

SOCIO-DEMOGRAPHIC CORRELATES OF AGE AT MARRIAGE IN NEPAL: AN EMPIRICAL ANALYSIS

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Age at marriage of girls is gradually increasing in Nepal, but still there is a lower age at marriage in the Terai. This paper aims to investigate the reasons for early marriage of girls among some families in Nepal with particular focus on the Terai and seeks answer to the research question 'What are the prominent socio-demographic and cultural factors that influence marriage timing of women in Nepal?'

Findings from empirical data analysis reveal that determination of marriage timing is a complex phenomenon. There are several factors that influence marriage timing of women in Nepal. Although bivariate analysis shows a further elaborative list of factors, multivariate analysis confirms the effect of each variable while controlling the effect of other variables. The prominent factors influencing marriage timing of women are age, place of birth, age at menarche, education of women and their mothers, and caste or ethnicity, and religion.

The significant differences in the risk of marrying early among caste and religion groups, and the significantly higher risk among caste/ethnic groups of Terai origin and Muslims who reside mainly in the Terai, are supported by the distinct sociocultural differences with more strict marriage norms and practices prevalent among these groups. The low educational level of these groups in general and women in particular further increases their risk of marrying at an early age. An education level of some secondary and above seems to be a protective factor against early marriage, but many of the caste and ethnic groups (except Terai high-castes) and Muslims of Terai have substantially low education, particularly among women. Lower age at menarche of girls of Terai origin may also be associated with early marriage as age at menarche and age at marriage of girls were positively associated. The lower age at menarche of girls of Terai caste groups in particular seems to be an important factor creating pressure on parents to arrange marriage of their daughters at an early age.

Keywords: Age at marriage and arrange marriage.

INTRODUCTION

Mahabir Malli was much worried about not being able to arrange the marriage of his nine year old daughter. But on Tuesday, he was much happier because the marriage of his daughter, Raja was being solemnized on that day.

'The prestige of our family is questioned if we do not arrange marriage of a daughter at a young age' said Mahabir after completion of Kanyadan.¹ 'Do not ask about my happiness now, I am not

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stepping on the ground now'. Despite the delay, he could arrange the marriage of his daughter in a lavish way. He was even happier because he could find a 12-year-old boy from a good family (Koirala, 2007,p. 1).

This is an excerpt from the news on early marriage published on the front page of the Kantipur Daily, the popular national daily vernacular newspaper in 2007; it shows that parents feel proud in arranging the marriage of their daughters at an early age. Further, the feeling expressed by the parents indicates that even for a child aged nine they fear that marriage has been delayed and their family's prestige may be questioned by the society.

This is only one of the representative cases of early marriage in Nepal. Many such stories go untold and unheard. Despite the ban on early marriage in Nepal, many girls, and also boys, are married young. Many of them are even married before adolescence. Such stories are made public with pride. Unfortunately, there is no intervention or legal action taken by the government to protect children from violation of their rights.

In Nepal, marriage is still one of the most important events in the life of a woman. It is also a formal process that sanctions sexual gratification guided by the Hindu code of conduct (Aryal, 2004). It also marks the important point in a woman's life at which childbearing becomes socially acceptable (MoH et al., 2002). In line with the Hindu tradition which dominates Nepalese thinking, marriage is virtually universal for both men and women. The arrangement of marriage is considered one of the most important duties of parents for their children; consequently, parents have a great obligation to make decisions about marriage, and they arrange most marriages with little involvement of the bride and groom (FHI, 2000).

The average age at marriage of women has been steadily increasing over recent decades in Nepal. This is evident from the singulate mean age at marriage (SMAM2) of women in Nepal which has increased from 15.4 years in 1961 to 19.5 years in 2001. The data by geographic region show that the women of the Terai have the lowest SMAM in all Censuses, lower than the women from the Hills and the Mountains, and further below the national average (Table 1). This shows that in spite of the general rise in age at marriage of girls in Nepal, early marriage is common in the Terai region whereas late marriage is becoming the norm in the Mountains and the Hills.

Table 1: Singulate mean age at marriage (SMAM) of men and women of Nepal over time

Source& year	Mountains			Hills			Terai			Nepal		
	M	F	D	M	F	D	M	F	D	M	F	D
1961 Census	Na	na	-	na	na	-	na	na	-	19.5	15.4	4.1
1971 Census	Na	na	-	na	na	-	na	na	-	20.8	16.8	4.0
1981 Census	21.8	18.5	3.3	22.0	18.0	4.0	19.7	15.8	3.9	20.7	17.2	3.5
1991 Census	21.9	18.6	3.3	22.2	18.9	3.3	20.6	17.0	3.6	21.4	18.1	3.3
2001 Census	22.1	19.6	2.5	23.4	20.2	3.2	22.5	18.9	3.6	22.9	19.5	3.4

Note: na-not available, M=Male, F=Female, D=Age difference between male and female.

