manage marriages more within the family. As Nisan in 1991 observes, the Copts, Egyptian Christians, possess tight ethnic cohesion, rooted in a traditional religious culture. Marriage among Christians is a very important family decision and the view of the Church in marriage had to be taken very seriously especially if the groom is a non-relative, so, perhaps, Christian women would consider such choices as not their own personal choices.

VII.3 CO-RESIDENCE AT BEGINNING OF MARRIAGE

The EDHS 1995, women's-status module includes information on living arrangement at the beginning of first marriage. The data provides information on whether, at the beginning of marriage, the newly wed couple had lived in a separate place on their own or lived with the wife's or the husband's families or with someone else. Table vii.3.1 displays the distribution of ever-married women who had completed the women's status module by place of living at beginning of marriage and some family background variables. Table vii.3.1 shows that, on total, just above half of women

had lived with their in-laws at the beginning of their first marriage. While 43 percent of them had lived in a household of their own. Only 2 percent of sampled women had reported living with their own families at the beginning of marriage and a negligible percentage, 0.3 percent, had lived with someone else other than the couples' families at the beginning of their marriage. It is obvious from the results that the usual residence arrangement after marriage is either living with the husbands' family or living alone. Thus, it is interesting to study the differentials in the percentage of women who had lived with their in-laws at beginning of marriage.

Table vii.3.1 Distribution of ever-married women according to co-residence at the beginning of marriage and some background variables, Egypt DHS 1995 WS module

Background variables	Living at beginning of marriage				Number of women
	Wife's family	Husband's family	Someone else	Couple alone	
Father can read					
Yes	1.8	44.3	0.2	53.6	3192
No/D.K.	2.5	62.8	0.3	34.5	3931
Mother can read					
Yes	1.7	33.5	0.0	64.8	1201
No/D.K.	2.3	58.8	0.3	38.6	5922
Mother ever worked					
Yes	4.3	54.9	0.7	40.1	419
No/D.K.	2.0	54.5	0.2	43.2	6704
Ever circumcised					
No	5.4	16.3	0.0	78.3	201
Yes	2.1	55.6	0.3	42.0	6916
Childhood place of residence					
Capital/ large cite/abroad	2.8	23.8	0.2	73.2	1103
City/town	2.4	40.6	0.0	57.0	1966
Country side	1.9	69.6	0.4	28.1	4050
Total	2.2	54.5	0.3	43.1	7123

Table vii.3.1 shows that women with literate fathers or mothers reported less living with their in-laws than women with illiterate fathers or mothers. No apparent differentials were found according to whether mother ever worked or not. On the other hand, the proportion of women who had lived with their in-laws among non-circumcised women was less than third that among women who had been circumcised, 16 percent compares to 56 percent. Also the proportion of women lived with their in-laws at the beginning of marriage was lowest among women who had

lived their childhood in the capital or another large city and highest among women who had lived their childhood in the countryside, 24 percent compares to 70 percent. Table vii.3.2 presents the distribution of women according to co-residence at beginning of marriage and some of the respondent's background variables.

Table vii.3.2 Distribution of ever-married women according to co-residence at the beginning of marriage and some background variables, Egypt DHS 1995 WS module

Background variables	Living at beginning of marriage				Number of women
	Wife's family	Husband's family	Someone else	Couple alone	
Type of place of residence					
Urban	2.6	34.0	0.3	63.1	3309
Rural	1.8	72.3	0.2	25.7	3814
Region					
Urban Governorates	2.9	28.8	0.2	68.0	1623
Lower Egypt Urban	2.2	35.6	0.6	61.6	922
Lower Egypt Rural	1.0	73.1	0.4	25.5	2122
Upper Egypt Urban	2.2	43.3	0.2	54.3	723
Upper Egypt Rural	2.9	71.0	0.0	26.0	1668
Highest education level					
None	2.3	66.0	0.4	31.3	4560
Primary	2.4	46.2	0.0	51.4	944
Secondary +	1.6	27.0	0.0	71.3	1619
Worked for cash					
Did not work	2.2	58.2	0.3	39.3	5708
Worked- with no control	2.2	66.8	0.0	31.0	351
Worked- with control	2.0	30.2	0.3	67.5	1055
Religion					
Moslem	2.1	55.2	0.3	42.4	6756
Christian	3.5	40.9	0.0	55.5	367
Total	2.2	54.5	0.3	43.1	7123

It is clear from table vii.3.2 that co-residence with in-laws is highest in rural areas, whether upper or Lower Egypt. The proportion of women who lived with their in-laws in rural areas was more than double that among women living in urban areas, 72 percent compares to 34 percent. Women's education also seem to influence living arrangement at beginning of marriage as the percentage of women who had lived in their own household raises steadily from 31 percent among non-educated women to 71 percent among women with at least secondary education. Women who had worked before marriage and had some or main control over earning had one of the highest proportions of living in their own houses, 67 percent. The differentials in co-residence

at marriage is not extremely large according to religion, however, Moslem women reported more living with in-laws than Christian women, 55 percent against 41 percent.

VII.3.1 Association Between Prior Variables and Co-Residence at Beginning of Marriage

A step-wise forward conditional logistic regression model is built to study the association between the probability of living with in-laws at the beginning of marriage and some prior variables. The independent variables included are: father and mother literacy, mother ever worked, respondent not being circumcised, childhood place of residence, region, respondent's education level, respondent worked before marriage and degree of control over earning, and religion. The results of the logistic regression model are presented in table vii.3.3, where only the variables that were significantly associated with co-residence at beginning of marriage at the last step of the analysis are listed.

The analysis shows that the following variables: whether mother can read, childhood place of residence, region, education and having control over earning, turned to be significantly associated with the probability of living with in-laws at the beginning of marriage. Women living in urban Governorates were nearly 4 times less likely to live with in-laws than women living in Upper Egypt Rural region. No significant differentials were found between women living in Lower Egypt Rural and Upper Egypt Rural regions. On the other hand, women living in other urban areas, whether in Lower or Upper Egypt, were significantly less likely to live with their in-laws when compared to women living in Upper Egypt rural areas, OR= 0.32 and 0.48 respectively.

Women with at least secondary education were 2.7 times less likely to live with their in-laws than non-educated women (OR=0.365 and p-value=0.000). Primary education also reduces the chances of women to live with their in-laws but not with the same magnitude as secondary education and at a lower significance level (OR=0.809 and p-value=0.014). Working for cash before marriage and having at least some control over earning reduces the chances of women to co-reside with their in-laws at beginning of marriage by almost one and a half times (OR=0.712 and p-value=0.001).

Table vii.3.3 Logistic regression results, odds ratios, of co-residence with in-laws at the beginning of marriage on the prior variables and, Egypt DHS 1995 WS module

Variables significantly associated at last step of the analysis	Sig.	Odds Ratio	95% C.I. for OR	
			Lower	Upper
Mother can read	0.018	*0.81*^	0.68	0.964
Childhood place of residence	0.000			
Capital/large city	0.000	*0.47**	0.37	0.61
City/town	0.004	*0.79**	0.68	0.93
Countryside[r]	-	1.00	-	-
Region	0.000			
Urban Governorates	0.000	*0.25**	0.21	0.31
Lower Egypt Urban	0.000	*0.32**	0.25	0.40
Lower Egypt Rural	0.909	1.01	0.86	1.18
Upper Egypt Urban	0.000	*0.48**	0.40	0.58
Upper Egypt Rural[r]	-	1.00	-	-
Education	0.000			
None[r]	-	1.00	-	-
Primary	0.014	*0.81*^	0.68	0.96
Secondary +	0.000	*0.36**	0.31	0.43
Worked for cash before marriage	0.001			
Never worked[r]	-	1.00	-	-
Paid in kind or in cash with no control	0.158	1.22	0.93	1.59
Paid in cash with some or main control	0.001	*0.71**	0.59	0.86
Constant	0.000	3.57		

* Significant at p-value<0.005. ^ Significant at p-value<0.05. [r] Reference category.

VII.3.2 Relation Between Involvement in Husband Selection and Co-Residence at Beginning of Marriage

It is interesting to look at the relation between the degree of involvement in husband selection process and co-residence at the beginning of marriage. According to timing of events, the involvement in the husband selection process occurs before the co-residence at marriage, however, realistically it is very hard to arrange the two events according to time as the decision of residence arrangement, in many cases, can be taken simultaneously with the husbands' selection process. However, to be able to study the relation between the two variables we will assume that the co-residence at beginning of marriage is the outcome of the interaction of many variables including the degree of involvement in the process of husband selection. The relation between co-residence at beginning of marriage and marriage elements is quite complex, as well, in terms of which can affect which.

As we explained before, although the fact that a husband is related to the wife is in itself an element of marriage, consanguinity, yet it forms a very important part of the husbands' selection process. Also, although age at marriage is one of the marriage elements yet again it can play an important role in both the husband selection process as well as co-residence arrangements at the beginning of marriage as it represent the age of women at time-of-event. Following this both the degree of involvement in the husband selection and age at first marriage will be included in the explanatory variables' set. Table vii.3.4 presents the distribution of ever-married women according to co-residence at beginning of first marriage and degree of involvement of first husband selection process.

Table vii.3.4 Distribution of ever-married women according to co-residence at the beginning of marriage and degree of involvement in husband selection process, Egypt DHS 1995 WS module

Involvement in the husband selection process	Living at beginning of marriage				Number of women
	Wife's family	Husband's family	Someone else	Couples alone	
Related & not met	3.6	67.9	0.5	28.0	748
Related & met	2.9	65.4	0.1	31.6	1487
Not related & not met	1.7	55.6	0.6	42.2	1657
Not related & met	1.3	46.8	0.0	51.8	1556
Related & chose	1.5	56.9	0.0	41.6	777
Not related & chose	2.7	34.5	0.4	62.3	897
Total	2.2	54.5	0.3	43.1	7123

Table vii.3.4 shows that women with the least degree of involvement in selecting their husbands reported the highest proportion of living with their in-laws at beginning of marriage, 68 percent, while women with the most degree of involvement reported the lowest proportion, 34 percent. We notice that women who were not related to their husbands, regardless to whether they had chosen or met, reported living with in-laws less than those married to relatives. However, even among those who were married to non-relatives, the proportion of women living with in-laws declines as the women had more involvement in the selection, meeting or choosing the husband.

In order to have a better view of the association between the involvement in husband selection and co-residence at beginning of marriage, two step-wise logistic regression models are performed in the analyses. The first model studies the association between the husband selection process alone and co-residence with in-laws using the latter as the outcome. Then a second model that includes the set of prior variables as well as

the degree of involvement in husband selection in addition to age at marriage and duration of marriage as independent variables. Table vii.3.5 presents the results of the first logistic regression model studying the association between the degree of involvement in the husbands' selection process and the probability of living with in-laws at the beginning of marriage, no more independent variables were included in this model.

Table vii.3.5 Results of first logistic regression model, Odds Ratios, to test the association between degree of involvement in husband selection process and co-residence with in-laws at the beginning of marriage, Egypt DHS 1995 Ws module

Variables included in the model	Sig.	Odds Ratio	95% C.I. for OR	
			Lower	Upper
Involvement in husband selection	0.000			
Related & not met[r]	-	1.00	-	-
Related & met	0.233	0.89	0.74	1.08
Not related & not met	0.000	*0.59**	0.49	0.71
Not related & met	0.000	*0.42**	0.35	0.50
Related & chose	0.000	*0.62**	0.51	0.77
Not related & chose	0.000	*0.25**	0.20	0.31
Constant	0.000	-	-	-

[r] Reference category, * significant on p-value<0.005.

The results of the first logistic regression model show that women who were not related to the husband, or chose the husband themselves were less likely to live with in-laws at beginning of marriage. Moreover, those who were not related and chose the husband were the most unlikely group to live with their in-laws at beginning at marriage, OR = 0.25. The results show that being related and meeting the husband before marriage was not significantly associated with the probability of living with in-laws at beginning of marriage. Table vii.3.6 presents the results of the second logistic regression model of the association between all the prior variables including the degree of involvement in the husband selection process with the probability of living with in-laws at the beginning of marriage.

As we saw in Section VII.2, the degree of involvement in the husband selection process is already affected by the respondent's and her family's background characteristics. Thus, when controlling for these variables, we can measure actual association between the level of involvement in husband selection and co-residence at beginning of marriage. It is interesting to see that when we controlled for degree of involvement in husband selection process as well as other background variables, both

mother literacy and earning control turned to be insignificantly associated with co-residence at marriage (contrary to the results in Section VII.3.1, see Table vii.3.3).

Table vii.3.6 Results of the second logistic regression model, odds ratios, of co-residence with in-laws at the beginning of marriage on degree of involvement in husband selection and prior variables, Egypt DHS 1995 WS module

Variables included in the model	Sig.	Odds Ratio	95% C.I. for OR	
			Lower	Upper
Involvement in husband selection	0.000			
Related and not met[r]	-	1.00	-	-
Related and met	0.748	1.03	0.84	1.26
Not related and not met	0.006	*0.76^*	0.62	0.92
Not related and met	0.002	*0.73**	0.59	0.89
Related and chose	0.322	0.89	0.71	1.12
Not related and chose	0.000	*0.55**	0.43	0.69
Age at first marriage	0.000			
<16	0.261	1.11	0.92	1.34
16-19	0.003	*1.28**	1.09	1.51
20-21[r]	-	1.00	-	-
22-24	0.009	*0.77^*	0.63	0.94
25+	0.000	*0.61**	0.48	0.78
Father can read	0.827	0.99	0.87	1.11
Mother can read	0.074	0.86	0.73	1.01
Mother ever worked	0.291	0.88	0.70	1.11
Not circumcised	0.095	0.69	0.44	1.07
Childhood place of residence	0.000			
Capital/large city	0.000	*0.49**	0.40	0.60
City/town	0.286	0.92	0.78	1.08
Countryside[r]	-	1.00	-	-
Region	0.000			
Urban Governorates	0.000	*0.36**	0.30	0.43
Lower Egypt Urban	0.000	*0.42**	0.34	0.52
Upper Egypt Urban	0.000	*0.61**	0.49	0.76
Lower Egypt Rural	0.000	*1.45**	1.24	1.69
Upper Egypt Rural[r]	-	1.00	-	-
Education level	0.000			
No education[r]	-	1.00	-	-
Primary	0.010	*0.80^*	0.68	0.95
Secondary +	0.000	*0.42**	0.36	0.50
Working for cash before marriage	0.110			
Never worked[r]	-	1.00	-	-
Worked With no control	0.131	1.22	0.94	1.58
Worked with some or main control	0.180	0.88	0.74	1.06
Christian	0.309	0.88	0.68	1.13
Constant	0.000	2.89		

[r] Reference Category. * Significant on p-value<0.005. ^ Significant on p-value <0.005.

Being not related and meeting or choosing the husband significantly reduces the chances of a woman to live with her in-laws at beginning of marriage (OR=0.77 and 0.55 respectively). The results also show that being not related to, even when not meeting, the husband before marriage reduces the chances of living with in-laws at beginning of marriage but on p-value<0.05 only. On the other hand, even when a woman meets or chooses her related husband this does not significantly reduce her chances to live with his family at beginning of marriage. The results reflect a well-documented traditional residence arrangement after cross-relatives marriages, where the husband brings his related wife to the extended family household. This is especially true for women who had lived their childhood in the countryside and those currently living in rural areas, as confirmed by the results in table vii.3.6.

Women who had married for the first time at age 22 or more, especially those married at age 25 or more, were significantly less likely to live with their in-laws at the beginning of marriage than women married at age 20-21. Women's education level still significantly reduces the chances of women to live with their in-laws, for example women with at least secondary education were 2.6 times less likely to do so when compared to non-educated women. No other independent variables were significantly associated with the probability of living with in-laws at the beginning of marriage.

