

The Role of Marriage Age in Shaping Fertility and Reproductive Health Patterns

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Abstract

Nearly three in five respondents considered 20 years as the ideal age for marriage, indicating a general consensus on early adulthood as the preferred time for marriage. In practice, nearly two in five respondents got married between the ages of 18 and 20 years, showing that actual marriage age closely aligns with societal expectations. About half of the respondents reported that their husbands were above 20 years at the time of marriage, suggesting that most marriages involved adults rather than very young individuals. More than half of the respondents believed that the ideal age for giving birth is above 20 years, reflecting awareness of mature and safer childbearing practices. In the study area, nearly half of the respondents stated that they were above 20 years old when they had their first child, indicating that many followed recommended practices regarding age at first childbirth. Out of the total respondents, more than one third (34 percent) of respondents had their baby at hospital. The study found that nearly seven in ten (69 percent) respondents replied that their couple were using contraceptives. More than two in five (41 percent) of respondents replied that the ideal number of children is considered as three. Seven in ten (70 percent) of respondents had no desire of more children. More than three in ten (31 percent) of respondents replied that the ideal birth spacing between two children is three years.

Key Word : Marriage, Age, Fertility, Health Patterns, Lifetime

Introduction

Fertility is the average number of children that would be born to a woman, is she experiences the current fertility pattern in her lifetime. It is generally used to indicate the actual reproductive performance of a woman or groups of women. Age specific fertility rate is another refinement of birth rate. When the number of live births to women of definite age group per year is divided by the total number of females of that age group only. Generally, 15-49 years are considered to be the age of female fertility. But many a time a girl below 15 years of age and a women of more than 49 years may give birth to a child (Jhingan, 2021).

Marriage age can be defined as the chronological age at which a person enters into a marital relationship, whether legally formalized or socially recognized. Fertility is the actual reproductive performance of an individual or population and is usually measured using indicators such as Total Fertility Rate (TFR), Age-Specific Fertility Rate (ASFR), General Fertility Rate (GFR), and Children Ever Born (CEB). Reproductive behavior includes all decisions and actions related to childbearing, such as the age at first birth, spacing between

children, number of children desired, and the use of contraceptives. These concepts are central to demographic and public health research because they help explain population growth patterns, reproductive health outcomes, and the social and economic consequences of fertility. Studying the relationship between marriage age and reproductive behavior allows policymakers and researchers to better understand the factors influencing family size, population trends, and maternal and child health (Ogwu, 2025).

Globally, marriage age has been rising, especially in developed countries, reflecting social, economic, and cultural changes. In countries like Japan, South Korea, and much of Europe, the average age at first marriage has increased significantly, resulting in delayed childbearing and lower total fertility rates. For instance, in Japan and South Korea, delayed marriage is closely linked to ultra-low fertility levels, with women often having fewer children or choosing to remain childless. In contrast, many developing countries still experience early marriage, particularly in rural and traditional communities, which contributes to higher fertility rates and larger family sizes. International studies emphasize that later marriage is associated with smaller family size, increased use of contraception, better maternal health, and improved child health outcomes. These global trends show a clear pattern: as marriage age increases, fertility generally declines, illustrating the strong connection between reproductive timing and demographic change (Tomczyk et al., 2025).

In Asia, the impact of marriage age on fertility is evident in countries undergoing rapid social and economic change. For example, in China, fertility intentions and outcomes are strongly influenced by age at marriage, gender preference, and government policies such as the “Universal Two-Child” policy. In South Korea and Japan, delayed marriage is a significant factor contributing to ultra-low fertility rates, reflecting shifts in gender roles, career priorities, and urbanization. In these societies, the timing of marriage is tightly linked to fertility decisions, and later marriages often result in fewer children and longer intervals between births. Historical demographic studies reveal that fertility decline in these countries is closely coupled with changes in marital patterns, showing that reproductive behavior is strongly mediated by social norms regarding marriage. These examples demonstrate that marriage age is a key determinant of fertility transitions in Asia, affecting not only the number of children born but also the broader demographic structure (Raittio et al., 2025).