Source: CBS, 2003.

1 Gift of a virgin girl in marriage.

2 SMAM computed by Hajnal (1953) can be calculated as $SMAM = (15 + 5P - 50N) / (1 - N)$ where P is the sum of proportions never-married at ages 15-19 to 45-49 and N is the proportion never-married at exact age 50 (estimated as the average of proportions at ages 45-49 and 50-54). The assumption is that there is no marriage taking place before the age of 15.

Comparison of SMAM for men with that for women shows that men generally tend to marry at a later age than women. Although there is a difference in SMAM of men by geographic region, and men did once tend to marry at an early age, now the difference is narrowing with a very little geographic difference in the SMAM of men. The SMAM of Terai men in 2001 was slightly higher than that of Mountain men but lower than that of the Hill men and the national average (Table 1).

Despite the general increase in age at marriage of men and women in Nepal, many girls are still married at a very early age, as is evident from the case presented in the opening example. Using another calculation which is based on the population composition (by age, sex and marital status) of the 2001 census and population projection for 2007, 23,502 girls aged 10-14 years were married in 2007, of whom 18,510 (78.9%) were girls from the Terai. Similarly, 252,323 (53.5%) of about half a million (471, 821) girls aged 15-19 who were married in 2007 were girls from the Terai. These estimates suggest that early marriage is still prevalent in Nepal with a much higher incidence in the Terai region than elsewhere in Nepal.

Marriage in Nepal is an institution deeply rooted in the customs and traditions, influenced by several factors including religion and sociocultural diversity. Hence, this article examines the relationship between various socio-demographic and cultural factors, and age at marriage of women, based on some empirical analysis and seeks answer to the research question "What are the prominent socio-demographic and cultural factors that influence marriage timing of women in Nepal?"

DATA AND METHODS

Data

This study makes use of multiple (secondary) data sets. Common to the use of secondary data, the data sets have some limitations in terms of inclusion of some intended variables considered important for this research. Two primary data sets are analyzed:

- 1) Nepal demographic and health survey (NDHS) 2006
- 2) Nepal adolescents and young adults (NAYA) survey 2000

The primary data sets used for analysis of patterns and determinants of age at marriage are the NDHS 2006 and NAYA 2000.

Nepal demographic and health survey 2006

The data used in most of the analysis in this study are from NDHS 2006. The sample in the 2006 survey is a two-stage, stratified, nationally representative sample of households. At the first stage of sampling, 260 Primary Sampling Units (PSUs), 82 in urban areas and 178 in rural areas, were selected using systematic sampling with Probability Proportion to Size (PPS). A complete household listing was carried out in all the selected PSUs to provide a sampling framework for the second stage selection of households. At the second stage of sampling, systematic samples, of about 30 households per PSU on average in urban areas and about 36 households per PSU on average in rural areas, were selected in all the regions. Since Nepal is predominantly rural, in order to obtain statistically reliable estimates for urban areas, the urban area was over sampled (MoH et al., 2007).

Data were collected through three main questionnaire modules: the Household Questionnaire, the Women's Questionnaire, and the Men's Questionnaire, however, the men's questionnaire is not used in this study. These questionnaires were adapted to reflect the population and health issues relevant to Nepal at a series of meetings with various participants from government ministries and agencies, NGOs and international donors. The final draft of the questionnaires was discussed at a questionnaire design workshop organized by the Ministry of Health and Population (MoHP) followed by translation of the survey into the three main local languages, Nepali, Bhojpuri and Maithili. The Household Questionnaire was used to list all the usual members and visitors in the selected households and to identify women and men who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, ownership of various durable goods, and ownership of mosquito nets.

The Women's Questionnaire was used to collect information from all women aged 15-49. These women were asked questions on the following topics: respondent's characteristics such as education, residential history, media exposure; pregnancy history, childhood mortality; knowledge and use of family planning methods; fertility preferences; antenatal, delivery, and postnatal care; breastfeeding and infant feeding practices; immunization and childhood illnesses; marriage and sexual activity; woman's work and husband's background characteristics; awareness and behaviour regarding AIDS and other sexually transmitted infections (STIs), and maternal mortality (MoH et al., 2007).

The data used for analysis are derived from both the household questionnaire and the women's questionnaire. The household survey of 22,247 women contains information on all female members of each household selected in the sample, including the current marital status of females aged 10 years and older. Information on variables related to religion, caste, place of residence, geographic region, age, marital status, education status, economic status of the household etc. come from this household module. The women's questionnaire has information on age at marriage of women, their sexual initiation, and information on their partner's age, age at marriage, education, occupation etc., including information on both married and unmarried women aged 15-49 years since 2006.