VII.4 RELATION BETWEEN INVOLVEMENT IN HUSBANDS' SELECTION AND POST-MARITAL INTER-SPOUSAL RELATIONS

In this section we examine the association between the respondent's degree of involvement in the husband selection process and different post-marital indices that reflect the inter-spousal relationship after the selection had been performed. The selected indices are described in Section VII.1. These indices reflect the post-marital inter-spousal relations between the respondent and her current or last husbands. Since our interest is to study the relationship between the husband selection process and the post-marital inter-spousal relations, we constrain our sample to those who had married only once. By doing this we can measure the association between the degree of involvement in first husband selection process and the inter-spousal relationship with the first husband. Out of the 7123 ever-married women who had completed the women's-status module, 6799 had been married only once and had been included in the analysis in this section.

Table vii.4.1 presents the values and distributions for each of the inter-spousal relations indices, the table also presents the mean value for each index. All indices are collected from all ever-married women, except for the spousal communication index that had been collect for women who were married at the time of survey only, 6321 women.

Table vii.4.1 Distribution of the inter-spousal relations indices for ever-married women who married for only once, Egypt DHS 1995 WS module

Inter-spousal relations indices													
Decision index		Spousal communication		Freedom of movement index		Divorce equality		Acceptance of beating		Direct access of money		Gender role index	
Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
0	10.7	0	28.8	0	4.9	0	10.3	0	13.4	0	36.8	0	3.0
1	5.3	1	17.5	1	8.7	1	31.5	1	9.4	1	10.8	1	5.6
2	7.4	2	19.2	2	14.3	2	30.9	2	13.2	2	13.8	2	12.8
3	10.7	3	16.2	3	28.6	3	15.5	3	15.2	3	14.1	3	21.2
4	14.0	4	13.3	4	29.4	4	7.9	4	14.4	4	24.5	4	26.1
5	18.2	5	5.0	5	14.1	5	3.8	5	16.2			5	19.5
6	17.5							6	16.6			6	9.8
7	16.2							7	1.6			7	1.9
No.	6799		6321		6799		6799		6799		6799		6799
Mean	*4.17*		*1.82*		*3.11*		*1.90*		*3.31*		*1.78*		*3.69*

Table vii.4.1 shows that interviewed ever-married women were on average involved, either solely or jointly, in four household related matters out of seven possible. These matters are related to household budget, family visits, food cooked in the household, children's education, medical attention for children, and use of family planning methods. Just above half of the respondents, 52 percent, reported being involved in at least five household matters.

For currently married women only, the spousal communication index reflects how many topics the husbands regularly discuss with their wives. As mentioned in Section VII.1, there were five possible topics, namely, events at work, future plans, financial plans, gossip and news, and children's activities. Just less than half of women did not discuss any or discussed only one topic with their husbands, while 18 percent of the cases had their husbands discussing regularly at least four topics of the possible five.

Around 72 percent of ever-married women were allowed to go to three or more places alone, and only 5 percent were not allowed to go to any of the five places alone. One tenth of women did not see that men and women have similar rights to seek divorce for any similar reasons, and only 12 percent thought that they have similar rights in at

least four situations. Only 13 percent of ever-married women thought that husbands were not supposed to beat their wives in any situation while 77 percent of them thought that husbands are justified to beat their wives in at least two situations. Above one third of sampled women had to seek permission before accessing money to buy any household's item, on the other hand, a quarter of women had direct access to money to buy any of the four items. Table vii.4.1 shows that 21 percent of women scored less than three in the gender role index, and 12 percent scored 6 or 7, mean score was 3.7.

One of the ways to study the association between the husband selection process and the different inter-spousal relation indices is to category the chosen post-marital relation indices, and then use logistic regression models and multinomial logistic regression models, to study the association between different independent variables and the probability of falling into a certain category of the indices. One way of grouping the indices, in the light of the original count distributions, can be as following: *Decision index:* 1. No involvement in any decisions, 2. 1-2 topics, 3. 3-5 topics, 4. 6-7 topics. *Spousal Communication index*: 1. No communications on any topics, 2. 1-2 topics, 3. 3-5 topics. *Freedom of movement index*: 1. 0-2 places, 2. 3-5 places. *Divorce equality index*: 1. No equal reasons, 2. 1-2 reasons, 3. 3-5 reasons. *Acceptance of beating*: 1. 0-1 occasions, 2. 2-4 occasions, 3. 5-7 occasions. *Direct access to money index*: 1. No items, 2. 1-3 items, 3. 4 items. *Gender role index*: 1. 0-2, 2. 3-4, 3. 5-7. *Ever been beaten since first marriage*: 0. No, 1. Yes. This grouping took into account that in some indices the percentage of women who scored zero was relatively high. For example, 29 percent of currently married women scored zero in the spousal communication index compared to 17 percent scored one in the same index. Another example is the direct access to money index where 37 percent of ever-married women had no direct access to money at all while only 11 percent had access to buy only one item. It is interesting to study the characteristics of those who scored very low or very high in each of the inter-spousal relations indices, for this reason the reference category for each index is usually chosen to be the middle category.

To understand the relationships between the degree of involvement in the husband selection process and the post marital inter-spousal relations more clearly, the analyses are performed in two steps. First, we study the association between degree of involvement in the selection process and each category of the indices without including other independent variables in the models. Second, we build a new set of

models where other individual characteristics are included in the independent variables list in addition to the degree of involvement in the husband selection process.

VII.4.1 First Step in the Analysis

Table vii.4.2 presents the results of the logistic regression model and multinomial logistic regression model of the occurrence of beating and the acceptance of beating, on the degree of involvement in the husband selection process.

Table vii.4.2 Results of logistic regression and multinomial regression models of the occurrence of beating and degree of acceptance of wives' beating on degree of involvement in husband selection, Egypt DHS 1995 WS module

Degree of involvement	Being Beaten	Acceptance of beating		
		0-1	2-4[r]	5-7
Related and not met[r]	1.00	1.00	1.00	1.00
Related and met	0.62*	1.64*	1.00	0.66*
Not related and not met	0.88	1.34^	1.00	0.67*
Not related and met	0.54*	2.34*	1.00	0.40*
Related and Chose	0.61*	1.71*	1.00	0.64*
Not related and chose	0.56*	2.57*	1.00	0.32*

[r] Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05.

The results show that any degree of involvement, except being not related and never met before marriage, reduces the chances of the wives being beaten when compared to being related and not met husband. Consistently, women who had any degree in selecting their first husbands were significantly less likely to justify the beating in many situations, 5-7, and more likely to not justify it at all or only in one occasion when compared to the same reference group. Those who were not related and had met or chosen their first husbands had the highest odds ratios not to be beaten and not to justify at all or only in one occasion wives beating, 2.34 and 2.57 respectively.

Table vii.4.3 presents the results of the regression models examining the association between the involvement in the husband selection process and each of the decision index, spousal communication index, and freedom of movement index. The results show that being not related, irrespective of meeting or choosing, and being related but chose husband significantly increases the number of household decisions the woman is involved in from 3-5 to 6-7 subjects. Women who were not related and chose their husbands had the highest odds ratios, 2.2, to be involved in most of the household decisions.

Regarding spousal communication levels among women who were married at the time of survey, women who were not related and chose the husbands also had the highest odds ratios, 3.9, to have regular discussions in 3-5 topics. Only women who were related and met their husbands did not have significantly higher chances of having better spousal communication levels than women who were related and never met their husbands before marriage. Table vii.4.3 shows that women with any degree of involvement in the husband selection process were significantly more likely to be allowed to go to more places alone. In particular women who were not related and either met or chosen their husbands had significantly higher odds ratios, 2.5 and 3.1 respectively.

Table vii.4.3 Results of logistic regression and multinomial regression models of some inter-spousal relations on the degree of involvement in husband selection, Egypt DHS 1995 WS module

Degree of involvement in husband selection	Decision index				Spousal communication †			Freedom of movement	
	0	1-2	3-5^r	6-7	0	1-2^r	3-5	0-2^r	3-5
Related & not met^r	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Related & met	0.80	0.88	1.00	1.20	0.80	1.00	1.05	1.00	1.63*
Not related & not met	1.18	0.80^	1.00	1.43*	0.75*	1.00	1.45*	1.00	1.70*
Not related & met	0.59*	0.64*	1.00	1.65*	0.69*	1.00	2.27*	1.00	2.51*
Related & chose	0.61*	0.64*	1.00	1.31^	0.53*	1.00	2.00*	1.00	1.49*
Not related & chose	0.54*	0.46*	1.00	2.22*	0.39*	1.00	3.89*	1.00	3.11*

^{r} Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05. † Among currently married women only.

Table vii.4.4 presents the results of the regression models examining the association between the involvement in the husband selection process and each of the direct access to money, gender role index, and divorce equality index. Women with any degree of involvement in the husband selection process were significantly less likely to have no direct access to money. Again, women who were not related and met or chosen their husbands were the least likely ones to have no direct access to money at all. However, there were no significant differences in having full access to money according to degree of involvement in the husband selection process. Oddly respondents who were not related and met their husbands before marriage were significantly less likely to have full direct access to money than women who were related and never met their husbands before marriage.

Regarding the gender role index, the results show that women who were not related and chose their husbands, with the most degree of involvement, were more likely to score very high in the gender role index (OR=1.58, p-value<0.005). The results show that the degree of involvement, except being not related and chose the husband, does not affect the probability of scoring very high in the divorce equality index. However, being not related and choosing the husband reduces the chances of woman to score zero in this index by nearly 3 times.

Table vii.4.4 Results of the multinomial regression models of some inter-spousal relations on the degree of involvement in husband selection, Egypt DHS 1995 WS module

Degree of involvement in husband selection	Access to money			Gender role index			Divorce equality index		
	0	1-3^r	4	0-2	3-4^r	5-7	0	1-2^r	3-5
Related & not met^r	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Related & met	0.66*	1.00	0.65	0.93	1.00	0.90	0.84	1.00	0.88
Not related & not met	0.63*	1.00	1.03	0.89	1.00	0.94	0.71*	1.00	1.02
Not related & met	0.38*	1.00	0.66*	0.80^	1.00	1.18	0.59	1.00	0.94
Related & chose	0.69*	1.00	0.76	0.69^	1.00	1.25^	0.74^	1.00	1.15
Not related & chose	0.31*	1.00	0.89	0.57*	1.00	1.58*	0.34*	1.00	1.28^

^{r} Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05.

VII.4.2 Second Step in the Analysis

In the second step of the analysis, we perform a set of regression models to study the association between the degree of involvement in husband selection process, co-residence at beginning of marriage, respondent's and her family's background variables, and duration of marriage and age at first marriage and each of the inter-spousal relations indices. The full results are listed in the appendix Section VII.7. Table vii.4.5 summaries the results of the regression models for the association between the degree of involvement in the husband selection process, as well as other individual's and family's characteristics, on the different inter-spousal relations indices. For multinomial regressions the table only presents the results of significant contrasts with the middle categories. For example, for direct access to money, the odds ratios of having full access and not 1-3 items are presented, rather than having no access at all and not 1-3 items. An exception is acceptance of beating, where the negative outcome is presented, which is justifying beating for 5-7 reasons against 2-4 reasons. However, the discussion will cover the full results, which are presented in tables vii.7.1 to vii.7.3 in the appendix.

The results reflects that women who had been more involved in the husband selection process, especially women who were not related and had chosen their husbands, were more likely to have better inter-spousal relations after marriage. Women who were related and had any degree of choice, either met or chosen, were significantly less likely to be beaten than other women. The degree of involvement in the husband selection process did not significantly increase the chances of women to have high communication levels with their husbands. However, women who had chosen their husbands, and in particular those who were not related, were less likely to have no spousal communications at all when compared to women who were related and never met the husband, OR= 0.71 and 0.65 and p-value<0.05 and <0.005 respectively (see Table vii.7.2 in appendix).

The results do not show large differentials in the inter-spousal relationships between women who had no involvement at all and those who were related but reported choosing their own husbands. The main differentials between the last two groups were in the probability of being beaten and the freedom of movement index and both were in significant level p<0.05 only. Such results suggest that reporting choosing a relative as a husband does not necessarily imply a higher level of autonomy and involvement of the woman in her husband selection process. This may suggest that the reason for a woman to report choosing her husband while he is a relative could be anything else but having really chosen him. It could be that the respondent was brought up knowing that she is going to marry her cousin due to strong kinship structure of the family, and perhaps over the years she might have accepted such choice and even perceived it as her own.

Not living with in-laws was found to be significantly associated with most of the post-marital inter-spousal relations. However, the direction of the relationship was not exactly as one might expect. Women who did not start their marital life with their in-laws had significantly lower chances of scoring very high in the spousal communication and gender role indices and also were significantly less likely to be allowed to more places in their own and to have higher divorce equality indices when compared to women who had lived with their in-laws.

Table vii.4.5 Summary of logistic and multinomial regression models, odds ratios presented, of different inter-spousal relation indices on prior variables for women who had married only once, Egypt DHS 1995 WS module

Independent variables	Inter-spousal relation indices							
	Beaten	Accept beating 5-7 vs. 2-4	Decision index 6-7 vs. 3-5	Spousal comm.[1] 3-5 vs. 1-2	Freedom to move 3-5 vs. 0-2	Money Access 4 vs. 1-3	Gender role 5-7 vs. 3-4	Divorce equality[2] 3-5 vs. 1-2
Involvement in the selection								
Related & not met	R	R	R	R	R	R	R	R
Related & met	0.75*	0.72*	-	-	1.68*	-	-	-
NR & not met	-	-	-	-	1.40*	-	0.77^	-
Not related & met	-	0.64*	1.28^	-	1.82*	0.71^	-	-
Related & chose	0.75^	-	-	-	1.34^	-	-	-
Not related & chose	-	-	1.53*	-	1.77*	0.73*	1.32^	1.31^
Didn't live with in-laws	-	0.78*	1.37*	0.86^	0.71*	-	0.83^	0.83*
Duration of marriage								
0-4	0.55*	-	0.57*	0.59*	0.59*	-	-	-
5-9	R	R	R	R	R	R	R	R
10-14	-	-	1.44*	-	1.40*	1.60*	-	-
15-19	0.81^	-	1.56*	-	1.67*	1.45*	-	-
20+	0.61*	-	1.76*	0.68*	1.78*	2.15*	-	-
Age at marriage								
<16	-	-	-	-	0.83^	0.73^	-	-
16-19	-	-	-	-	-	0.81^	-	-
20-21	R	R	R	R	R	R	R	R
22-24	-	-	-	-	-	-	-	-
25+	-	-	-	-	-	-	-	-
Father can read	-	0.86^	1.19^	1.37*	-	-	-	-
Mother can read	-	-	-	1.34*	-	-	-	-
Mother ever worked	2.25*	-	-	-	-	-	1.40^	-
Childhood place of res.								
Capital/large city	0.75^	0.70^	1.57*	-	1.70*	0.41*	-	1.50*
City/Town	-	0.74*	-	-	-	-	-	1.40*
Countryside	R	R	R	R	R	R	R	R
Region								
Urban Governorates	-	0.38*	-	-	3.82*	1.47*	1.48*	0.59*
Lower Egypt Urban	-	0.54*	1.55*	1.83*	1.77*	-	-	0.49*
Upper Egypt Urban	-	-	-	-	1.62*	1.46^	1.41*	-
Lower Egypt Rural	-	0.66*	-	1.33*	2.30*	-	0.76*	0.73*
Upper Egypt Rural	R	R	R	R	R	R	R	R
Education								
No education	R	R	R	R	R	R	R	R
Primary	0.67*	0.67*	1.36*	1.61*	-	-	1.41*	-
Secondary +	0.27*	0.34*	1.71*	1.87*	-	1.56*	1.43*	0.77^
Worked for cash before marriage								
Never worked	R	R	R	R	R	R	R	R
No control	1.73*	1.97*	-	-	-	-	-	-
Some control	-	-	-	1.53*	-	-	-	-
Not circumcised	0.42*	-	-	-	-	-	1.54^	-
Christian	-	-	1.36^	-	-	-	-	N/A

1 For currently married women only. 2 Excluding religion from independent variables. R Reference category. – Not significantly different from the reference category. *Significant for p-value <0.005. ^ Significant for p-value<0.05. N/A not applicable.