Nepal has experienced a gradual increase in the average age at marriage, although early marriage remains common in some rural and traditional communities. Analysis of Nepal Demographic and Health Survey (NDHS) data shows that women marrying at age 20 or above generally have fewer children than those marrying before 20, highlighting the effect of marriage age on fertility. Early marriage is associated with higher fertility, shorter birth intervals, and increased reproductive health risks for both mothers and children. Variations in marriage age and fertility patterns are influenced by factors such as caste, ethnicity, religion,

education, household economic status, and urban-rural differences. Policies and programs promoting female education, delayed marriage, and family planning have contributed to reduced fertility in certain areas. Despite these efforts, disparities remain, emphasizing the need for targeted interventions to address early marriage and its consequences on reproductive behavior and fertility outcomes in Nepal (Faruq, 2025).

Fertility indicates the reproductive performance of a woman. The demographers define fertility as the child bearing activity of a population, where as in biology and medicine this term is generally used for capacity to bear children. Fertility is actual reproductive performance of a female or group of them. The child bearing period of a woman is generally assumed to exist between the ages 15 to 40. The level of fertility in demography is measured in terms of live-birth performance. The child bearing is, no doubt, basically a biological function, but the child bearing in any society is performed in socio-economic and cultural setup and is, therefore, influenced by socio-economic factors as well as social customs, values and norms related to various aspects of childbearing (Nag, & Singha, 2020).

There is the relationship between late marriage and low fertility is the result of higher control levels of marital fertility among the populations that marry late. When trends in marriage age and fertility levels are compared, it appears that states with a higher marriage age also have a lower fertility rate, although this relationship is not universal. For instance, in Andhra Pradesh, the marriage age is comparatively low but fertility has declined rapidly. It is important to note that the factors that promote late marriage are also the ones that encourage smaller families. In the case of southern India, endogamy and kinship structures that provide greater autonomy to women have been put forth as factors responsible for both late marriage and low fertility rates there, whereas in northern India, exogamy and patriarchy have contributed to early marriage and high fertility levels (Dommaraju, 2021).

When there is higher age at marriage, fertility is generally observed to be low. This reduction in total fertility with increasing marriage age can occur under the following condition: if age-specific marital fertility rates do not differ by marriage age and if non-marital fertility is negligible. When marriage age increases under these conditions, fertility can decline because of the reduced number of women at risk of childbearing. In addition, marriage age can lower fertility when marital fertility among women marrying late is lower than among those marrying at a younger age (Dommaraju, 2021).

Age at marriage in an individual's life history and its role in fertility and mortality transitions, surprisingly few analytic studies have been undertaken to investigate the determinants and consequences of marriage patterns in Malawi. Studies elsewhere have, however, identified a number of factors that seem to influence the timing of marriage. Increases in age at marriage are associated with major social-structural changes such as increases in educational attainment, urbanization, and the emergence of new roles for single

women. The nature of the relationship between timing of marriage on the one hand and socioeconomic factors on the other hand has not been exhaustively investigated in Malawi. Therefore this study primarily examines the effect of social and economic factors on the woman's age at first marriage. In particular, the study aims at establishing the effects of some of the factors that have been indicated in studies elsewhere to be closely associated with the woman's age at first marriage. These include region and type of residence, education, religion and ethnicity (Kumchulesi, 2021).

Age at first marriage is the age-entry of a woman which marks the initiation of pregnancy and subsequently giving birth. Early age at marriage increases the likely incidence of childbirth and elongates a woman's reproductive period, which could result in higher fertility levels. However socio-economical and cultural norms are other factors that also determine when a woman first gives birth. The age at first marriage of males and females, from 15-49 by rural and urban areas, and ecological zones. Women from Mountain and Hill Zones marry one year later than women from the Tarai. Men from the Hill Zone marry less than one year later than men from the Tarai and Mountain Zones. Similarly women from urban areas marry less than one year later than women from rural areas. Whereas men from urban areas marry less than two years later than men from rural areas (NSO , 2023).

Higher female partner age and longer duration of marriage: key factors for less frequent sexual intercourse in infertile couples.” The main objective of the study was to examine the demographic and lifestyle factors that influence the frequency of sexual intercourse among infertile couples actively trying to conceive. This cross-sectional study selected 790 infertile couples seeking fertility treatment and collected data on age, occupation, smoking status, body mass index, and sexual intercourse frequency, which was self-reported by participants. Descriptive statistics and binary logistic regression analyses were used to identify predictors of sexual intercourse frequency. The study found that younger female age and shorter duration of marriage were significant predictors of higher sexual intercourse frequency, while men's smoking negatively affected intercourse frequency (Dashtkoohi et al. 2025).