Nepal adolescents and young adults survey 2000

The Nepal Adolescents and Young Adults (NAYA) survey includes interview data from both married and unmarried men and women aged 14-22. A total of 7,977 respondents (3,802 males and 4,175 females) from 13 districts (six Terai and seven Hills districts) were interviewed.

The urban areas were surveyed during July and August 2000 and the rural areas were surveyed in two phases: from 5 August to 2 October in the Hill region and from 29 August to 29 October 2000 in the Terai region. The urban areas were over sampled to allow reliable estimates based only on the urban adolescent and youth population (Choe et al., 2004; Thapa et al., 2002).

In the urban areas, more than 18,000 houses were visited in the 100 census wards or blocks. These houses contained nearly 25,000 households (defined as residents who shared the same kitchen), or about 1.4 households per house visited. Among all the urban households surveyed, 10,298 had eligible respondents, that is, males and females aged 14 to 22 who had spent the previous night in

the house. Similarly, in the rural Hills and Terai regions, nearly 22,000 houses were visited in the selected wards (80 census wards or blocks respectively). Those houses contained nearly 23,000 households, or about 1.1 household per house visited. Among all the rural households surveyed, 10,610 had eligible respondents (Thapa et al., 2002).

In urban areas, 3,053 eligible respondents from 2,000 households were selected for interview, representing 19.4 percent of the 10,298 households with eligible respondents. The sample households were selected by means of sampling intervals and random numbers based on a random table. The largest numbers of respondents were unmarried males (1,297, or 93% of all males) and unmarried females (1,054, or 73% of all females). In the rural areas, a total of 4,000 households and 5,478 eligible respondents were selected for interview. The 4,000 rural households represented 37.7 percent of the 10,610 households with eligible respondents. Of the selected respondents, 58 percent of the females and 79 percent of the males were single.

Of the selected urban households, 96.4 percent were successfully interviewed. The percentage for individual respondents was slightly lower, 92.5 percent (ranging narrowly from 91% to 95%). The ratio of eligible respondents selected for interview to the number of households selected for interview was 1.53 to 1 for all five urban areas. Altogether, 2,824 respondents (51% female and 49% male) were successfully interviewed in the five urban areas.

In the rural areas, about 94 percent of the households and an equal percentage of individual respondents were successfully interviewed. The ratio of eligible respondents to the number of households was 1.4 to 1, slightly lower than in the urban areas. Altogether, 2,730 females and 2,423 males were successfully interviewed in the eight rural districts selected for the survey.

The survey questionnaire consisted of 13 modules: respondents' background; residential history; family characteristics; puberty; menstruation; friendship, love, and marriage; sexuality; pregnancy and childbearing; knowledge and practice of family planning, knowledge and incidence of sexually transmitted infections, including HIV/AIDS; gender roles; mass-media exposure; awareness of girl-trafficking; and miscellaneous topics, including smoking, alcohol use, and drug use. Separate questionnaires were designed for unmarried females, married females, unmarried males, and married males (Thapa et al., 2002).

This survey also includes qualitative information collected through focus group discussion, which is valuable in demystifying some of the sociocultural aspects affecting early marriage. The survey also includes attitudes and behaviour of adolescents and young adults on most of the socio-cultural and economic variables, which are useful for comparing trends and patterns of marriage prevalence and age at marriage. Several other variables are also useful: marital status, age at marriage, importance placed on virginity of girls before marriage, education at the time of marriage, education of partners at the time of marriage, education of parents, age at first menstruation, attitudes and perceptions related to types of marriage preferred, place of birth, attitudes on gender discrimination, and dowry.

There are some limitations to this survey, however. Although it is claimed to be the first national survey of this type covering a larger sample size, it only covers a few districts (17% of total districts), totally excluding the districts in the Mountains region. Hence, it is not a properly

representative national survey. Further, the age of respondents ranges from 14 to 22 years, and so is not suitable to show trends of any specific variable over a period of time owing to the short age cohort.

METHODS

Both bivariate and multivariate analyses were applied to assess the effect of predictor variables on age at marriage of women. Chi-square, t-test and F-test or ANOVA were applied to calculate the mean age at marriage of women, and some attitudinal aspects by various background characteristics.

In the multivariate analysis, the proportional hazard model (Cox Regression) was applied. The proportional hazard model is the most general form of regression model because it is not based on any assumptions concerning the nature or shape of the underlying survival distribution (Newman, 1995; Vittinghoff et al., 2005). The model assumes that the underlying hazard rate (rather than survival time) is a function of the independent variables (covariates); no assumptions are made about the nature or shape of the hazard function. Another reason for choosing this method is that some of the variables such as age at menarche and education of mother and father were available in the NAYA 2000 data sets which included respondents aged 14-22. To make the findings of NAYA 2000 and NDHS 2006 comparable, the proportional hazard model is more appropriate as just over a third of the respondents in the former data set are married while four-fifths in the latter are married. For example, if logistic regression was applied to predict the effect of independent variables on age at marriage, only the married respondents would be included in the model. But in this model, all the respondents exposed to risk of marriage with similar socio-economic characteristics were included in the model to predict the hazard of marriage.