On the other hand, women who did not live with their in-laws were less likely to justify wives' beating in many situations and were more involved in the household decision making process. There were no significant differences in the probability of beating according to whether women had started their marital lives with their in-laws or not. Women who did not live with their in-laws were significantly less likely to have no access to money at all when compared to those who had, OR= 0.76 and p-value<0.005 (see Table vii.7.3).

The analyses show that women with longer durations of marriage, irrespective of other characteristics, had better inter-spousal relations than those with shorter durations, especially those married 0-4 years before the survey. One might explain such observations by assuming that women may have accumulated more autonomy over their marital time, or due to that as duration of marriage increases the chances of women to be widowed or divorce are higher and thus they would be more involved as they become the solo head of the house. However, looking at the distribution of ever-married women by marital status at time of survey, presented in table vii.4.6, we notice that up to duration of marriage 15-19 years, at least 93 percent of women were married at time of survey and it drops to 85 percent among women married for 20 years or more. Such results suggest that women with smaller durations of marriage than 20 years, who had significantly better inter-spousal relations were more likely to have gained such a position over time. It should be noted that it seems that women gain more day-to day autonomy, such as direct access to money, freedom of movement and decision making, however, the duration of marriage on its own does not improve women's perceptions of some issues such as divorce equality, non-traditional gender roles or accepting of beating.

Table vii.4.6 Distribution of ever-married women who had married only once according to duration of marriage and marital status at time of survey, Egypt DHS 1995 WS module

Duration of marriage	Marital Status at time of survey			Number of women
	Married	Widowed	Divorced	
0-4	97.4	0.0	2.5	1336
5-9	97.3	0.6	2.2	1258
10-14	95.4	2.6	2.0	1165
15-19	93.2	5.1	1.7	1230
20+	84.9	13.3	2.8	1810
Total	93.0	5.0	2.0	6799

Age at first marriage does not seem to be significantly associated with most of the post-marital inter-spousal relations indices. However, women who had married very young, earlier than 16 years of age, were significantly less likely to be allowed to go to more places or to have full direct access to money. The same group of women were more likely to score very low in the gender role index, 0-2 against 3-4, when compared to women married at age 20-21 (see Table vii.7.3). On the other hand, women who had married relatively very late, age 25 or more, do not seem to have a much better post-marital inter-spousal relations than women who had married in the middle age group, 20-21 years.

Respondents with literate mothers or fathers had significantly higher spousal communication levels than their counterparts. Table vii.7.3 shows that the same group of women were less likely to score very low in the gender role index, OR= 0.75 and 0.77 and p-value<0.05 and <0.005 respectively, when compared to women with illiterate mothers or fathers. Women with literate mothers were twice less likely to be not involved in any household decision rather than in 3-5 decisions when compared to women with illiterate mothers (see Table vii.7.2). Also, women with literate fathers were significantly more involved in the decision making process and less accepting of wives' beating. However, table vii.4.5 shows that the magnitude of association between the respondents' parents' literacy is not large on most of the post-marital relations when other variables are controlled for.

Respondents with mothers who ever worked for cash had significantly higher acceptance of non-traditional gender role and they were less likely to score very low in either the communication level or the divorce equality indices, however, on significant level p<0.05 only (see Tables vii.7.2 and vii.7.3). On the other hand, the same group of women were 2.2 times more likely to be beaten after marriage than respondents with mothers who never worked. This rather confusing result is difficult to explain but can be related to the mothers' nature of work which we have no information about. It is also should be kept in mind that only 5.6 of respondents reported that their mothers had ever worked for cash before respondents were married. To have some idea about the characteristics of mothers who had ever worked a logistic regression model was performed to study the relation between some characteristics and the probability of the mother to work. The independent variables included were: whether father can read, mother can read, region of residence, respondent education, respondent not circumcised, and number of goods owned by

the respondents household as a proxy of their mothers' standard of living. The results of the logistic regression model are shown in table vii.4.7.

Table vii.4.7 Results of logistic regression model of mother working on some characteristics among women who had married only once, Egypt DHS 1995 WS module

Independent variables	Sig.	Odds Ratio	95% C.I. for Odds Ratios	
			Lower	Upper
Father can read	0.000	*0.59**	0.46	0.76
Mother can read	0.000	*2.36**	1.77	3.15
Region	0.000			
Urban Governorates	0.000	*2.38**	1.60	3.54
Lower Egypt Urban	0.000	*2.54**	1.64	3.93
Upper Egypt Urban	0.000	*3.79**	2.68	5.34
Lower Egypt Rural	0.000	*0.59**	0.46	0.76
Upper Egypt Rural[r]	-	1.00	-	-
Education	0.000			
None[r]	-	1.00	-	-
Primary	0.047	*0.70^*	0.49	1.00
Secondary +	0.000	*0.45**	0.32	0.65
Not circumcised	0.000	*3.63**	2.15	6.14
Goods owned by household	0.223			
0	0.553	1.17	0.70	1.97
1-3	0.801	0.97	0.75	1.25
4-7[r]	-	1.00	-	-
8-15	0.052	0.73	0.53	1.00
Constant	0.000	0.03		

[r] Reference category. ^ Significant on p-value<0.05. * Significant on p-value<0.005.

The results suggest that respondents who had any education and those with literate fathers were significantly less likely to report that their mothers had ever worked for cash. For example, respondents with at least secondary education were twice as likely to have mother who had never worked than non-educated respondents. On the other hand, uncircumcised respondents, those living anywhere except Upper Egypt rural, and those with literate mothers were significantly more likely to have mothers who had ever worked. The association between the respondents' education level and the chances of her mother not having worked, in addition to the positive association between the same variable and the inter-spousal relations, may explain the puzzling relationship between mother working and inter-spousal relations. On other words, non-educated women were more likely to have mothers who had ever worked and the

same group were more likely to be beaten (see Table vii.4.5). In turn this may explain why respondents with mothers who ever worked were more likely to be beaten.

Both childhood and current place of residence were significantly associated with the inter-spousal relationships. In particular, women who had lived their childhood in the Capital or other large city and those who were living in the Urban Governorates and Lower Egypt urban regions had a significant better post-marital inter-spousal relations profile. On the other hand, women who were living in the Upper Egypt Rural region had the worst inter-spousal relations profile, except on the gender role index where women living in Lower Egypt Rural region were less likely to score very high than those living in Upper Egypt Urban. In many indices there were no significant differentials between women living in rural or urban areas in Upper Egypt, which places women living in Upper Egypt in general in a less favourite position than women living in other regions. As shown earlier, the region of Upper Egypt Rural has the highest poverty levels and lowest human development indices in Egypt (see Section VI.1). The negative association between this region with its very poor profile and marriage elements as well as inter-spousal relations addresses the importance of the macro-level variables on marriage dynamics as explained in chapter II.

Respondents' education level was one of the main important characteristics associated with the inter-spousal relations. Women with any education, and especially those with at least secondary education were significantly more likely to have much better inter-spousal relations than non-educated women. For example, women with at least secondary education were 1.7 times more likely to take part of the decision-making regarding most issues related to the household, and 1.9 times more likely to have the highest levels of spousal communication levels than non-educated women. The results reflect a well-documented association between education and women's autonomy (Mason, 1987, Dixon-Mueller, 1993, and Kishor, 2000). However, the results do not show any significant association between the respondents' education level and her post-marital freedom of movement.

Working before marriage, however, did not show the same strong relationship with inter-spousal profile as education. The only positive relation was that women who had worked for cash and had at least some control over their earnings were 1.5 times more likely to have higher spousal communication levels than those who had never worked. On the other hand, the results suggest that women who had worked before marriage but had no control over their earnings were in a worse position than those who had not

worked at all regarding domestic violence and acceptance of beating. These results reflect the importance of the nature of work experience, rather than the work experience in itself, to have positive implications on the women's status. Women who had paid in kind or had no control over their earning were probably involved in types of work that may have reduced their self-esteem rather than enhanced it. Moreover, table vii.4.8 shows that 84 percent of women who had worked before marriage but had no control over their earnings were not educated compared to 70 percent among women who did not work before marriage at all. Such results suggest that the nature of work done by this particular group of women did not necessarily enhance their autonomy or their position in the society.

Table vii.4.8 Distribution of women who had married only once by type of work before marriage and education level, Egypt DHS 1995 WS module

	Highest education level			Number of women
Worked for cash before marriage	No education	Primary	Secondary	
Did not work before marriage	69.1	14.3	16.6	5458
Paid in kind or in cash with no control	84.2	6.9	8.9	322
Paid in cash with some or main control	23.7	11.0	65.2	1010
Total	63.1	13.5	23.4	6799

The analyses suggest that being not circumcised, which in itself is a sign of not accepting traditional gender roles by the respondents' parents, significantly reduces the probability of women to be beaten after marriage and the acceptance of beating, it also improves the acceptance of non-traditional gender roles.

There were almost no differentials between Christians and Moslems regarding inter-spousal relationships when other characteristics are controlled for except that Christian women were more likely to have higher involvement in the household decision making on p-level <0.05 only (see Table vii.4.5).

VII.5 RELATION BETWEEN INVOLVEMENT IN HUSBANDS' SELECTION PROCESS AND SOME MARRIAGE ELEMENTS

VII.5.1 First Marriage Ending in Divorce

Egypt DHS 1995 women's status module provides us with information on how the first marriage had ended, if it had, whether in divorce or in widowhood. In this section the relation between the degree of involvement in the husband selection process, and other prior variables, and the probability of first marriage ending in divorce is studied. Since

the occurrence of divorce is highly affected by censoring, life table techniques are used. The time variable in the life table should be duration of marriage, i.e. time since first marriage until termination by divorce or until survey point where marriage is still intact. However, the variable used which is time since first marriage does not really reflect the 'duration of first marriage'. Terminations due to widowhood will be excluded from the analysis, thus, a sub-sample of 6714 ever-married women who had not been widowed in their first marriage is used, 392 of those had their first marriage ended in divorce and out of them 257 women had remarried. Since we don't know the timing of divorce, the data on divorce represent current-status data and had to be analysed using current-status data analysis approach (see Section III.5).

Figure vii.5.1 presents the current-status proportions of first marriage ending in divorce according to years since first marriage, excluding those who were widowed in their first marriage. In total only 5.8 percent of the included women had their first marriage ended in divorce. The proportion of divorce increases steadily from 1.1 percent among women with marriage duration 0-2 years to 8 percent among women who had been married for 15 years or more.

Figure vii.5.1 Current-status proportions of first marriage ending in divorce by time since first marriage, Egypt DHS 1995 WS module

Years since first marriage
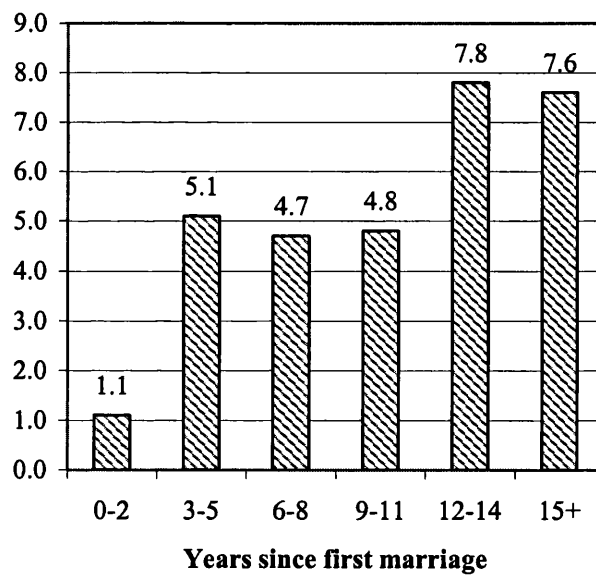
Differentials in First Marriage Ending in Divorce

To analyse the current-status data of first marriage ending in divorce we used the log time since first marriage in years as continuous explanatory variables to be able to interpret the models as a Proportional Hazard model (PH). We used non-parametric PH model and fitted four link functions to the data, the complementary log-log, the logit, the probit and the negative log-log. To interpret such model as a PH model the exponential of the parameter estimates are used to estimate the relative risks. We compared twice the difference of the log-likelihood (deviance). Other explanatory variables were; first husbands' age at marriage, respondents' age at first marriage,

degree of involvement in husband selection process, co-residence with in-laws at beginning of marriage, region, childhood place of residence, first husbands' education level, respondents' education level, respondent worked for cash before marriage, respondent's mother can read, respondent's father can read, respondent's mother ever worked, and respondent been circumcised. Our dependent variable is the probability of experiencing first marriage dissolution whether due to divorce. Table vii.5.1 presents the analysis of deviances for first marriage ending in divorce in Egypt 1995 using the sample of the women's status module.

The results show that the best link function, with the least deviance, for the current-status data of first marriage ending in divorce is the negative log-log function. Table vii.5.1 shows that the best model is formulated of the following explanatory variables: log-duration since first marriage, first husbands' age at marriage, degree of involvement in husband selection process, first husband's education level, respondent's education level, co-residence with in-laws at beginning of marriage, and respondent's father can read, provides a better fit for our model explaining marriage dissolution.

Table vii.5.1 Analysis of the deviances for first marriage ending in divorce excluding women who had their first marriage ending in widowhood, Egypt DHS 1992 WS module

	Logit	Probit	Complementary log-log	Negative log-log	DF
Total deviance	2238.7	2243.8	2249.1	2236.8	5947
Reduction in deviance					
Log (duration of marriage)	*193.4*	*194.6*	*195.4*	*193.0*	*1*
+Husband age at marriage	*191.2*	*189.4*	*188.0*	*192.8*	*5*
+Involvement	*45.7*	*48.1*	*50.5*	*44.5*	*4*
+ Husband education	*33.3*	*33.6*	*33.2*	*33.3*	*2*
+ Education	*13.3*	*15.2*	*16.2*	*7.8*	*2*
+ Co-residence with in-laws	*19.1*	*11.8*	*12.7*	*10.3*	*1*
+ Father can read	*17.4*	*14.8*	*12.0*	*14.6*	*1*
+Working before marriage	2.7	3.2	4.4	2.7	2
+ Region	9.4	11.7	14.5	8.4	4
+ Not Circumcised	3.6	2.9	2.5	3.6	1
+ Wife's age at marriage	3.5	3.7	3.8	3.6	4
+ Childhood place of residence	1.7	0.0	1.6	2.1	2
+ Mother can read	0.7	1.0	1.5	0.7	1
+ Mother ever worked	0.2	0.2	0.3	0.1	1
Best Model	*2028.5*	*2032.5*	*2037.6*	*2027.3*	*4194*

The estimated relative risks for different explanatory variables in the best model, using the negative log-log function, are presented in table vii.5.2.

The result of the current-status analysis shows that husband's age at marriage, and not the respondents', was significantly associated with the risk of divorce. Men married at age 30 or more were more likely to divorce their wives than those married at age 25-29. Especially those married at age 35 or more, as they were 2.5 times more likely to divorce their wives. Note that respondents' age at marriage reflects their first marriages while no information is available about the husbands' marriage. Such observations can be linked to polygyny where taking second wives usually occur among older men who are also more likely to divorce their second wives, however, the EDHS 95 data does not contain any information about polygyny or wives' rank thus we can not test such assumptions.

Again husbands' education level, and not the respondents', were more strongly associated with the probability of divorce. Men with any, and especially with at least secondary, education were significantly less likely to divorce their wives than non-educated husbands. On the other hand, respondents with primary education were twice more likely to have their first marriage ending in divorce than non-educated women, on p-value<0.005. Also women with literate fathers were significantly at higher risk of their first marriage ending in divorce, however on lower significant level of p=0.03 only.

Table vii.5.2 shows that women who were related to their first husbands and chosen the husbands, were significantly at lower risk of divorce, RR =0.54, however, on the border of significance p=0.049 only. On the other hand, women who were not related to their husbands and choose them were significantly at higher risk of divorce, RR=2.7 and p=0.000. Such result can be justified under the assumption that the two related families of both partners act together to prevent the occurrence of divorce as it had been suggested as one of the advantages of consanguinity (Bittles et al, 1990).