Differential fertility is the study of fertility differences between specific population groups. Common analyses are by socio-economic group, by religion, by education level, by race, by occupation, by urban/rural region, by wife's work experience and by husband's income. Such analyses are carried out in order to throw light on the causes of reproductive behavior, to interpret the changes which have taken place in the birth rate and as a guide to changes likely to take place in the future. If, for instance educated persons experience lower fertility, and if the proportions of the population in these classes are increasing, then this could be a factor causing the overall birth rate to fall. The cultural differences in fertility is

concerned with the examination of the factors, the ‘intermediate variables’ of through which cultural conditions can affect fertility.

Objectives

The main objective of this study is to find out the fertility behavior of the resp and to study about fertility differentiae by age at marriage.

Methodology

This study adopted a descriptive research design, as it aimed to describe and analyze the existing conditions and characteristics related to the research objectives. The overall nature of the study was quantitative, focusing on numerical data and statistical analysis to draw meaningful conclusions. The required data were collected through a field survey method, which involved direct interaction with respondents using structured questionnaires to obtain reliable and firsthand information. Dugeswor Rural Municipality-02, located in Dailekh District, has a total population of 3840 people living in 642 households.

After collecting the data from interview schedule, it was carefully checked to remove the possible errors. The collected information was tabulated in the master tables. Then the data were classified and tabulated in different tables under different headings and sub-headings by using mathematical and numerical procedure.

Analysis And Interpretation

The study concerns with the analysis and interpretation of respondents fertility behaviors age at marriage, age at first birth, place of baby birth, no. of their children, birth spacing between their children, etc in the study area.

Knowledge on ideal age at marriage

Respondents were asked whether they had the knowledge on ideal age at marriage in the study. The response obtained from the respondents has been shown in the following table:

Table 1: *Distribution of respondents by knowledge on ideal age of marriage*

Ideal age at marriage	No. of respondents	Percent
Under 15 years	-	-
15 - 18 years	5	4.76
18 - 20 years	41	39.05
Above 20 years	59	56.19
Total	105	100.00

Source: *Field Survey, 2082*

The above table reveals that nearly three in five (56 percent) of respondents replied that the ideal age at marriage as 20 years, nearly two in five (39 percent) of respondents replied that the ideal age at marriage was 18 to 20 years and only five percent of them

answered that the ideal age at marriage was 15 to 18 years. Similarly, none of them replied that the ideal age at marriage was under 15 years.

The data indicate that most respondents considered 20 years to be the ideal age for marriage, reflecting a preference for marriage at early adulthood. A notable portion viewed 18 to 20 years as appropriate, while only a few thought the ideal age was between 15 and 18 years. None of the respondents considered marriage under 15 years to be ideal. Overall, the findings suggest a general consensus among respondents in favor of marrying at a mature age rather than during early adolescence.

Age at marriage

Age at first marriage is the age-entry of a woman which marks the initiation of pregnancy and subsequently giving birth. Early age at marriage increases the likely incidence of childbirth and elongates a woman's reproductive period, which could result in higher fertility levels. However, socio-economic and cultural norms are other factors that also determine when a woman first gives birth (NSO, 2014). Respondents were asked about their age at the time of marriage and the response obtained from the respondents has been shown in the following table:

Table 2 : *Distribution of respondents by age of marriage*

Age at marriage	No. of respondents	Percent
12 - 15 years	-	-
15 - 18 years	33	31.43
18 - 20 years	41	39.04
Above 20 years	31	29.53
Total	105	100.00

Source: *Field Survey, 2082*

The above table reveals that nearly two in five (39 percent) of respondents got married at the age 18 – 20 years, more than three in ten (31 percent) of respondents got married at the age of 15-18 years and three in ten (30 percent) of them got married at the age above 20 years. On the other hand, none of them married at the age under 15 years.

The distribution of respondents by age at marriage shows that the majority of women in the study area marry before reaching the legal age of 20 years. This indicates that early marriage is prevalent in this rural community, reflecting traditional practices and socio-cultural norms that favor marrying at a younger age. Despite the legal provision in Nepal that sets the minimum age of marriage at 20 years, these findings highlight the persistence of early marriage in rural areas, underlining the need for targeted awareness programs and stricter enforcement of marriage laws to protect the rights and well-being of young women.