The probability of the endpoint (in this case marriage) is called the hazard. The hazard is modelled as:

$$H(t) = H_0(t) \times \exp(b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k)$$

where $X_1 \dots X_k$ are a collection of predictor variables and $H_0(t)$ is the baseline hazard at time t , representing the hazard for a person with the value 0 for all the predictor variables.

By dividing both sides of the above equation by $H_0(t)$ and taking logarithms, we obtain:

$$\ln \left[\frac{H(t)}{H_0(t)} \right] = b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k$$

We call $H(t)/H_0(t)$ the hazard ratio. The coefficients $b_1 \dots b_k$ are estimated by Cox regression, and can be interpreted in a similar manner to that of multiple logistic regression.

In the case of marriage, the covariate (risk factor) is dichotomous and is coded 1 if present (married) and 0 if absent (not married or single). Then the quantity $\exp(b_i)$ can be interpreted as the instantaneous relative risk of an event, at any time, for an individual with the risk factor present compared with an individual with the risk factor absent, given both individuals are the same on all other covariates.

A few modifications of the dependent variables were executed to compute appropriate dependent variables for the proportional hazard model (Cox regression). Age at marriage and current age of the respondents were combined to create the variable 'age at marriage or current age of the respondent' which was treated as a time variable. Similarly, marital status of the respondents was recoded into another dichotomous variable with response categories, single or married, which was treated as an event variable. The independent variables were geographic region, place of residence (place of birth in NAYA 2000), age of respondents, age at menarche (in NAYA 2000 only), education level (current at the time of survey in NDHS 2006 and at marriage time in NAYA 2000), economic status of the household (NAYA 2000 only), and combined religion and caste.

Although the conventional tripartite geographic division (Mountains, Hills and Terai) of Nepal has limitations in capturing and explaining the demographic changes including marriage prevalence and timing, geographic region was also included in the model. This will further help in assessing its limitations compared to other variables such as caste and religion. Caste and religion were found to be significantly associated; so a combined variable of caste and religion was computed. For instance, Muslim was a category under both caste and religion and when entered into the multivariate model (Cox proportional hazard model), it was found significant for caste but non-significant for religion in the NAYA 2000 analysis and non-significant for both caste and religion in NDHS 2006 (data not shown). Almost all (98-99%) of the Hills higher-castes, Hills lower-castes, Terai higher-castes, Terai middle-castes, and Terai lower-castes were Hindu and only a few cases were of 'Other' religions. Among the Hills Janajati (or middle-caste), while the majority were Hindu, considerable proportions were Buddhist and a small percentage (around 4-5%) were 'Other' religions. From bivariate analysis, there was similarity in marriage prevalence and age at marriage among Buddhists and 'Other' religions, so these two were combined in one category. This was also because there were few cases under 'Other' religion. Musalmans were, of course, of Muslim religion. Although there is social hierarchy among Muslims as well, all Muslims were enumerated as a single category, so a decision was made to compute a combined caste and religion variable to have distinct differences by religion within the caste as well.

In the Cox regression analysis (proportional hazard model), independent variables need to be either dichotomous dummies or continuous. Age of respondents and age at first menstruation were continuous variables. Place of residence, education of father, and education of mother were dichotomous dummies. Education of respondents was a categorical variable with four categories; three binary dummy variables were created. Similarly, combined caste and religion variables had 12 categories and thus 11 binary dummy variables were created. In the case of binary dummy variables, the remaining category of the variable which was not included as a binary dummy variable was treated as the reference category.

RESULTS

Table 2 presents the descriptive statistics from the analysis. The mean age of women was 28.6 years in NDHS 2006 and 17.6 years in NAYA 2000. The respondents in NDHS were aged 15-49 and 80 percent of them were ever-married while the respondents in NAYA were aged 14-22 and just over a third of them were ever-married. Girls on average first menstruated at 13.8 years which was only available in NAYA data set. By rural-urban place of residence, 27 percent of women in NDHS 2006 were living in urban areas, and 36 percent in NAYA (Table 2).