Women who lived with their in-laws at beginning of marriage were at lower risk of divorce, RR= 0.7 and p=0.003. This can be linked to cross-relative marriages, see Section VII.3, where women who were related to their husbands were significantly more likely to live with their in-laws at beginning of marriage (see Table vii.3.6). Through the same dynamics both families would do their outmost to prevent divorce as it is seen by the Egyptian society as an unwanted event and any measures to prevent it would be taken (Hoodfar, 1997).

Table vii.5.2 Results of the best model, relative risks, for the current-status data, using the negative log-log link function for differentials in first marriage ending in divorce, Egypt DHS 1995 WS module

	Sig.	Relative Risk	95% CI for RR	
			Lower	Upper
Log time since first marriage	0.004	.	.	.
Involvement in husband selection				
Related & not met	.	1.00	.	.
Related & met	0.097	0.68	0.44	1.07
Not related & not met	0.207	1.28	0.87	1.88
Not related & met	0.057	1.48	0.99	2.21
Related & chose	0.049	*0.54^*	0.29	1.00
Not related & chose	0.000	*2.69**	1.77	4.09
Didn't live with in-laws	0.003	*1.43**	1.13	1.80
First husband's age at marriage				
<20	0.245	1.25	0.86	1.80
20-24	0.072	0.74	0.54	1.03
25-29	.	1.00	.	.
30-34	0.001	*1.71**	1.24	2.38
35+	0.000	*2.52**	1.83	3.47
First husband's education				
None	.	1.00	.	.
Primary	0.000	*0.45**	0.35	0.59
Secondary+	0.000	*0.28**	0.19	0.43
Respondent's education				
None	.	1.00	.	.
Primary	0.001	*2.26**	1.39	3.66
Secondary+	0.179	1.44	0.85	2.45
Respondent's father can read	0.028	*1.30^*	1.03	1.65

* Significant on p-value<0.005. ^ Significant on p-value<0.05

VII.5.2 Inter-Spousal Age-Gap

Egypt DHS 1995 women's status module also provides us with information on the date of birth of first husband for those who had married more than once, thus, the age-gap between the respondent and her first husband at the time of marriage can be calculated. However, one should bear in mind that the accuracy of reporting of the first husband age is influenced by several factors that can influence the reporting of respondents' age at marriage which are mentioned in Chapter IV. Moreover, older women who had married more than once may tend to misreport their first husbands' age than her current husbands' age.

One way to improve the quality of data on first husband's age is to exclude women who had married for the first time long before the survey, and to restrict the analysis to the

marriage cohort of the 20 years before the survey only. The choice of 20 years before the survey will permit studying trends in the inter-spousal age gap as well as reducing recall errors. Since the data collected is from women age 15-49 at time of survey thus we only exclude older women who had married for the first time at relatively young ages.

Table vii.5.3 presents the distribution of ever-married women included in the sample by age gap with first husband, as well as median age-gap, according to degree of involvement in husband selection process and living with in laws at beginning of marriage.

Table vii.5.3 Distribution of ever-married women who had married during the 20 years before the survey by age gap with first husbands, and median age-gap, according to degree of involvement in husband selection process and living with in laws at beginning of marriage, Egypt DHS 1995 WS module

Background Characteristics	Age gap with first husband							Median age-gap	Number of women
	Wife older	Husband older by					Don't know husband age		
		0-2	3-5	6-9	10-14	15+			
Involvement in husband selection									
Related & not met	4.5	13.9	21.8	24.4	21.0	12.8	1.6	7.42	451
Related & met	5.4	20.6	24.3	28.1	14.5	5.6	1.4	5.75	990
Not related & not met	4.4	16.6	21.8	28.7	16.6	10.0	1.9	7.06	1085
Not related & met	3.9	17.3	20.4	33.1	19.3	5.6	0.4	6.83	1211
Related &chose	4.6	21.1	27.1	26.6	15.6	5.1	0.0	5.67	630
Not related & chose	3.5	22.1	31.4	23.5	16.4	2.9	0.4	5.33	791
Lived with in-laws at beginning of marriage									
No	3.0	17.9	23.3	28.6	18.0	8.2	0.9	6.67	2454
Yes	5.5	19.4	24.7	27.8	16.2	5.3	1.1	5.92	2703
Total	4.4	18.7	24.1	28.2	17.0	6.7	1.0	6.33	5158

More than half of included women, 52 percent, were married for the first time to husbands who were older than themselves by 3-9 years. Only 4 percent of women were older than their first husbands, while 7 percent were younger by at least 15 years.

In total, only 1 percent of women provided neither the age nor year of birth of first husband. The median age-gap with first husband was 6.3 years. Table vii.5.3 shows that the median age-gap was highest among those who had never met their first husbands before marriage, whether related or not. Contrary to one might expect, the median age-gap with first husbands was slightly higher among women who did not start their marital lives with their in-laws (6.7 and 5.9 years respectively). The expected pattern would be that those who live with their in-laws tend to follow more traditional norms of marriage,

which includes larger inter-spousal age-gaps. However, since the difference is not very large it might not be significant, the multinomial analyses should clearly show any significant differentials.

Table vii.5.4 presents the same distribution and median age-gap, according to respondent's and husbands' age at marriage, duration of marriage, and education level of first husband. It should be noted that respondent's age at marriage refers to her first marriage while husband's age at marriage does not necessarily refer to his first marriage.

Table vii.5.4 Distribution of ever-married women who had married during the 20 years before the survey by age gap with first husbands, and median age-gap, according to some marriage characteristics and husbands education, Egypt DHS 1995 WS module

Background Characteristics	Age gap with first husband							Median age-gap	Number of women
	Wife older	Husband older by					Don't know husband age		
		0-2	3-5	6-9	10-14	15+			
Duration of marriage									
0-4	4.1	15.2	22.7	31.9	20.6	5.4	0.2	6.92	1344
5-9	4.7	20.6	24.1	28.4	16.3	5.9	0.1	6.00	1289
10-14	3.3	20.3	25.8	26.9	15.3	7.1	1.3	5.92	1233
15-19	5.3	18.8	23.8	25.3	15.9	8.6	2.4	6.08	1293
Respondent's age at marriage									
Less than 16	0.8	8.9	22.6	31.4	23.2	10.7	2.2	8.25	877
16-19	2.1	15.6	22.9	30.2	21.4	6.8	0.9	7.00	1956
20-21	4.0	18.8	27.4	31.1	13.3	4.7	0.8	5.92	797
22-24	5.8	22.5	29.8	28.0	9.6	4.4	0.1	5.00	878
25 or more	14.3	35.8	17.7	14.4	10.5	6.5	0.9	2.92	649
Husband's age at marriage*									
Less than 20	14.7	54.6	27.9	2.8	0.0	0.0	0.0	1.92	458
20-24	6.8	26.1	37.8	26.6	2.8	0.0	0.0	4.58	1347
25-29	2.9	14.6	25.0	37.6	19.2	0.8	0.0	6.75	1923
30-34	1.2	8.2	11.7	34.1	37.6	7.2	0.0	9.42	920
35+	0.0	1.4	3.7	9.9	27.7	57.3	0.0	16.62	459
Husband's education									
None	5.6	17.2	22.9	24.1	14.6	12.2	3.4	6.50	1273
Primary	4.5	19.4	23.3	28.2	17.6	6.7	0.2	6.25	1843
Secondary +	3.4	18.9	25.5	30.7	18.2	3.1	0.2	6.25	2037
Total	4.4	18.7	24.1	28.2	17.0	6.7	1.0	6.33	5158

* Excluding women who did not know either the age or year of birth of first husband (50 cases).

The median inter-spousal age gap with first husbands was highest among women married relatively young, on the other hand, women who married for the first time at

relatively older ages, 25 years or more, had the lowest median age gap, where the husband was 2.9 years older. As one might expect both the distribution and the median age gap were very much related to the husband age at first marriage, where the median age gap increases steadily from 1.92 years among husbands married younger than the age of 20 to 16.6 years among husbands married at age 35 or more. Such observations suggest that inter-spousal age-gap seems to be more related to husbands' age at first marriage more than the wife's age at marriage, which was confirmed by Casterline et al in 1986.

The results do not show any clear differences in both the distribution of age-gap and median age-gap according to duration of marriage, except that women married for the first time more recently, 0-4 years before the survey, had a median age gap with their husbands that is one year older than women with longer durations of marriage. Small differentials in the distribution of age-gap were observed according to husbands' education, where relatively higher proportion of non-educated men had a large, 15 or more years, inter-spousal age gap when compared to husbands with any education. However, the median age-gap was almost the same among the three categories of husbands' education.

Table vii.5.5 presents the distribution of women by inter-spousal age-gap as well as the median age-gap according to some of the respondents' families background characteristics and region of residence. Slightly smaller proportions of women with literate fathers or mothers were older than their husbands or younger than their husbands by at least 15 years.

Women who lived their childhood in the countryside had a median age-gap with their first husbands that was half a year higher than those lived in other places. Such difference seem to happen due to smaller proportions marrying husbands who were only 2 years or less older and higher proportions marrying husbands who were at least 15 years older than themselves. Women living in the Upper Egypt rural region had the highest percentage of being married to husbands who were older than themselves by at least 15 years (9.4 percent). While women living in the Lower Egypt Rural region had the highest percentage of being older than their husbands. The distribution of women with middle inter-spousal age-gaps, husband older by 3-9 years, do not seem to vary much by region.

Table vii.5.5 Distribution of ever-married women who had married during the 20 years before the survey by age gap with first husbands, and median age-gap, according to some families background characteristics, Egypt DHS 1995 WS module

Background Characteristics	Age gap with first husband							Median age-gap	Number of women
	Wife older	Husband older by					Don't know husband age		
		0-2	3-5	6-9	10-14	15+			
Father can read									
Yes	3.6	19.2	23.8	29.9	17.7	5.5	0.3	6.33	2490
No/D.K.	5.1	18.2	24.3	26.5	16.4	7.8	1.6	6.17	2668
Mother can read									
Yes	3.0	20.2	24.9	30.5	16.9	4.0	0.5	6.25	995
No/D.K.	4.7	18.3	23.9	27.6	17.1	7.3	1.1	6.33	4163
Mother ever worked									
Yes	5.9	16.5	26.3	28.4	16.3	5.4	1.2	6.00	324
No/D.K.	4.3	18.8	23.9	28.2	17.1	6.8	1.0	6.33	4834
Childhood place of residence									
Capital/ large city	4.1	19.9	25.7	28.2	18.6	3.1	0.4	5.99	853
City/town	3.8	21.9	24.0	28.1	16.0	5.7	0.6	6.00	1455
Country side	4.7	16.7	23.6	28.3	17.1	8.3	1.4	6.58	2847
Region									
Urban Governorates	3.2	20.6	24.5	27.1	17.9	6.4	0.3	6.18	1138
Lower Egypt Urban	4.4	19.7	22.9	31.8	16.2	4.3	0.6	6.33	677
Lower Egypt Rural	6.0	18.6	24.8	27.5	16.1	6.0	0.9	6.00	1517
Upper Egypt Urban	2.1	21.6	22.5	28.3	19.2	6.1	0.3	6.42	558
Upper Egypt Rural	4.3	15.0	23.9	28.1	17.0	9.4	2.3	6.75	1218
Total	4.4	18.7	24.1	28.2	17.0	6.7	1.0	6.33	5158

Table vii.5.6 presents the same distribution by some of the respondents' characteristics. The table shows that women with only primary education had the highest median age-gap, that is the husband was 7.3 years older than the wife compared to 6.2 years among non educated and 6 years among women with secondary education or more. Larger proportions of non-educated women or women with at least secondary education were older than their first husbands or the husbands were only 2 years or less older when compared to women with primary education, 24 percent compared to 17 percent. On the other hand, women with primary education had the highest percentage of having a husband older than themselves by 10 years or more, 32 percent, when compared to non-educated women, 25 percent, and women with at least secondary education, 18 percent.

Table vii.5.6 Distribution of ever-married women who had married during the 20 years before the survey by age gap with first husbands, and median age-gap, according to some of respondents' characteristics, Egypt DHS 1995 WS module

| Background Characteristics | Age gap with first husband | | | | | | | Median age-gap | Number of women |
| | Wife older | Husband older by | | | | | Don't know husband age | | |
		0-2	3-5	6-9	10-14	15+			
Respondent education									
None	4.9	19.3	23.2	26.2	15.6	9.3	1.4	6.25	2936
Primary	4.6	12.6	23.9	27.0	24.1	7.4	0.4	7.33	709
Secondary +	3.2	20.4	25.8	32.5	16.5	1.2	0.4	6.00	1513
Respondent worked before marriage									
Did not work	3.8	16.3	23.6	29.6	18.2	7.5	1.0	6.75	3981
No control	4.8	19.0	29.8	25.6	11.0	6.8	2.9	5.50	226
Some or main control	6.5	28.9	24.1	23.0	13.8	3.3	0.3	4.83	942
Ever circumcised									
No	5.2	19.0	14.9	32.4	23.1	5.3	0.1	7.33	169
Yes	4.3	18.6	24.4	28.1	16.9	6.8	1.0	6.25	4983
Religion									
Moslem	4.3	18.5	24.0	28.4	16.9	6.8	1.0	6.33	4861
Christian	5.1	21.3	25.9	24.6	18.9	4.2	0.0	5.75	297
Total	4.4	18.7	24.1	28.2	17.0	6.7	1.0	6.33	5158

Table vii.5.6 shows that husbands of women who had worked for cash and had at least some control over earning were in median 2 years younger than husbands of women who did not work for cash at all (median age gap 4.8 and 6.7 respectively). Interestingly we notice that only 15 percent of women who were not circumcised were married to husbands who were only 3-5 years older than themselves, while 28 percent to husbands at least 10 years older, contrary to the distribution of circumcised women. Such observations might be due to the very small number of non-circumcised women included in the analysis (169 cases). Again no large differentials were observed according to religion; however, the median age gap of Moslem women was around half a year higher than that of Christian women.

Differentials in Inter-Spousal Age-Gap

In this section the associations between the degree of involvement in the husband selection process, as well as the rest of prior variables, and the inter-spousal age-gap are studied. Previously mentioned respondents' and their families' characteristics are included as well as husbands' education. Duration of marriage will be entered in the equation to study any variations in the inter-spousal age differences across different

marriage cohorts. Although that respondents' and husbands' age at marriage have the main influence on the age-difference, they can not be both included in the explanatory variables set as the outcome is based on the difference between them. However, as we have seen from table vii.5.4, inter-spousal age-gap seems to be more related to husbands' age at first marriage more than the wife's age at marriage. The same observation was made by Casterline et al (1986). Following this we will include the husbands' age at first marriage in addition to the other explanatory variables to study the variation in the probabilities of having different age-gaps. Multinomial regression models are used and the group of women with husbands older than themselves by 6-9 years are used as a reference category. The set of explanatory variables then includes: degree of involvement in husband selection process, co-residence with in-laws at beginning of marriage, duration of marriage, husbands' age at marriage, respondent's father can read, respondent's mother can read, respondent's mother ever worked, respondent's childhood place of residence, region, respondent's education, husband's education, respondent worked before marriage, respondent not circumcised, and religion.

The initial run showed that the following variables are not significantly associated with the probability of falling in any of the age-gap categories: Living with in-laws at beginning of marriage, duration of marriage, mother can read, mother ever worked, husband's education, and not being circumcised. Thus, these variables were excluded from the final analyses. The remaining explanatory variables are: husband's age at marriage, degree of involvement in husband selection, father can read, childhood place of residence, region, respondent's education, working before marriage, and religion. The results of the final multinomial regression models are listed in table vii.5.7.