Child Ever Born by Age at Marriage

It was intended to compare the CEB with the age at marriage of the respondents to address the differential fertility by age at marriage. The relationship between age at marriage and CEB has been shown in the following table.

Table 3: *Child ever born by age at marriage*

Age at marriage	No of respondents	No of live birth	CEB
12-15 years	-	-	-
15-18 years	33	61	1.84
18-20 years	41	87	2.12
Above 20 years	31	92	2.96
Total	105	240	Mean CEB: 2.30

Source: *Field Survey, 2082*

Above table shows that child ever born was 1.84 among the respondents who married at the age of 15-18 years, child ever born was 2.12 among the respondents who married at 18-20 years and child ever born was 2.96 among the respondents who got married at the age above 20 years.

The data indicate that the number of children ever born tends to increase with the age at marriage. Respondents who married between 15 and 18 years had fewer children on average, while those who married at 18–20 years had slightly more. The highest average number of children was observed among respondents who married after the age of 20. This suggests a positive relationship between later age at marriage and the total number of children born among the respondents.

Husband's age at marriage

Respondents were asked about their husband's age at marriage in the study area. The response obtained from the respondents has been shown in the following table:

Table 4: *Distribution of respondents by knowledge on ideal age of marriage*

Ideal age at marriage	No. of respondents	Percent
Under 15 years	-	-
15 - 18 years	27	25.71
18 - 20 years	31	29.52
Above 20 years	47	44.77
Total	105	100.00

Source: *Field Survey, 2082*

In the above table, nearly half (45 percent) of respondents replied that their husband's age was above 20 years, three in ten (30 percent) of respondents replied that their husband's age was 18-20 years and one in four (26 percent) of respondents replied that their husband's

were at the age 15-18 years. Similarly, none of them replied that their husbands were of age under 15 years.

The data show that nearly half of the respondents reported their husbands' age to be above 20 years. A smaller portion indicated that their husbands were between 18 and 20 years, while about one in four respondents reported their husbands' age as 15–18 years. None of the respondents reported having husbands younger than 15 years.

Ideal age at first child birth

Respondents were asked whether they had knowledge about ideal age at first child birth. The response obtained from the respondents has been shown in the following table:

Table 5: *Distribution of respondents by knowledge on age at first child birth*

Age at first child (years)	No. of respondents	Percent
Under 18	17	16.19
18-20	34	32.38
Above 20	54	51.43
Total	105	100.00

Source: *Field Survey, 2082*

Above the table shows that more than half (51 percent) of respondents replied that the ideal age of giving birth is above 20 years, nearly one third (32 percent) of respondents replied that the ideal age is 18-20 years and nearly one in five (16 percent) of respondents replied that the ideal age of child birth is under 18 years is the study.

The data indicate that the majority of respondents considered the ideal age for childbirth to be above 20 years. A significant portion viewed 18–20 years as appropriate, while a smaller group believed that childbirth under 18 years was ideal.

Age at first child birth

Respondents were asked about their age at first child birth and the response obtained from the respondents has been shown in the following table:

Table 6: *Distribution of respondents by age at first child birth*

Age at first child (years)	No. of respondents	Percent
Under 18	16	15.23
18-20	38	36.19
Above 20	51	48.58
Total	105	100.00

Source: *Field Survey, 2082*

Above the table shows that nearly half (49 percent) of respondents replied that they were above 20 years while giving birth to their first child, more than one third (36 percent) of

respondents replied that they were at the age of 18–20 years and more than one in ten (15 percent) of respondents replied that they were under 18 years at the time of giving birth to their first child.

Use of contraceptives

Respondents were asked whether their couple are using contraceptive or not. The response of the respondents has been presented in the following table:

Table 7: *Distribution of respondents by use of contraceptives*

Use of contraceptives	No. of respondents	Percent
Yes	72	68.57
No	33	31.43
Total	105	100.00
If yes, types of contraceptives		
Condom	20	27.77
Depo	19	26.38
Pill	17	23.61
Male sterilization	5	6.94
IUD	5	6.94
Norplant	3	4.16
Female sterilization	2	2.78
Total	72	100.00

Source: *Field Survey, 2082*

The above table shows that nearly seven in ten (69 percent) respondents replied that their couple were using contraceptives. Among them, nearly three in ten (28 percent) respondents couples were using condom, more than one in four (26 percent) of respondents were using Depo, nearly one in four (24 percent) respondents replied that their couples were using Pills, seven percent respondents replied that their couples were using male sterilization and IUD each, four percent respondents replied that their couples were using Norplant and only three percent of them replied that they use female sterilization. MOHP, New ERA & ICF International (2012) mentioned that the three most popular modern methods used by married women are female sterilization (15 percent) but very less of the respondents i.e. only two percent had practiced it in the study area.