Table 2: Descriptive statistics of the variables included in the multivariate analysis

Variables	NDHS 2006	NAYA 2000
Urban place of residence (%)	27.3	36.3
Geographic region (%)		
Mountains	13.7	na
Hills	39.2	53.0
Terai	47.1	47.0
Age of respondents (mean years)	28.6	17.6
Age at menstruation (mean years)	na	13.8
Highest education level of women (%)		
No education	52.6	27.3
Primary	17.7	15.7
Some secondary	20.4	19.9
SLC & above	9.3	37.1
Father literate (%)	na	71.1
Mother literate (%)	na	36.2
High wealth index of HH (%)	na	36.4
Combined caste/ethnic and religion (%)		
Hills high-caste	36.8	34.0
Hills middle-caste Hindu	17.1	19.8
Hills middle-caste Buddhist & 'Other' religion	9.3	7.9
Hills low-caste	8.6	6.7
Terai high-caste	0.6	na
Terai middle-caste	8.9	7.9
Terai Janajati	10.2	na
Terai low-caste	3.6	na
Terai 'other'-caste	na	18.8
'Other'-caste Hindu	1.5	0.6
'Other'-caste Buddhist & 'Other'-religion	0.3	na
Musalman (Muslims)	3.1	4.3
N (total)	10,793	3,487
Event	8,640 (80.1%)	1,347 (38.6%)
Censored	2,153 (19.9%)	2,140 (61.4%)

Note: In NAYA 2000 data sets, Terai high-caste, Terai Janajati and Terai Dalit are not enumerated separately. Many caste groups are categorized as 'Others' category; na: not available.

Source: 2006 NDHS and 2000 NAYA data sets.

By education, 53 percent of women had no education in NDHS 2006 and 27 percent in NAYA; 18 percent had primary education in the former data set and 16 percent in the latter. One-fifth of women had some secondary education in both data sets, but those with high school and above education constituted nine percent among NDHS 2006 respondents and just over a third in NAYA 2000.

By parental education, while 71 percent of fathers of the women were literate, only 36 percent of mothers were. The wealth index of the women's household was only included in the NAYA 2000 analysis. Slightly over a third of the respondents were from households with high economic status. Although this variable was present in NDHS 2006, it was not included in the model because the

economic status of the women was enumerated at the time of survey and not at the time of marriage. In the patrilocal form of marriage which is common in Nepal, women after marriage live in the husband's house, so the economic status of the household enumerated is of her husband's household and not of her parental household.

As noted above, a combined caste and religion variable was used in the multivariate analysis. Hills high-caste women, who follow mainly Hinduism, are the major caste group and constitute 37 percent in NDHS 2006 and 34 percent in NAYA 2000. Hills middle-castes (or Janajati), who follow Hinduism, are at 17 percent and 20 percent in the respective data sets whereas Hills middle-caste Buddhists and 'Other' religion are nine percent and eight percent. Hills low-caste women (mainly Hindu) are at nine percent and seven percent in the NDHS and NAYA. Terai high-caste Hindu women are less than one percent and only enumerated in NDHS. Terai middle-caste Hindu women are at nine percent and eight percent in the respective data sets. Terai Janajati women who are mainly Hindu constitute 10 percent of the respondents and were only enumerated separately in NDHS, as were Terai low-caste Hindu women who constitute four percent of the respondents. Terai other-caste Hindu women constitute 19 percent of the respondents in NAYA and may include many of the Terai caste/ethnic groups such as Terai higher-caste, Terai low-caste, and Terai Janajati which were not enumerated separately, so this category is very large. Muslims constitute three and four percent in the respective data sets. 'Other' caste Hindu women were at less than two percent and less than one percent in NDHS and NAYA data sets whereas 'Other' caste and 'Other' religion (Buddhist and 'Other') made up less than one percent in NDHS 2006.

Correlates of age at marriage

Mean age at marriage of ever-married females aged 14-22 from NAYA 2000 was calculated using various background characteristics, age at menarche, education of parents, and types of marriage entered, which were not available in the NDHS 2006 data sets. As less than half of the respondents were married, median age at marriage was not applicable. Both t-test and F-test or ANOVA was applied based on types of independent variables to assess the association between the independent and dependent variables. Pearson correlation was also calculated to measure the degree of association between some independent (e.g. age at menarche) and dependent variables (e.g. age at marriage) which were in numeric scale.

Findings from the proportional hazard model (Cox regression analysis) which was applied to both NAYA 2000 and NDHS 2006 data sets are presented in the subsections on the independent variables.

Age of women: The hazard coefficients (reported as odds ratio in logistic regression) in Table 3 and Table 4 show that the higher age cohorts were at a higher risk of marrying earlier than younger age cohorts; age was found to be highly significant in the model in both data sets. For each additional year increase in the age of women, the risk of marrying at an earlier age increased from one percent in NDHS to seven percent in NAYA.

Tripartite geographic division: By geographic region, women in the Terai³ had a higher risk of marrying at an early age than women in the Hills. In NAYA 2000, Terai women had a statistically significant 62 percent higher risk of marrying young than women from the Hills (Table 3).