The results show that husband's age at marriage is the most significant variable associated with the inter-spousal age gap. Younger husbands are much more likely to have older wives or smaller age gaps than husbands who were 25-29 years old at time of marriage. On the other hand, the chances of a 35 years or more husband are nearly nil to have an age gap of less than two years, OR=0.08, and no one in this age had a wife that is older than himself. While husbands who married at age 35 years or more were 13 times more likely to be older than their wives by 10-14 years than husbands married at age 25-29.

The next most significant variable that seemed to affect inter-spousal age gap was working before marriage and having at least some control over earning. The results show that women in the previous category were significantly more likely to be older than their

husbands and to have husbands who are only 2 years or less older than themselves when compared to women who had not worked before marriage (OR= 7.2 and 5.1 respectively and p-value<0.005).

Table vii.5.7 Multinomial regression results, Odds Ratios, of age-gap on different background characteristics for the marriage cohort less than 20 years before the survey, Egypt DHS 1995 WS module

Explanatory variables included in the final analysis	Age gap with first husband					
	Wife older	Husband older by				
		0-2	3-5	6-9^r	10-14	15+
Involvement in selection						
Related & not met	0.83	0.68	0.93	1.00	*1.83**	1.89
Related & met^r	1.00	1.00	1.00	1.00	1.00	1.00
Not related & not met	0.88	0.86	0.95	1.00	0.88	0.75
Not related & met	0.67	0.77	*0.76^*	1.00	1.09	0.89
Related &chose	0.98	1.20	1.25	1.00	1.08	0.97
Not related & chose	0.46	1.17	*1.57**	1.00	1.22	*0.37^*
Husband's age at marriage						
Less than 20	*151.4**	*144.8**	*24.7**	1.00	-	-
20-24	*6.41**	*5.55**	*3.14**	1.00	*0.15**	-
25-29^r	1.00	1.00	1.00	1.00	1.00	1.00
30-34	-	*0.32**	*0.37**	1.00	*3.40**	**
35+	-	*0.08**	*0.26**	1.00	*12.9**	**
Father can read	*0.71^*	0.95	0.84	1.00	0.94	1.07
Childhood place of residence						
Capital/ large city	*2.17^*	1.38	1.36	1.00	0.90	0.70
City/town	*1.69^*	*1.60**	*1.36^*	1.00	*0.71^*	*0.44^*
Country side^r	1.00	1.00	1.00	1.00	1.00	1.00
Region						
Urban Governorates	1.31	*2.70**	*1.43^*	1.00	*0.63^*	*0.29**
Lower Egypt Urban	*1.97^*	*2.33**	1.24	1.00	*0.60^*	*0.24**
Lower Egypt Rural	*2.47**	*1.95**	*1.45**	1.00	*0.76^*	*0.36**
Upper Egypt Urban	0.73	*2.23**	1.15	1.00	0.95	0.90
Upper Egypt Rural^r	1.00	1.00	1.00	1.00	1.00	1.00
Respondent education						
None^r	1.00	1.00	1.00	1.00	1.00	1.00
Primary	1.32	*0.71^*	1.12	1.00	*1.48**	1.00
Secondary +	1.32	*1.53**	*1.56**	1.00	*0.49**	*0.06**
Worked before marriage						
Did not work^r	1.00	1.00	1.00	1.00	1.00	1.00
No control	1.51	1.46	1.46	1.00	0.70	0.83
Some or main control	*7.19**	*5.07**	*2.09**	1.00	*0.55**	*0.18**
Christian	*2.20^*	*1.74^*	*1.56^*	1.00	1.04	0.64

** Omitted because reference category contains fewer than 25 cases. * Significant on p-value <0.005. ^ Significant on p-value<0.05. – No observations in this category.

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Women with at least secondary education were significantly more likely to marry husbands older than themselves by 5 years or less than having larger age-gaps. They were, in particular, less likely, 17 times, to marry husbands who were at least 15 years older than themselves when compared to non-educated women. On the other hand, women with only primary education were less likely to have husbands who were only 2 years older than themselves and more likely to have husbands 10-14 years older than themselves than 6-9 years older when compared to non-educated women.

Regarding region, women living in any region were more likely to be married to husbands who were 2 years or less older than themselves than women living in the Upper Egypt rural region. Women living in the Lower Egypt rural region had the highest significant odds ratios, 2.5, to be older than their first husbands against the husband being 6-9 years older than them. On the other hand women living in Urban Governorates or Lower Egypt urban regions had the lowest significant odds ratios. 0.3 and 0.2 respectively, of being married to husbands who were 15 years or more older than themselves against 6-9 years older. However, the results do not show clear differentials in the inter-spousal age gap according to urban and rural areas. Such results conform to previous study of inter-spousal age-gap in Egypt (Sokona and Casterline, 1988).

Women who had lived their childhood in city or town, but not the capital or a large city, were significantly more likely to be married to husbands who were only 2 years or less older than themselves rather than 6-9 years older when compared to women lived their childhood in the countryside. The same group of women where significantly less likely to have husbands who were at least 10 years older than themselves, but on significant level <0.05 only. Christian women were significantly more likely to have smaller age-gap with their first husbands, or be younger than their husbands, than Moslem women, but again with p-value <0.05 only. Father literacy only reduces the chances of women of being older than their first husbands and on p-value<0.05.

The results of the multinomial regression model show that the inter-spousal age gap is associated mainly with the husband's age at marriage. In an attempt to study the association between different characteristics, other than the husband's age at marriage, with the inter-spousal age gap, another model that excludes the husband's age at marriage from the explanatory variable set and includes the rest of the characteristics was built. The new multinomial regression model, examines the association between the inter-spousal age gap and the following explanatory variables: involvement in

husband selection process, duration since first marriage, respondent's father can read, respondent's mother can read, respondent's mother ever worked for cash, respondent did not live with in-laws at beginning of marriage, respondent childhood place of residence, region, respondent's education, husband's education, respondent worked for cash, respondent not circumcised, and respondent religion. The results of the last multinomial regression model are presented in table vii.5.8. Two explanatory variables, respondent's mother can read, and respondent's mother ever worked for cash, were not significantly associated with falling into any age-gap category and were not presented in the final table of results.

Table vii.5.8 shows that, after excluding the husband age at marriage, very minor regional differentials in the inter-spousal age gap were detected. Women living in the Lower Egypt Rural region were significantly more likely to be older than their husbands and to have smaller age gaps, 0-2 years, with their husbands when the husbands are older (OR=1.81 and 1.38 and p-value<0.005 and <0.05 respectively).

The most significant differentials on the age-gap were related to whether the wife had worked before marriage and had at least some control over her earning. This particular group of women were nearly 4 times more likely to be older than their husbands than women who had not worked for cash at all. The same group of women were significantly more likely to have smaller age gaps, 0-2 or 3-5 years, with their older husbands than 6-9 years age gap when compared to the same reference category.

The pattern of the relation between the degree of involvement in the husband selection process and the inter-spousal age gap was not very clear. However, women who had not met their husbands, whether related or not, were significantly at higher risks of being younger than their husbands by at least 15 years than women who were related but met their husbands before marriage. On the other hand, women who were not related and met their husbands before marriage were significantly less likely to be older than their husbands or to have small or moderate age gap with them when compared to women who were related but met their husbands. Women with the most degree of involvement in the husband selection process, who were married to chosen non-relatives, were more likely to have husbands who were 3-5 years older than themselves than 6-9 years older when compared to the same reference group.

Women who did not live with their in-laws at the beginning of marriage were less likely to be older than the husbands and nearly 3 times more likely to be younger than

the husband by at least 15 years than women who had lived with their in-laws at the beginning of marriage.

Table vii.5.8 Multinomial regression results, Odds Ratios, of age-gap on different background characteristics excluding husband's age at marriage for marriage cohort less than 20 years before the survey, Egypt DHS 1995 WS module

Explanatory variables included in the final analysis	Age gap with first husband					
	Wife older	Husband older by				
		0-2	3-5	6-9ʳ	10-14	15+
Involvement in selection						
Related & not met	0.86	0.72	0.98	1.00	*1.66**	*2.18**
Related & metʳ	1.00	1.00	1.00	1.00	1.00	1.00
Not related & not met	0.74	*0.72^*	0.84	1.00	1.13	*1.79**
Not related & met	*0.57^*	*0.64**	*0.71**	1.00	1.15	1.15
Related &chose	0.91	1.03	1.17	1.00	1.15	1.26
Not related & chose	0.77	1.16	*1.60**	1.00	1.36	0.85
Duration since first marriage						
0-4	0.84	*0.71**	0.87	1.00	1.12	1.05
5-9ʳ	1.00	1.00	1.00	1.00	1.00	1.00
10-14	0.70	1.04	1.15	1.00	1.00	1.18
15-19	1.21	1.03	1.13	1.00	1.07	1.35
Father can read	*0.69^*	0.91	0.85	1.00	0.95	1.13
Didn't live with in-laws	*0.58**	*0.78^*	0.90	1.00	1.13	*2.83**
Childhood						
Capital/ large city	*2.11^*	1.33	1.35	1.00	0.90	*0.38**
City/town	*1.59^*	*1.50**	1.28	1.00	0.89	0.99
Country sideʳ	1.00	1.00	1.00	1.00	1.00	1.00
Region						
Urban Governorates	0.71	1.31	0.95	1.00	1.13	1.15
Lower Egypt Urban	1.07	1.05	0.76	1.00	0.93	0.59
Lower Egypt Rural	*1.81**	*1.38^*	1.12	1.00	1.04	0.80
Upper Egypt Urban	0.48	1.27	0.83	1.00	1.20	1.11
Upper Egypt Ruralʳ	1.00	1.00	1.00	1.00	1.00	1.00
Respondent education						
Noneʳ	1.00	1.00	1.00	1.00	1.00	1.00
Primary	1.19	*0.57**	1.00	1.00	*1.42^*	0.90
Secondary +	0.58	*0.59**	0.90	1.00	0.78	*0.11**
Husband's education						
Noneʳ	1.00	1.00	1.00	1.00	1.00	1.00
Primary	0.74	0.97	0.89	1.00	1.01	*0.48**
Secondary +	0.66	0.96	0.97	1.00	1.08	*0.46**
Worked before marriage						
Did not workʳ	1.00	1.00	1.00	1.00	1.00	1.00
No control	1.20	1.17	1.31	1.00	0.71	1.04
Some or main control	*3.93**	*2.85**	*1.40**	1.00	1.07	1.43
Not circumcised	1.86	0.77	*0.43**	1.00	1.26	*2.34^*
Christian	*1.90^*	1.39	1.36	1.00	1.27	0.62

* Significant on p-value <0.005. ^ Significant on p-value<0.05.

The results show that, women who had lived their childhood in the capital or other large cities were significantly more likely to be older than their husbands and less likely to have husbands who were older than themselves by at least 15 years, when compared to women who had lived their childhood in the countryside.

Wives and husbands with at least secondary education were less likely to have very large inter-spousal age gaps, husbands are older by 15 years or more (OR 0.11 and 0.46 respectively and both significant p-value<0.005. However, women with any education were significantly less likely to have very small age-gap with their husbands, husband older by less than 2 years only.

The differentials in the inter-spousal age gap according to religion is almost negligible, where Christian women are more likely to be older than the husband than Moslem women, however, on p-value <0.05 only. The same observation applies to whether father can read or not, where the only differentials between the two groups of women were that those with literate fathers were less likely to be older than the husbands and again on significant level p-value<0.05 only. Women who were not circumcised were significantly less likely to have husbands who were only 3-5 years older than themselves than 6-9 years older. The same group of women were also at higher risks of having husbands who are older than themselves by at least 15 years, however, on significant level<0.05 only.

VII.6 CONCLUSION

In Egypt a large proportion of women, 41 percent, did not even know their first husbands before marriage, while fewer than one quarter of them had chosen their husbands themselves. The majority of sampled women reported that they have not chosen their husbands, 87 percent. This fraction remained high, 63 percent, even among women with at least secondary education, and only a quarter of this group reported choosing non-related husbands, see Table vii.2.2. These results conform other studies in Egypt that found a preference for arranged marriage over love marriage even among more educated women (Hoodfar 1997, and Rugh 1984). Such a preference was suggested to be a tactic used by the women to gain their families subsequent support in case divorce or polygyny occurs. However, the analysis indicates that women who had married more recently were more involved in the husband selection process than those married longer ago, especially those married 15

years or more before the survey. Respondents who had married very young were significantly less likely to be involved in the husband selection process than women married at age 20-21. Women who married at age 22-24 were the group with the most involvement in the husband selection process and not, as perhaps might been expected, the group of women who married at relatively later ages, 25 years or more.

Childhood and current place of residence were significantly associated with the involvement in the husband selection process. Respondents who had lived their childhood in the Capital or other large cities, were much more involved in the husband selection process than women who grew up anywhere else in the country. Respondents' education level had the most pronounced effect on degree of involvement in the husband selection process: women with at least secondary education were 5 times more likely to be married to a chosen non-relative husband than relatives who they had not met, when compared to non-educated women. Respondents who had worked before marriage and had at least some control over their earnings were also more likely to marry a non-relative and either meet or choose him. However, the association between the degree of the respondent's involvement in the selection process and her education level was stronger than that with working and control over her earnings. No differentials at all were found regarding whether the respondents had been circumcised or according to their parents' literacy. Interestingly, the only significant difference in the degree of involvement in husband selection between Moslems and Christians was that Christians were less likely to be married to a non-relative and to choose them. However, one should always keep in mind that only 5 percent of sampled women were Christians.

Being not related to the husband and getting married at age 22 or later significantly reduces the chances of women living with their in-laws at the beginning of their marriage. These results reflect a well-documented traditional residence arrangement after cross-relative marriages, where the newly wed wives are brought to the husbands' extended family's household. That is especially true for women who had lived their childhood in the countryside and those currently living in rural areas where they were significantly more likely to live with their in-laws at the beginning of marriage (see Table vii.3.6).

The results show that women who had been more involved in the husband selection process were more likely to have better inter-spousal relations after marriage. Women who were not related and had met or chosen the husbands themselves were

significantly less accepting of beating, were more involved in household decisions, and had more access to money (see Table vii.4.5). The results do not suggest large differentials in inter-spousal relations according to whether the respondent had met or chosen the husband, as long as he was not a relative. Such results may imply that meeting the non-related husband before marriage, without necessarily choosing him can improve some of the inter-spousal relations after marriage.

The results do not show large differentials in inter-spousal relationships between women who had no involvement at all and those who were related but reported choosing their own husbands. The main differentials between these two groups were in the occurrence of beating and freedom of movement and both were significant ($p < 0.05$ only). Such results suggest that reporting choosing a relative as a husband does not necessarily imply a higher level of autonomy and involvement of the woman in her husband selection process. One may conclude that a respondent may report the choice of her related husband while she had no real involvement in the selection process. This could be due to a strong emphasis through her family on such partner choice since her early childhood, so that over the years she had accepted or even perceived it as her own choice.

The analysis reveals that women who had married more recently had less favourable inter-spousal relations than women with longer durations of marriage. It is more likely that women gain more day-to-day autonomy, such as direct access to money, freedom of movement and decision-making as their marriage duration increases. However, the results do not show that the duration of marriage on its own improves women's perceptions of some issues such as divorce equality, non-traditional gender roles or accepting of beating.

Respondents' education level was one of the most important characteristics associated with the inter-spousal relations. Women with any education, and especially those with at least secondary education were significantly more likely to have better inter-spousal relations than non-educated women. The association between education and women's autonomy is well documented (Mason, 1987, and Dixon-Mueller, 1993) and the inter-spousal relations reflect important evidence of post-marital autonomy (Kishor, 2000); thus it was no surprise to observe such strong relationship. Working before marriage, however, did not show the same strong relationship with inter-spousal profile as education. In fact, the results suggest that women who had worked before marriage but had no control over their earnings were in a worse position than

those who had not worked at all regarding domestic violence and acceptance of beating. These results reflect the importance of the nature of work experience, rather than the work experience in itself, in order to have positive effect on the women's status. Women who had paid in kind or had no control over their earnings were most probably involved in types of work that may have reduced their self-esteem rather than enhanced it, or were in a worse social position than those who had not worked at all.