The non-use of contraceptives among this segment can be attributed to several factors, including husband's pressure or opposition, deep-rooted cultural and religious beliefs, misconceptions about side effects, and lack of awareness or access to family planning services.

Ideal number of children

Respondents were asked whether they had knowledge on ideal number of children.

The response obtained from the respondents has been shown in the following table:

Table 8: *Distribution of respondents by ideal number of children*

Response	No. of respondents	Percent
One	10	9.52
Two	25	23.80
Three	43	40.95
Four	23	21.90
Five	4	3.81
Total	105	100.00

Source: *Field Survey, 2082*

In the above table, more than two in five (41 percent) of respondents replied that the ideal number of children is considered as three, nearly one in four (24 percent) of respondents considered two children as the ideal number, more than one in five (21 percent) of respondents replied that the ideal number of children is four and one in ten (10 percent) of respondents replied that the ideal number of children is only one and only four percent of them replied that the ideal number is five in the study. The data suggests that three children are viewed as the most ideal family size by the largest share of respondents. Two and four children are also commonly considered appropriate, while very few favor having only one or as many as five children. This reflects a moderate preference for medium-sized families.

Knowledge on ideal birth spacing

Respondents were asked whether they had the knowledge on ideal birth spacing or not. The response obtained from the respondents has been shown in the following table:

Table 9: *Distribution of respondents by birth spacing*

Response	No. of respondents	Percent
One year	-	-
Two year	19	18.09
Three year	33	31.42
Four year	27	25.71
More than four year	26	24.77
Total	105	100.00

Source: *Field Survey, 2082*

Above table shows that more than three in ten (31 percent) of respondents replied that the ideal birth spacing between two children is three years, more than one in four (26 percent)

of respondents replied that the ideal birth space between two children is considered as four years, one in four (25 percent) of respondents replied the ideal time is more than four years and nearly one in five (18 percent) of respondents replied the ideal birth space between two children is two years.

The data indicate that respondents had varying opinions on the ideal birth spacing between two children. Most considered a gap of three years to be ideal, while a significant portion preferred four years or more than four years. Findings suggest that respondents generally favored spacing children by two to four years to ensure better family planning and child-rearing.

Abortion

Respondents were asked whether they had any abortion in their life. The response obtained from the respondents is shown in the following table:

Table 10: *Distribution of respondents by abortion*

Abortion	No. of respondents	Percent
Yes	23	21.90
No	82	78.10
Total	105	100.00

Source: *Field Survey, 2082*

The above table shows that nearly four in five (79 percent) of respondents had practiced abortion whereas rest of them had not practiced it. The data indicate that the majority of respondents had experienced or practiced abortion, while only a small portion had not. This suggests that abortion was relatively common among the respondents in the study area.

Conclusion

The study concluded that higher proportion of the respondents had the knowledge on ideal age at marriage. Higher proportion of the got married at the age 18 – 20 years and nearly half of respondents replied that their husband's age was above 20 years. More than half of respondents replied that the ideal age of giving birth is above 20 years. Majority of the respondents replied that their couple were using contraceptives. More than two in five of respondents replied that the ideal number of children is considered as three. Similarly, higher proportion of the respondents had three children with them. Majority of respondents had no desire of more children and only three in ten of respondents replied that the ideal birth spacing between two children is three years. Higher proportion of the respondents had three years interval between two children and more than nearly two in four (39 percent) of respondents had given live birth during five years. Majority of the respondents had practiced abortion in the study area.

The study shows that the age at which women get married has a clear influence on the number of children they have and the timing of their births. Women who marry later tend to have fewer children, while those who marry earlier often have more children over their lifetime. The patterns of childbirth vary across different age groups, highlighting the importance of marriage timing in shaping family size and reproductive behavior. Overall, understanding when people marry helps to explain how families grow and provides insight into the factors that affect fertility in the community.

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