3 Owing to the present population composition, Terai women according to the geographic-region category include both Hills-origin and Terai-origin women.

Table 3: Hazard coefficients of marriage timing of women (aged 14-22) by selected background characteristics, Nepal, 2000

Background characteristics	Statistics	
	B	Exp (B)
Age	0.07	1.07***
Age at menarche	-0.13	0.88***
Place of birth		
Urban	-0.15	0.86*
Rural (ref.)	0.00	1.00
Geographic region		
Hills (ref.)	0.00	1.00
Terai	0.48	1.62***
Education of womena		
No education (ref.)	0.00	1.00
Some primary	-0.29	0.75***
Some secondary	-0.85	0.43***
High school & above	-1.83	0.16***
Education of father		
Illiterate (ref.)	0.00	1.00
Literate	-0.10	0.90++
Education of mother		
Illiterate (ref.)	0.00	1.00
Literate	-0.33	0.72**
Combined caste and religion		
Hills high-caste (ref.)	0.00	1.00
Hills middle-caste Buddhist	-0.65	0.52***
Hills middle-caste Hindu	-0.42	0.66***
Hills low-caste	0.28	1.33**
Muslims	0.14	1.16++
Terai middle-caste	-0.10	0.90++
Terai 'other'-caste	0.28	1.33**
'Other'-caste	0.45	1.57++
Economic status of the household		
Low (ref.)	0.00	1.00
High	-0.11	0.89++
-2 Log Likelihood	19104.3***	

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ++ $p > 0.05$; aCurrent at the time of survey for unmarried and at the time of marriage for married respondents combined.

Source: 2000 NAYA data set.

Similarly, analysis of NDHS 2006 shows that women in the Mountains had a 12 percent lower risk of marrying young than the reference group women (Hills women). In contrast, Terai women had an 18 percent higher risk of marrying at an earlier age than the reference group women. In both cases, the relationships were statistically highly significant (Table 4).

Rural-urban place of residence: In contrast to the general trend, rural-urban place of residence was found to be non-significant in the multivariate analysis based on both NDHS 2006 and NAYA 2000. The magnitude of risk of marrying at an earlier age was, however, different in these two models. In the NAYA 2000 analysis, an urban woman had a 14 percent lower risk of marrying young than the rural woman, which was significant (Table 4). In contrast, the urban women in the

NDHS 2006 had a similar risk of marrying young to that of rural girls. There may be two reasons for this situation: first, only a small percentage of people live in the urban areas in Nepal, and many people living in urban areas have strong bonds with their traditional extended families living in rural areas. Thus, they may still have a strong attachment to the social norms and traditions that influence early marriage of girls. Second, place of residence was enumerated as current at the time of the NDHS survey and may have changed after marriage. But in the case of NAYA 2000, place of residence at birth was enumerated, which seems more meaningful than the current place of residence.

Table 4: Hazard coefficients of marriage timing of women (aged 15-49) by selected background characteristics, Nepal, 2006

Background characteristics	Statistics	
	B	Exp(B)
Age	0.01	1.01***
Place of residence (current at the time of survey)		
Urban	0.00	1.00++
Rural (Ref)	0.00	1.00
Geographic region		
Mountains	-0.12	0.88***
Hills (Ref)	0.00	1.00
Terai	0.17	1.18***
Education level (current at the time of survey)		
No education (Ref)	0.00	1.00
Primary	-0.11	0.90**
Some secondary	-0.61	0.54***
SLC & above	-1.10	0.33***
Combined caste & religion		
Hills high-caste (Ref)	0.00	1.00
Hills middle-caste Hindu	-0.36	0.69***
Hills middle-caste Buddhist	-0.53	0.59***
Hills low-caste	0.23	1.26***
Terai high-caste	0.17	1.19++
Terai middle-caste	0.26	1.29***
Terai Janajati	-0.06	0.94++
Terai low-caste	0.36	1.44***
'Other'-caste Hindu	0.12	1.13++
'Other'-caste 'Other' religion	-0.28	0.76++
Muslim	0.21	1.23**
-2 Log Likelihood	144640.3***	

Note: *p<0.05; **p<0.01; ***p<0.001; ++non-significant.

Source: 2006 NDHS data set.