Women who chose non-relatives as their husbands were significantly more prone to the risk of divorce, unlike those who had chosen related husbands. Such results may suggest that both the family and the partners, as they had some choice in the marriage process, play important roles in preventing the divorce. This fits with what is perceived as the advantage of consanguineous marriages as described by Bittles et al (1990). Women who were married for the first time to older husbands, 35 years or more, were at higher risk of divorce (see Table vii.5.2). This result can be related to polygyny, where the husband usually takes a second wife at an older age and it is also more likely for the second wife to be divorced than the first wife (Mir-Hosseini, 1993). Husbands' education level significantly reduces the likelihood of divorce. The results show that the variables associated with the prevalence of divorce are more related to the husband than the wife. This reflects the fact that divorce in Egypt, and most Arab countries, is mainly a husband based and initiated decision, (Holy 1989, and Hoodfar 1997), and thus the husband's characteristics rather than the wife's play important roles in shaping such a decision. Another factor that can contribute to divorce in the Arab region is infertility. Infertility can be devastating to couples in a country like Egypt where the socio-psychological-cultural role of the family is of fundamental importance (Inhorn, 1996). It is suggested that men who do not have children are persuaded by their families to seek new partners and that the women are usually the sole partner to be blamed in cases of infertility. Infertility is usually defined as the inability to conceive after one year of regular, unprotected intercourse (Schmidt and Munster, 1995). However, due to the unavailability of the date of divorce in the DHS data, as well as other information required to identify women who were infertile during their first marriage, it was not possible to test the association between infertility and the probability of divorce.

Women who had no involvement at all in selecting their husbands were more likely to be 10-14 years younger than their husbands. On the other hand, women who had full

involvement in their husband's selection, non-related and chose, were more likely to have a reasonable age-gap of 3-5 years younger than their husbands. No other significant differentials in inter-spousal age-gap were found between women with other degrees of involvement in the husbands' selection process. As confirmed by other studies, husbands' age at marriage was the most significant variable associated with inter-spousal age-gap (Casterline et al, 1993). Living in urban areas, especially in the Urban Governorates region, increases the chances of women having smaller inter-spousal age-gap, 0-2 years. Both respondents' education and working before marriage with control over the earnings increase the chances of women being older than their husbands or having small age-gaps of less than five years. However, the effect of working for cash and having control over earnings on the inter-spousal age-gap is much stronger than that for education. Out of the sampled women who had worked for cash and had at least some control over their earnings, 16 percent were married to husbands younger than 25, and 68 percent were married at age 22 or more compared to 11 percent and 57 percent respectively among women with at least secondary education.

The husband selection process comprises the combinations of three main components: being not related, meeting the husband before engagement or marriage, and choosing the husband. The results reveal that some marriage elements and inter-spousal relationships are more closely associated with some of the husband selection process components. However, some of the components may together significantly influence other elements rather than on their own. Moreover, some inter-spousal relationships, such as freedom of movement, are significantly better among women who were more involved in the selection process yet they do not seem to be affected by any specific component of the selection process but rather by an increase in the woman's pre-marital autonomy, represented in their degree of involvement in the husband selection process. It is useful to summarise which specific components of the selection process are associated with which marriage elements. Table vii.6.1 summarises the significant relationships between different components of the husband selection process and some marriage and inter-spousal relationships elements. Some inter-spousal relationships did not show a consistent pattern of association with particular components of the selection process and thus do not appear in the summary table. These inter-spousal relationships are: freedom of movement, spousal communication, and gender role.

The results show that meeting the husband before engagement or marriage is associated with a significant reduction in the acceptance of beating, regardless of whether there is a blood relationship between spouses or of whether the respondent chose the husband or not (see Table vii.4.5). One can interpret these results as suggesting that women who meet their husbands tend to build relationships with them that allow for the non-acceptance of beating. At the same time, it could be that women with more liberal attitudes toward traditional issues, such as wife beating, are more likely to demand meeting their husbands before marriage.

Table vii.6.1 Summary and direction of significant association between different husband selection components and different marriage and inter-spousal relationships elements

Husband selection components		
Meeting	**Related**	**Choosing**
Acceptance of beating ↓	Co-residence with in-laws ↑	
	Being beaten ↓	
	Direct access to money ↑	
	Not related and Choosing	
	Risk of divorce↑	
	Attitude towards divorce equality ↑	
	Involvement in decision making ↑	
	Inter-spousal age-gap ↓	

↑ Significant increase ↓ significant decrease.

Being related to the husband was significantly associated with an increase in the chances of women co-residing with their in-laws at the beginning of their marriage and with a reduction in their chances of being beaten by the husbands after marriage, as well as an increase in their direct access to money (see tables vii.3.6 and vii.4.5). The association between being related and co-residing with in-laws points to the known higher viability of such procedure among related spouses especially in cases of the extended families. The significantly low prevalence of domestic violence among related spouses is one of the documented advantages of consanguineous marriages, where the husband considers the response of his related in-laws towards any bad treatment of their daughter. As the literature suggests, the preference for consanguineous unions is in part to assure a more compatible marriage, which improves the welfare of the newly wed couple (Bittles et al, 1990, and Hoodfar, 1997). The results show that being not related to the husband and choosing him was associated with a significant increase in women's attitude to favour divorce equality

as well as an increase in the chances of divorce. On the other hand, women who were related and had chosen their husbands had the lowest chances of being divorced (see table vii.5.2). The relation of husband choice and being related to divorce can be explained in the light of the degree of family interference in preventing the occurrence of divorce. In the case of women who had chosen their related husbands, not only will the two related families pursue all means to prevent the undesirable event of divorce, but the element of choice also suggests more compatibility between the spouses that may act in the same direction of resolving any disagreement away from the divorce. On the other hand, women who had chosen their unrelated husbands lack the role of the two related families in preventing divorce in case of marital conflicts. Moreover, the same group of women had significantly a more liberal attitude towards divorce equality and see that both spouses have equal rights to seek divorce. Therefore they are the group of women who are more capable not only of seeking divorce but also of accepting and coping with the status of a divorcee in the culture of Egypt where such status is not favoured. The same two components, being not related and choosing the husband together, were also associated with a significant increase in the women's degree of involvement in the household decision-making and with a significant reduction in the inter-spousal age-gap (see tables vii.4.5 and vii.5.8). Women who chose their unrelated husbands are the women with the highest degree of involvement in the husband selection process and are shown, as expected, to have the best inter-spousal relationships and most non-traditional marriage norms. Such expectations are mainly due to the fact that they are a group of women with selected characteristics; such as being more educated, worked and controlled their earnings, had grown up in the Capital or large cities. Moreover, this group of women had already challenged the norms of relative marriage and the dominated involvement of the parents in the husband selection process. This group of women were significantly more likely to be involved in most of the household decisions; however, they did not have a significantly higher spousal communication levels. Yet, they were significantly less likely to have no spousal communication at all (see Table vii.7.2).

CHART vii.7.1: Relation between prior, husband selection process, and co-residence at beginning of marriage with marriage elements
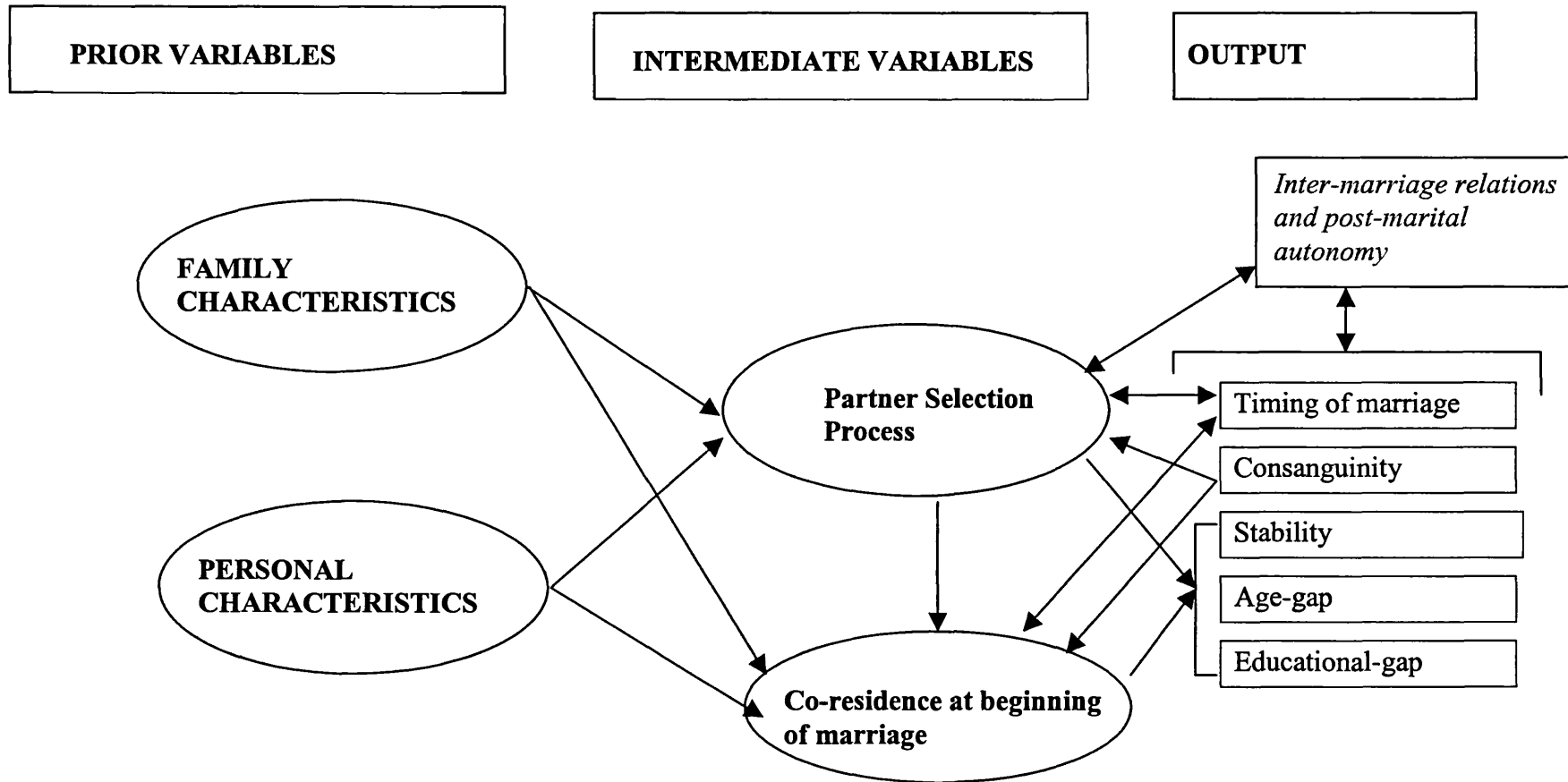
Table vii.7.1 Results of logistic regression and multinomial regression models, Odds Ratios, of occurrence of beating and acceptance of beating on the degree of involvement in husband selection and other prior variables, EDHS 1995 WS module

Independent variables	Being Beaten	Acceptance of beating		
		0-1	2-4 r	5-7
Involvement in the selection				
Related & not met r	1.00	1.00	1.00	1.00
Related & met	0.75*	1.47*	1.00	0.72*
Not related & not met	1.01	1.03	1.00	0.85
Not related & met	0.89	1.39^	1.00	0.64*
Related & chose	0.75^	1.17	1.00	0.95
Not related & chose	0.90	1.19	1.00	0.82
Didn't live with in-laws	1.16	1.14	1.00	0.78*
Duration of marriage				
0-4	0.55*	1.19	1.00	0.85
5-9 r	1.00	1.00	1.00	1.00
10-14	0.91	1.31^	1.00	1.04
15-19	0.81^	1.33*	1.00	1.02
20+	0.61*	1.60*	1.00	1.13
Age at marriage				
<16	1.04	0.84	1.00	1.21
16-19	1.05	0.98	1.00	1.10
20-21 r	1.00	1.00	1.00	1.00
22-24	0.95	1.18	1.00	1.19
25+	0.79	1.38^	1.00	1.11
Father can read	0.94	0.98	1.00	0.86^
Mother can read	0.99	1.10	1.00	1.13
Mother ever worked	2.25*	0.83	1.00	0.98
Childhood place of residence				
Capital/large city	0.75^	1.58*	1.00	0.70^
City/Town	0.96	1.02	1.00	0.74*
Countryside r	1.00	1.00	1.00	1.00
Region				
Urban Governorates	1.17	0.94	1.00	0.38*
Lower Egypt Urban	0.97	1.21	1.00	0.54*
Upper Egypt Urban	1.10	1.18	1.00	0.94
Lower Egypt Rural	1.12	0.93	1.00	0.66*
Upper Egypt Rural r	1.00	1.00	1.00	1.00
Education				
No education r	1.00	1.00	1.00	1.00
Primary	0.67*	1.31^	1.00	0.67*
Secondary +	0.27*	2.75*	1.00	0.34*
Worked for cash before marriage				
Never worked r	1.00	1.00	1.00	1.00
Worked with no control	1.73*	0.97	1.00	1.97*
Worked with control	1.10	1.07	1.00	0.79
Not circumcised	0.42*	2.21*	1.00	0.83
Christian	1.02	1.46*	1.00	0.96

r Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05.

Table vii.7.2 Results of logistic regression and multinomial regression models, Odds Ratios, of decision, spousal communication and freedom of movement indices on the degree of involvement in husband selection and other prior variables for ever-married women who had married only once, EDHS 1995 WS module

Independent variables	Decision index				Spousal communication †			Freedom of movement	
	0	1-2	3-5 [r]	6-7	0	1-2 [r]	3-5	0-2 [r]	3-5
Involvement in the selection									
Related & not met [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Related & met	0.87	0.87	1.00	1.18	0.95	1.00	0.87	1.00	1.68*
Not related & not met	1.40^	0.95	1.00	1.24	0.94	1.00	0.93	1.00	1.40*
Not related & met	0.89	0.85	1.00	1.28^	1.01	1.00	1.26	1.00	1.82*
Related & chose	0.85	0.69^	1.00	1.16	0.71^	1.00	1.20	1.00	1.34^
Not related & chose	1.07	0.75	1.00	1.53*	0.65*	1.00	1.31	1.00	1.77*
Didn't live with in-laws	1.05	0.81^	1.00	1.37*	0.86^	1.00	0.86^	1.00	0.71*
Duration of marriage									
0-4	1.49*	1.95*	1.00	0.57*	1.00	1.00	0.59*	1.00	0.69*
5-9 [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10-14	0.87	0.80	1.00	1.44*	0.84	1.00	1.02	1.00	1.40*
15-19	1.29	0.73^	1.00	1.56*	0.76^	1.00	0.94	1.00	1.67*
20+	2.11*	0.82	1.00	1.76*	0.76^	1.00	0.69*	1.00	1.78*
Age at marriage									
<16	0.87	1.18	1.00	1.20	0.93	1.00	0.97	1.00	0.83^
16-19	1.05	1.16	1.00	1.16	0.92	1.00	0.90	1.00	0.96
20-21 [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
22-24	1.09	0.94	1.00	1.11	1.27	1.00	0.89	1.00	1.24
25+	1.36	0.96	1.00	0.99	1.22	1.00	0.99	1.00	1.29^
Father can read	1.03	0.86	1.00	1.19^	0.86	1.00	1.37*	1.00	0.95
Mother can read	0.52*	0.94	1.00	1.09	0.84	1.00	1.34*	1.00	1.14
Mother ever worked	0.93	0.83	1.00	0.93	0.74^	1.00	1.00	1.00	1.11
Childhood place of residence									
Capital/large city	0.72	0.57^	1.00	1.57*	1.00	1.00	1.24	1.00	1.70*
City/Town	0.73^	0.85	1.00	1.06	0.93	1.00	1.04	1.00	0.85
Countryside [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Region									
Urban Governorates	0.68^	0.62^	1.00	1.21	0.44*	1.00	0.85	1.00	3.82*
Lower Egypt Urban	0.67	0.54*	1.00	1.55*	0.40*	1.00	1.83*	1.00	1.77*
Upper Egypt Urban	1.02	0.86	1.00	1.24	0.76^	1.00	0.83	1.00	1.62*
Lower Egypt Rural	0.53*	0.57*	1.00	1.10	0.36*	1.00	1.33*	1.00	2.30*
Upper Egypt Rural [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Education									
No education [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Primary	0.83	0.77^	1.00	1.36*	0.76^	1.00	1.61*	1.00	0.87
Secondary +	0.43*	0.59*	1.00	1.71*	0.78^	1.00	1.87*	1.00	1.17
Worked for cash before marriage									
Never worked [r]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Worked with no control	0.82	1.06	1.00	0.81	1.21	1.00	1.03	1.00	0.82
Worked with control	0.77	0.71^	1.00	1.20	0.95	1.00	1.53*	1.00	1.07
Not circumcised	4.57*	1.68*	1.00	1.09	2.61*	1.00	1.52	1.00	0.33
Christian	1.01	0.93	1.00	1.36^	1.02	1.00	1.28	1.00	0.83

[r] Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05. † For currently married women only.

Table vii.7.3 Results of logistic regression and multinomial regression models, Odds Ratios, of access to money, gender role, and divorce equality indices on the degree of involvement in husband selection and other prior variables for ever-married women who had married only once, EDHS 1995 WS module

Independent variables	Access to money			Gender role index			Divorce equality index †		
	0	1-3 ^{r}	4	0-2	3-4 ^{r}	5-7	0	1-2 ^{r}	3-5
Involvement in the selection									
Related & not met ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Related & met	0.86	1.00	0.91	*0.78^*	1.00	0.85	1.05	1.00	0.93
Not related & not met	0.83	1.00	1.04	0.91	1.00	*0.77^*	0.93	1.00	1.00
Not related & met	*0.67**	1.00	*0.71^*	0.82	1.00	1.05	1.01	1.00	0.97
Related & chose	0.80	1.00	0.76	0.78	1.00	1.14	1.16	1.00	1.05
Not related & chose	*0.67**	1.00	*0.73**	0.78	1.00	*1.32^*	0.80	1.00	*1.31^*
Didn't live with in-laws	*0.76**	1.00	1.10	1.06	1.00	*0.83^*	0.93	1.00	*0.83**
Duration of marriage									
0-4	*1.29**	1.00	0.92	1.21	1.00	1.03	0.81	1.00	0.95
5-9 ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10-14	*0.70**	1.00	*1.60**	0.90	1.00	0.94	1.16	1.00	0.95
15-19	*0.58**	1.00	*1.45**	0.94	1.00	1.13	*1.69**	1.00	0.94
20+	*0.70**	1.00	*2.15**	1.21	1.00	0.97	1.30	1.00	0.86
Age at marriage									
<16	*0.76^*	1.00	*0.73^*	*1.34^*	1.00	0.98	1.14	1.00	1.15
16-19	0.93	1.00	*0.81^*	*1.30^*	1.00	1.06	0.84	1.00	1.03
20-21 ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
22-24	*0.71**	1.00	0.83	*1.37^*	1.00	1.12	0.87	1.00	0.89
25+	0.79	1.00	1.01	0.82	1.00	1.15	0.93	1.00	1.07
Father can read	0.89	1.00	0.88	*0.77**	1.00	1.06	*0.76^*	1.00	1.04
Mother can read	0.95	1.00	1.01	*0.75^*	1.00	0.89	*1.46**	1.00	1.14
Mother ever worked	*0.76^*	1.00	0.84	0.89	1.00	*1.40^*	*0.63^*	1.00	1.07
Childhood place of residence									
Capital/large city	*0.53**	1.00	*0.41**	*0.74^*	1.00	1.12	*1.52^*	1.00	*1.50**
City/Town	*1.21^*	1.00	1.07	0.86	1.00	0.96	*1.32^*	1.00	*1.40**
Countryside ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Region									
Urban Governorates	*0.35**	1.00	*1.47**	1.04	1.00	*1.48**	*0.30**	1.00	*0.59**
Lower Egypt Urban	*0.33**	1.00	1.21	0.83	1.00	1.18	*0.35**	1.00	*0.49**
Upper Egypt Urban	*0.69**	1.00	*1.46^*	*0.72^*	1.00	*1.41**	*0.42**	1.00	0.84
Lower Egypt Rural	*0.42**	1.00	1.17	*0.79^*	1.00	*0.76**	*0.36**	1.00	*0.73**
Upper Egypt Rural ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Education									
No education ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Primary	1.09	1.00	1.01	*0.69**	1.00	*1.41**	*0.63**	1.00	1.00
Secondary +	0.83	1.00	*1.56**	*0.52**	1.00	*1.43**	*0.41**	1.00	*0.77^*
Worked for cash before marriage									
Never worked ^{r}	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Worked with no control	0.80	1.00	1.31	*0.73^*	1.00	1.27	*2.07**	1.00	1.10
Worked with control	0.93	1.00	1.15	*0.67**	1.00	1.17	*1.39^*	1.00	1.00
Not circumcised	1.01	1.00	1.13	1.33	1.00	*1.54^*	*2.48**	1.00	1.16
Christian	1.15	1.00	0.92	0.88	1.00	0.93	N/A	1.00	N/A

^{r} Reference category. * Significant on p-value<0.005. ^ Significant on p-value<0.05. † Excluding religion from the independent variable set.

CHAPTER VIII: CONCLUSION

In this chapter the results of nuptiality patterns from the three Maghreb countries as well as from Egypt are summarised and compared. Interpretations of the results in relation to the micro and macro level variables, as described in the analytical framework in Chapter II, are discussed. Important findings from the in-depth analysis of Egypt are discussed. Then areas of further research as well as limitations due to available datasets are explored at the end of the chapter.

VIII.1 SUMMARY OF THE RESULTS

Table viii.2.1 presents a summary for the results of some marriage indicators in the Maghreb countries and Egypt. The results show that marriage is almost universal in the four countries. However, in Algeria 1993 the percentage of women ever-married at age 40-44 was the lowest among the four countries, 93 percent compared to 97 percent or more in the rest of the countries. The proportions of women who marry at ages older than 25 years are relatively low in the four countries. However, this proportion is slightly higher in Tunisia and Egypt than the other two countries, 7 percent compares to 4 and 5 percent.

Table viii.2.1 Summary of results of some marriage indicators in the Maghreb countries and Egypt

Some marriage indicators	Country			
	Algeria 1993	Morocco 1992	Tunisia 1988	Egypt 1995
% Ever married at age 40-44	92.5	97.4	96.6	98.1
% Of women 15-49 married at age <16	7.6	12.6	4.2	16.5
% Of women 15-49 married at age 25+	4.3	5.3	7.2	6.9
Median age at first marriage for women 25-49	19.9	18.8	21.1	19.3
% Of first marriage dissolution	14.2	20.0	6.7	11.4
% Remarried after dissolution	58.7	64.6	43.8	43.4
% Polygynous unions	5.2	5.1	na	3.6
% Consanguineous unions	25.6	21.8	36.6	23.8
Median inter-spousal age-gap	6.0	na	na	6.3

na: Not available

The variations in the early timing of marriage are much clearer than for later marriages. Greater proportions of women in Morocco and Egypt marry younger than the age of 16 than in Algeria and especially in Tunisia. This is reflected in the Tunisian median age at first marriage, which was one to two years higher than that for the rest of the three countries. A marriage pattern that is characterised by a preference for consanguinity, and relatively large inter-spousal age gap, as well as a low prevalence of polygyny is observed in all four countries. These results of prevalence and timing of marriage confirm that it is not the question of ever getting married or not, but when to get married that varies among and between countries.

A clear trend towards delayed first marriage was observed among younger cohorts in both Algeria and Tunisia but not as strongly in Morocco and Egypt. In Egypt, the median age at first marriage (MAFM) remained around 19 years old for all age groups 30-49, and increased by only one year for women aged 25-29 (Table vi.4.2). On the other hand, the MAFM increased from 19.4 years among women aged 40-44 to 22.8 years among women aged 25-29 in Tunisia 1988 (Table v.6.4). In Algeria, a similar pronounced trend was observed where the MAFM increased from 17.9 years among women aged 40-44 to 23.1 years among women aged 25-29 at time of survey (Table v.6.2). These observations were confirmed by the multivariate analysis, where Cox-regression models results, using the all women sample, showed a strong association between the age-group and timing of marriage in the three Maghreb countries. In Egypt the series of conditional logistic regression models showed that older ever-married women were significantly more likely to marry relatively very young than ever-married women aged 25-29 at time of survey. However, younger ever-married women were not significantly more likely to marry at older ages (see Tables vi.4.7 and vi.4.9). However, the results for Egypt showed that women who had married more recently were significantly more likely to marry at older ages and less likely to marry relatively very young (Tables vi.4.8 and vi.4.10). These observations point to a change in timing of marriage in the four countries; however, such changes are happening faster in both Algeria and Tunisia than in Egypt and Morocco.

VIII.2 INTERPRETATION OF THE RESULTS

Tunisia has the least early marriages, as well as the lowest prevalence of first marriage dissolution. In addition, as mentioned before, a strong trend of delayed first marriage was observed in Tunisia among younger female age-cohorts. On the Macro level, Tunisian family law is well known for its advantages to women, where the more recent legal minimum age at

first marriage for females is 17 years with the essential requirement that both bride and groom consent to the marriage. This new law is unlike all the current laws in the other Arab countries where the minimum legal age at marriage for females is 16 years and the bride's father, or another respectable member of the family, is the one who approves on the marriage contract on behalf of the bride. On the macro-level also, Tunisia has one of the highest development profiles among the four countries. It has the highest GNP per capita, had the lowest proportion of illiterate females over the age of 15, scored well above the rest of the countries on the human rights score, and has a high human development index (see Table v.1.1). These variables with the existence of other factors, as described in chapter II, can alter the set of preferred marriage norms and affect different marriage elements including timing of marriage.

The Tunisian family law also prohibits polygamy, and prohibits divorce without judicial proceedings, granting both spouses the right to request divorce (Hijab, 1988). In most of the other Arab countries divorce can be applied for by the husband only and even in the absence of the knowledge or consent of the wife (Hoodfar, 1997, and Mir-Hosseini, 1993). These differentials in the laws governing marriage in Tunisia from the rest of the Arab countries reveal the difficulties facing the husband to obtain the divorce, in comparison to other Arab countries, and explain the very low percentage of first marriage dissolution. On the micro level, women's education also plays an important role in decreasing the prevalence of divorce. As seen from the analysis of the probability of first marriage ending in divorce in Morocco and Egypt, the more educated women, especially those with at least secondary education, were significantly less prone to the risk of divorce. Tunisia has the highest proportion of females 15 years or more who are literate among the four countries, 55 percent compares to 36 percent in Algeria, 31 percent in Morocco, and 39 percent in Egypt (see Table v.1.1). The relationship between the development level of the country and the probability of getting married at a very young age can also apply to Algeria. Algeria had scored relatively well, following Tunisia, in its development profile. However, female literacy was not as high as in Tunisia. The literature also points out that unlike Tunisia the female contribution to the labour force is quite small in Algeria (Moghadam, 1997). Also the patriarchal gender structure is especially strong in Algeria (Skief, 1994). Such differentials can limit the role of a high human development index and high GNP per capita on different marriage elements in Algeria. Although the proportion of women who had married younger than age 16 is almost the double in Algeria than in Tunisia, 7.6 percent compared to 4.2 percent, both proportions are low. Moreover, the median age at first marriage in Algeria is only one year younger than that in

Tunisia, and age at marriage in both countries showed a pronounced trend towards older female ages at first marriage.

On the other hand, Morocco had the highest prevalence of first marriage dissolution and the highest proportions remarried after dissolution. Such high prevalence of first marriage dissolution can be partly explained through the lows governing marriage in Morocco, where unlike, Algeria and Egypt, the wife has the right to divorce her husband provided this is stipulated in the marriage contract. However, given the existing kinship structure of all the Arab countries including Morocco, the use of such rights by the wife is usually not recommended by the society and in practice very small proportions of women take advantage of this law (Mir-Hosseini, 1993). Mir-Hosseini (1993), in a study on divorce in Morocco and Iran, observes that in Morocco marriage is more fragile and its breakdown is more frequent among the poor, in contrast to Iran where marriage is more stable and divorce is more likely to happen among the middle and upper strata. However, no attempt had been made by the author to explain these observations. Therefore, the notably high prevalence of first marriage dissolution in Morocco suggests a greater acceptance of divorce and remarriage as part of the norms governing marriage in Morocco than in the other countries.

The reasons behind these differentials are not easy to find. However, the diversity of the population in terms of ethnicity in Morocco may play a role in explaining such differentials. As mentioned in chapter V, Berbers constitute a large proportion of the population in Morocco and Algeria, 40 percent and 30 percent respectively, contrary to Tunisia where they are a minority of only 3 percent (McDowell, 1992). The autobiography of a Berber woman (Amroughe, 1968) suggests that the customs of marriage for Berber women were to marry relatively young; to have as many children as possible; and to remarry as soon as possible after divorce or widowhood. Such observations can explain the higher prevalence of remarriage in Morocco than in the other countries. However, these observations should be taken with extreme caution as they represent the view of the author only and are not based on a representative study of Berbers in Morocco. Barbour (1965) describes Berber women in Morocco as having fewer legal rights than Arab women, but they were freer in some practical aspects such as less frequent use of the veil. He did not mention what legal rights they were not entitled to. These studies refer to quite a long time ago and are not helpful in drawing a picture about the current marriage customs among the Berbers. The literature on the Berbers in the Maghreb region, in general, and on their marriage customs in particular, is extremely limited and the references are very weak. It does not provide us with a clue to a specific preference of marriage norms, if these exist, among the Berber populations. To be able to

observe the marriage patterns of Berbers in Morocco, we need to know at least the distribution of them by region; however, none of the Moroccan censuses or national surveys included information on ethnicity.

Around one quarter of women in Algeria, Morocco, and Egypt were married in consanguineous unions; however, this proportion was higher in Tunisia, 37 percent. These figures suggest a more pronounced preference for first cousin marriages in Tunisia than the rest of the countries under study. The prevalence of consanguinity in Tunisia reaches almost 50 percent in the Centre West and South regions, which are characterised by a lower socio-demographic profile. These observations confirm those from other studies where higher rates of consanguineous marriage have been associated with low socio-economic status, illiteracy, and rural residence. In some populations a high prevalence of marital unions between close relatives has been reported among land-owning families, and in traditional ruling groups and the highest socio-economic strata (Bittles 1994, 1995).

The results reflect the existence of more traditional norms of marriage which favour early female marriage, consanguineous unions, and larger inter-spousal age gaps among women living in regions with less advantageous development profiles in most of the countries under study. These results confirm that both the macro and micro level variables act to change and alter the existent set of preferred marriage norms as suggested by the analytical framework.

For example, in Tunisia both the Centre West and South regions have less advantageous health and demographic profiles with higher infant and under five mortality rates, and lower proportions of women 15-49 with any education and in particular secondary or more (see Table v.1.1). The same two regions exhibit marriage patterns that are characterised by higher prevalence of early marriage, higher rates of first marriage dissolution, and higher prevalence of consanguineous marriages. Such characteristics refer to a more traditional set of marriage norms that are different from those observed in the Tunis region, with the best health and demographic profile region in Tunisia. Although Tunis the capital is characterised by a high prevalence of marriage, yet the median age at first marriage is the highest, both prevalence of marriage dissolution and consanguineous marriage are significantly lower than in the rest of the regions (see Table v.7.1). Another example is the Upper Egypt Rural region, which is found to be the poorest region with the least advantageous health and demographic profile in Egypt (see Tables vi.1.1 and vi.1.2). At the same time it is characterised by the lowest median age at first marriage, the highest prevalence of consanguineous unions, and largest inter-spousal age gap when compared to the other regions in Egypt, even the rural ones.