Caste/ethnicity and religion: Combined caste or ethnicity and religion in the multivariate analysis from the NAYA 2000 and NDHS 2006 show that women from these groups significantly differ in risk of marrying early by caste and religion. In general, Hindu and Muslim women had a higher risk of marrying young than Buddhist and 'Other'-religion women. Except for the Hills middle-caste or Janajati (both Hindu, and Buddhist and 'Other' religion), women of all other caste and religion groups were at a higher risk of marrying young than the reference group (Hills high-caste)

in NAYA 2000. The Hills middle-caste or Janajati group includes women of Magar, Tamang, Gurung, Rai, Limbu and Newar ethnicity who most often marry later than rest of the caste groups in the Hills and Terai (data not shown here). However, the magnitude of risk varies by different castes and religions. Hills low-caste and Terai other-caste women are at a moderately high risk (33% each) of marrying young than the reference group women. Muslim women and 'Other' caste women are at moderate and substantially higher risk respectively (16% and 57%) of marrying young compared to the reference category, but were not statistically significant. The Terai middle-caste women had a 10 percent lower risk of marrying young than the reference group, but this was not statistically significant. The risk of marrying at an earlier age for Hills middle-caste women was lower than for Hills high-castes (reference group), but the risk differed for Hindu, and Buddhist and 'Other' religions. Hills middle-caste women who follow Hinduism had a 34 percent lower risk of marrying young than the reference group women; the risk was 48 percent lower for Hills middle-caste women who follow Buddhism and 'Other' religions (Table 4). This signifies the effect of religion on the risk of marrying younger among the Hills middle-caste women.

Analysis of NDHS 2006 data shows a similar trend but with some differences in magnitude of risk of marrying younger. Further, some more groupings could be included in this model to represent more accurately the reality of the society. Except for the Hills middle-caste women (both Hindu, and Buddhist and 'Other'-religion), Terai Janajati, and 'Other'-caste 'Other'-religion women, all caste groups had a higher risk of marrying young than the reference group women (Hills high-caste). Hills low-caste, Terai high-caste, Terai middle-caste, 'Other'-caste Hindu, and Muslim women were at moderately higher risk (26%, 19%, 29%, 13% and 23% respectively) of marrying at an early age than the reference group. Terai low-caste women had a substantially higher risk (44%) of marrying young.

On the other hand, Terai Janajati women had only a six percent lower risk of marrying young than the reference group women, but were not significant. In contrast, Hills middle-caste women who follow Hinduism, and Buddhist and 'Other'-religion, and 'Other'-caste 'Other'-religion women had a lower risk (31%, 41% and 24% respectively) of marrying young than the reference group. Among the Hills middle-caste women, the decline in risk of marrying young was much higher among followers of Buddhist and 'Other' religion than of Hinduism, as was the case with the 'Other' caste group (Table 4).

Type of marriage: Type of marriage based on decision making entered by the women was also found to be significantly associated with their age at marriage. Not surprisingly, the mean age at marriage calculated from NAYA 2000 was lower for women in arranged marriages (14.9 years) than for women in love marriages (16.4 years) (Table 5). However, because of the small percentage of ever-married women in the sample, this variable was not included in the multivariate analysis as it would have resulted in a larger number of missing cases, thus reducing the number of cases included in the multivariate analysis.

Parental education: Education of parents (mother's and father's education separately) was also found to be associated with age at marriage of women. Bivariate analysis found a higher mean age at marriage for women whose fathers and mothers were literate (15.6 and 16.1 years respectively) than women with illiterate fathers and mothers (14.7 and 14.9 years respectively) (Table 5). This encouraged me to include the parental education variable in the multivariate analytic model.

From the multivariate analysis based on NAYA 2000 data, the education of women's parents influenced their risk of marrying young. Women with literate fathers and mothers had a lower risk

of marrying young than those with illiterate parents, but this was not significant for father's education. Women whose fathers were literate had a 10 percent lower risk of marrying young than women whose fathers were illiterate. In the case of mother's education, women whose mothers were literate had a 28 percent lower risk of marrying young than women whose mothers were illiterate.

Table 5: Mean age at marriage of women (aged 14-22) by selected background characteristics, Nepal, 2000

Background characteristics	Statistics		
	Mean	Std. Error mean	n
All married women	15.16	0.07	1,497
Age at first menstruation***			
9-12	14.46	0.18	216
13	14.50	0.14	342
14	15.37	0.11	463
15+	15.94	0.12	424
Education of father***			
Illiterate	14.68	0.10	662
Literate	15.62	0.09	735
Education of mother***			
Illiterate	14.96	0.07	1,231
Literate	16.11	0.15	251
Type of marriage entered***			
Arranged	14.93	0.07	1,262
Love	16.43	0.13	234
Correlation	Cor.		n
Age at menarche & marriage age***	Coeff.		
	0.243		1,445

Note: *t*-test, ANOVA, and correlation significance: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; +++ $p > 0.05$.

Source: 2000 NAYA data set.