However, the relationship between the development level of the region and the existent marriage patterns is not very consistent among all regions and countries. For example, a clear relationship of this type was not found for either Morocco or Algeria. In Morocco the Tensift and South regions had some of the highest fertility and child mortality rates, as well as the lowest proportions of highly educated women. At the same time, women living in these two regions were significantly less likely to marry very early and to be in polygynous unions when compared to other regions. Such observations point to other uncaptured macro-level variables that act simultaneously in setting the acceptable set of norms of marriage in certain regions in addition to the development level of the region. One of these macro-level variables could be the ethnic structure of the country. It is known that the population in the Tensift region in Morocco has a high proportion of Berbers, although, the exact distribution of Berbers over the country is not known (Nisan, 1991). It is suspected that there is a relatively different set of preferred marriage norms among the Berber population, which constitute a majority in both Morocco and Algeria. However, because no information is available about the exact distribution of the Berber population it is practically impossible to examine this relation.

The results show that Christian women in Egypt were significantly less likely to marry relatively very early (see Table vi.4.7). It is suggested that this observation is mainly related to the fact that Christians in Egypt are a minority and their marriageable pool is much smaller than that of Moslems, rather than that they have a different set of preferred marriage norms. The results of the in-depth analysis of Egypt DHS 1995 women's status data shows that Christian women were significantly less likely to chose a non-related partner than Moslems (see Table vii.3.3). They were also found to be significantly more likely to be in consanguineous unions than Moslem women (see Table vi.5.6). Islam is usually regarded as promoting cousin-marriages more than Christianity. In general, even within Christianity there are quite marked differences in attitude to close kin marriage. For example, the Orthodox churches prohibit consanguineous marriage, the Roman Catholic Church currently requires Diocesan permission for marriages between first cousins, and the Protestant denominations permit marriages up to and including first cousin unions (Bittles et al. 2001). Knowing that the Egyptian Christians are predominantly Orthodox with a smaller proportion Catholic, we observe a higher prevalence of consanguinity among Christians than among Moslems in Egypt. Therefore, there appears to be no particular rationale for the subdivision of the population into opposing forms of marriage preference in Egypt. It is suggested that norms of marriage do not vary much between Christians and Moslems in Egypt, and marriage is

regarded as a very important family matter, rather than an individual decision, in both religious groups in Egypt. However, due to the small number of Christians and therefore the fewer opportunities to find a suitable partner, the family tend to be more involved in selecting the suitable partner among Christians and the search process is expected to take longer than among Moslems. Therefore, the intermediate variable 'partner availability' as described in the analytical framework is associated with some of the micro-level variables and in turn affects some of the nuptiality elements.

On the micro level, individuals with higher status (more educated, worked for cash, or live in urban areas where they are more exposed to new ideas) tend to have different marriage patterns than other women. They tend to marry later, with lower risks of polygyny, and in non-consanguineous unions. Female education level has a more pronounced effect on timing of marriage in both Egypt and Algeria than in Tunisia and Morocco. The association between education and women's autonomy is well documented (Mason, 1987, and Dixon-Mueller, 1993). Higher levels of education are expected to disrupt traditional norms governing marriage preferences and identify new options. The effect of education on marriage elements can be significant because of the new values and autonomy it provides for women rather than simply as a source of delaying marriage.

The effect of other empowerment elements, however, was not the same on some of the marriage elements. For example, the study shows that while women's working experience reduces their chances of early marriage, such experience significantly increases their chances of divorce. The causal link between working and delayed age at marriage is not very clear. Women' work experience itself could be a result of her delayed marriage rather than the opposite. Such unclear causality direction is highlighted through the results of the relationship between working and post marital inter-spousal relations in Egypt (see Chapter VII), where women who had worked for cash before marriage did not have an obviously better inter-spousal relationship set than other women (see Section VII.4).

The negative relationship between female working and marriage dissolution can be attributed in part to the traditional and persistent roles of women in marriage in the region. Women are expected to carry all the household's and children's demands on their own without the consistent help of their husbands (Haddad, 1988). The female work experience, in the Arab region, is usually regarded as a source of income rather than an empowerment avenue or as a respected right for women. Thus, the result of most female work experience in the region is that they over-burden the wife and compete with her household responsibilities and can be a major source of disagreement and dissatisfaction for the husbands. Such outcomes leave the

working wife more prone to the risk of divorce and explain the high prevalence of marriage dissolution among them.

VIII.3 INTERPRETATION OF EGYPT IN-DEPTH ANALYSES

The in-depth analysis of the Egypt DHS women's status module 1995 revealed that the husband selection process in Egypt is mainly carried out within the family context. Even when the respondents report choosing the husbands themselves, the majority of them were found to have made such choices within the family pool of eligible partners and with the immediate approval of their family. These observations confirm the picture of marriage in the Arab region as a partnership between two families rather than two individuals, as has been indicated by many studies (Rugh, 1984 and 1997, Hoodfar, 1997, Abdelrahman and Morgan, 1987, Toubia, 1988, and Davis 1993).

Although consanguinity is one of the marriage elements and is described in the analytical framework as one of the outcomes, the partner selection process was found to be highly correlated with consanguinity. It was important to distinguish between elements of choice and being related to the husband when studying the process of partner selectivity in Egypt. Therefore, the degree of involvement in the husband selection process was examined separately for women who were related to the husbands and those who were not. For full discussion of the variable reflecting the degree of involvement in the husband selection process refer to Section VII.1.2. Over one third of sampled women had never even met their husbands before marriage, while only 13 percent of sampled women were not related to their husbands and reported choosing them (see Table vii.2.1). A picture of predominant involvement of the family in the partner selection process was observed in Egypt. However, this picture varied significantly according to some of the individuals' characteristics and by region. Moreover, the analysis showed a more recent trend (inferred from cohort differentials) towards more involvement of women in the husband selection process, with a higher prevalence of getting married to non-relatives, meeting before marriage, and choosing them (see Table vii.2.4). The results confirm that the Upper Egypt region had the most traditional norms of marriage, with a significantly higher proportion of women marrying related husbands than in other regions. However, women living in rural areas in Upper Egypt were more likely to have met their related husbands before marriage than those living in urban areas in the same region. This outcome is mainly due to the nature of life in rural areas were women and men meet more easily during the working days in the fields than in urban areas. At the same time the results show that women living in rural areas in Upper Egypt were

significantly less likely to be not related and choose their husbands than the rest of all other regions.

Women who had married for the first time at ages 22-24 years rather than those who had married at age 25 or over were the most involved group in the husband selection process. Knowing the median age at first marriage in Egypt is 19 years, those marry at age 22 to 24 years had married relatively later than the average but not very late as at age 25 or more. Such observations suggests that there is a group of women with more autonomy who choose to delay their marriage in order to select a suitable partner or to pursue further study or work experience. However, if their marriage is delayed beyond a certain age, 25 years in this case, the family starts to re-enter the partner selection process and the women start to lose involvement, irrespective of their characteristics. These suggestions reflect the pressure of the society on unmarried women at certain ages. These pressures are due to the fact that marriage is preserved by the Egyptian society as an essential part of individual, and especially woman, life that cannot be left without fulfilment. Moreover, any women's academic or career achievements are usually not appreciated, and even blamed, if they were not married.

The in-depth analysis of marriage patterns for Egypt showed that the usual arrangement of residence at the start of a marriage is either that the wife joins her husband's family's household or to establish a new household. Just over half of the women who completed the women's status modules started their marital lives with their in-laws. This prevalence increased to 70 percent among women living in rural areas, irrespective of whether in Upper or Lower Egypt. Such observations are related mainly to consanguinity unions and extended family structure, which are more prevalent in rural areas in Egypt. The multivariate analysis confirms that women who were related to their husbands were significantly more likely to begin their lives with their in-laws, irrespective of their degree of involvement in the husband selection process and other individual characteristics (Table vii.3.6).

The women's status module included much information on post marital inter-spousal relations, which allowed us to study existing relations between them and the degree of involvement in the husband selection process. One would expect that women who had chosen their husbands themselves and especially those who were not related (i.e. chose the husband from outside the family circle) to have higher communication levels with their spouses. However, the results show that they were not more likely to communicate with their husbands on many topics than other women even those with the least degree of involvement in the husband selection process (see Table vii.7.2). However, the same group of women, as well as those who had met their unrelated husbands before marriage, were more involved in the decision making process of

the household and had more freedom of movement. The analyses did not show significant differences in most of the post-marital inter-spousal relationships between women who had no involvement at all in the selection process, married to related husbands who they had never met before marriage, and those married to related husbands but reported choosing them. The main difference was that those with the least involvement in the husband selection process were more prone to domestic violence than the other group. These findings highlight that reporting choosing a related husband in many cases do not reflect a real choice of the husband by the respondent. However, such reporting can be part of the consanguineous unions process, where usually the woman grew up knowing that she would eventually marry her cousin, even if she had never met him, and over the years accepted such choice and even perceived it as her own.

On the micro level, education significantly improves women's post-marital inter-spousal relations. Working for cash before marriage had a puzzling relation with the post-marital inter-spousal relations. It was essential for women to have some control over their earnings in order to have any positive relationship between work before marriage and post-marital inter-spousal relations. In fact, the results suggest that women who had worked before marriage but had no control over their earnings were in a worse position than those who had not worked at all regarding domestic violence and acceptance of beating (see Table vii.4.5). These results point again to both the reasons behind female work experience and to the value of women's work in the Arab society, especially from the husbands' point of view. The results also emphasise the importance of the nature of work experience, rather than the work experience in itself, in order to have positive effects on the women's status. Women who were paid in kind or had no control over their earnings were probably involved in types of work that may have reduced their self-esteem rather than enhanced it, or were in a worse social position than those who had not worked at all, so they had to seek work for income means for their families. In Egypt, women who had chosen non-related husbands were significantly more prone to the risk of divorce. This finding agrees with the documented advantage of consanguinity, where the family is more likely to intervene to prevent marital dissolution (Bittles et al, 1990). A clear relationship between husbands' characteristics and probability of divorce was observed. While respondents' characteristics and their parents' had very limited association with the risk of divorce (see Table vii.5.2). This reflects the fact that a divorce in Egypt, as well as in the rest of the Arab region, is mainly the husbands' decision rather than the couples'. Men who were married at ages 35 or over, and those who were less educated were significantly more likely to divorce their wives. The high chances of husbands who marry at older ages to

divorce their wives might be linked to polygyny and wives' rank, however, no information on wives' rank or polygyny was available in the Egypt DHS 1995 survey.

VIII.4 AREAS OF FURTHER RESEARCH

Nuptiality studies in the Arab region are limited to a few indices that hardly reflect a complete picture of nuptiality patterns or their determinants. Moreover, such indices are usually available only for ever-married women in the reproductive age range. This is mainly due to the limited existing data on marriage in the region. Information on marriage elements is usually gathered at the national level through surveys that are hardly focused on the marriage process itself. These surveys are usually fertility surveys that are only interested in marriage because it is one of the proximate determinants of fertility. Therefore, researchers are left to find relationships between very few variables and a very limited set of marriage elements without the possibility to examine a wider set of plausible relations.

The current research uses the data available from the Demographic and Health Surveys (DHS) for Egypt 1995, Morocco 1992, and Tunisia 1988, and from Algeria Pan Arab Project (PAPCHILD) survey in 1993. The survey for Tunisia is relatively older than the other surveys; however, it was the only available accessible national data set that contained some information on marriage. Although Tunisia had a PAPCHILD survey in 1995 that also included national information on some marriage elements, this data set was not accessible for research and restricted for the use of the Tunisian governmental bodies only.

These datasets provided us with information on some of the marriage elements and some background variables that are representative at the national and regional levels. However, the main drawbacks of them that they were not initially designed to study nuptiality, but fertility and child health. Therefore, the information on marriage was gathered from the perspective of the link to fertility and not tailored to the study of nuptiality in particular. This meant not covering all marriage elements and not gathering enough information on background characteristics that are suspected to affect marriage, such as family background and more personal characteristics. Many marriage elements, such as polygyny, type of marriage, time of dissolution, and even age of the husband were not covered at all in many of the surveys. Furthermore, much important cultural information on norms and processes of marriage were not available. The Maghreb surveys even lack essential background information such as ethnicity or religion.

When dealing with nuptiality, information on both partners should be collected as they both constitute and affect different marriage elements. Information on different views of marriage

elements also needs to be gathered from never-married samples to reflect the views of marriage norms in the whole society. Moreover, it is suspected that some types of marriages, such as *'Zauagh Aurphy'*, which was described in chapter II, are not reported and therefore the never-married women in many of the Arab countries include some married women and information about them is not known.

Bearing all these constraints in mind, the information was exploited to extract a picture of nuptiality patterns in the chosen four North African countries and to relate any observation to a wider analytical framework. The Egypt DHS 1995 women's status module provided us with a richer set of information on the marriage process, which was very helpful in drawing a more detailed picture of nuptiality in Egypt.

As seen from Chapter I, nuptiality patterns are far from homogenous across the Arab region. However, in order to capture any consistent patterns among groups of countries, more analyses of marriage elements are needed and not only the simple marriage indices presented in Chapter I. Another step in the study of nuptiality in the Arab region is to use the available data sets from other Arab countries and draw initial comparisons of different marriage elements using similar techniques to those used in this study. Such comparisons will help to subdivide the Arab regions into groups of countries with similar and more homogeneous set of marriage elements. Within the context of the proposed analytical framework we can examine if there are certain common macro-level variables that govern different groups of countries with distinguished nuptiality patterns. However, by using the available information on marriage, which is usually available from fertility surveys, we can only extract a partial picture of nuptiality patterns in the region without fully understanding the dynamics behind it.

In order to have a proper picture on the dynamics of nuptiality, well-designed surveys that collect marriage histories and different marriage elements for both men and women in the region are necessary. Such surveys need to be based on a methodology that aims to capture possible dynamics that alters different marriage elements. Thus, a further step in studying nuptiality patterns in the Arab region is to attempt to design and conduct such surveys.

A growing concern with nuptiality as an element in demography in itself, rather than just as a proximate determinant of fertility, had been noticed in some research bodies in the Arab region. For example, the Social Research Centre, American University in Cairo, has developed a project that is mainly concerned with the demography of the Arab region. This project is called the New Arab Demography project and focuses on four main areas and one of them is nuptiality and the family in the Arab region. Within the scope of these interests it is plausible to seek funds and experience for further in-depth studies on nuptiality in the Arab

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region. This project also provides the opportunity for collaboration between researchers from different Arab countries in order to share different experiences and views when studying nuptiality in the region.

The Faculty of Economics and Political Science, Cairo University conduct another survey that is designed to collect information on marriage in Egypt in collaboration with the Social Research Centre, American university in Cairo, with Dr. Sahar El Tawila and Dr. Zeinab Khadr as the co-principal investigators. This survey is designed for a study on 'Patterns of marriage and family formation among youth in Eygpt'. The proposed survey is national representative and aims at studying the different stages in the process of family formation among young males and females aged 18-33 years. It explores a wide range of subjects in this area whether through actual experience or their perceptions regarding future events. The survey includes a separate module for each marriage stage ranging from single youths to those who are divorced or widowed. Choice of prospect marriage partner, the role of social networks in the marriage process, different liabilities and assets resulting from certain types of marriages, marriage impediments among the youth, and unconventional types of marriage are some of the subjects investigated in this survey.

The newly available nuptiality data and avenues for research will provide a great opportunity to study nuptiality in some Arab countries in a more comprehensive way. They also allow examining and enhancing the analytical framework to be able to produce a better understanding of nuptiality dynamics within the context of the Arab region.

It is very clear through out the study that the area of nuptiality in the Arab region needs more attention in planning and collecting the data. This thesis is a contribution in improving the understanding of the nuptiality process in the Arab region and emphasises that nuptiality, in this region, had been understudied in the past.

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