Education of girls: The higher education of women helps to minimize the risk of being married at an early age, as is evident from both surveys, NDHS 2006 and NAYA 2000. In the analysis, women with no education were the reference category. The analysis from NAYA 2000 shows that women with some primary education had a 25 percent lower risk of marrying young than the reference group women. Women with some secondary education, and with high school and above had 57 percent and 84 percent lower risk of marrying young than the reference category women (Table 3). Although the magnitude of hazard differed by education level of girls, all were statistically highly significant.

A similar trend was found in NDHS 2006 analysis but with a different level of magnitude of risk. The analysis shows that women with primary school education had a 10 percent lower risk of marrying young than women with no education at all (reference category) and was significant at the $p < 0.01$ level. Women with some secondary education, and with SLC and above level of education had a 46 percent and 67 percent lower hazard of marrying young than the reference category women; this was statistically highly significant (Table 4).

Age at menarche: The bivariate analysis from NAYA 2000 data sets in Table 5 revealed that mean age at marriage of women differed significantly by their age at first menstruation. The lower the age at menarche of women, the lower was their mean age at marriage. The girls who first menstruated between 9 and 12 years of age were married at 14.5 years and those who first menstruated at 15 or later were married on average at 15.9 years. The Pearson correlation between age at menarche and age at marriage was statistically significant and positive but weak (Pearson correlation value 0.243).

The multivariate analysis also shows a strong association between age at menarche of women and their hazard of marriage. For each additional year increase in age at menarche, the hazard of marriage decreased by 12 percent. The higher the age at menarche, the lower was the hazard of marrying young (Table 4).

Economic status of the household: Multivariate analysis from NAYA 2000 shows that the general economic status of the women's household is not significantly associated with the hazard of marrying young (Table 4). Women in high economic status households had an 11 percent lower risk of marrying young than the reference category women (low economic status), but this was not statistically significant.

DISCUSSION

Age of women: Age of women is significantly associated with marriage age, for several reasons, of which the first may be associated with the changing norms and attitudes among the women and their parents regarding marriage. In the contemporary Nepalese society, there is an increasing level of love matches among the young, and also 'love-cum-arranged' marriage is becoming popular among urban and educated people. Second, this change may be associated with an increased awareness level due to the expansion of mass media such as radio and television as well as the increased access and opportunities of girls' education in recent decades. Enhancement of education and increased awareness act as modernizing factors; as a result, people have a lower level of adherence to the social and traditional norms, and thus may delay marriage.

Tri-partite geographic region: Findings related to association between age at marriage and geographic region correspond with the findings from previous studies (Choe et al., 2005; Niraula & Morgan, 1996; Thapa, 1989; UNFPA, 2002). Women in the Terai are more likely to be married young than their counterparts in other regions.

Although there is a significant difference in marriage hazard of women by geographic regions, it should be noted that there are contrast differences in the sociocultural practices of Hills people and Terai-origin people. Because of the internal migration of Hills and Mountains people after 1950s, the sociocultural aspects of the Terai have substantially and significantly changed (Gurung, 1988). As mentioned by Dahal (1992, p. 17), 'All three main groups that reside within the region [Terai] — the original inhabitants, the people of "Indian origin" and the Nepali Highlanders ...' also indicate the cultural blend in the present Terai. Since the Terai category of geographic region contains people from the Hills and Mountains as well as native to the Terai, the Terai-origin or Madhesi women may have much greater hazard of marrying at an early age, as is evident from analysis of determinants in the following section.

Caste-ethnicity and religion: Findings related to association between age at marriage and caste or ethnicity show that caste or ethnicity of women is a significant factor that influences marriage

timing of women, consistent with findings from past studies in Nepal and elsewhere (Adedokun, 1999; Aryal, 1991; Bista, 1996; Choe et al., 2005; Kobrin & Goldscheider, 1978; McLaughlin et al., 1993; Thapa, 1989, 1997; UNFPA, 2002). This difference by caste/ethnicity may be due to the difference in education and socio-economic status, and level of attachment to cultural norms and traditions, particularly those related to marriage practices. Factors such as cultural norms and traditions related to marriage, notions of sexual purity, freedom of premarital sexual relationships, and choice of mate seem to be the primary factors influencing the marriage hazard rate among many caste/ethnic groups except for the Hills middle-caste (Janajati) (Bista, 1996); an example among Newar is the Ihi or Bel Bibah which is held at pre-pubertal age (Bista, 1996; Majupuria, 2007). Among the Hills middle-caste or Janajati (ethnic) groups, there is an increased freedom for women and girls to choose their spouse, and some freedom of premarital relationships with their spouse-to-be (Bista, 1996; Gurung, 1993), though this varies from one ethnic group to another. It is the case with some of the Terai Janajati group (Bista, 1996). In contrast, among many caste groups of Hindus and Muslims, there is much restriction of women's freedom of mobility, mingling with the opposite sex (CBS, 1995) and choosing their own husband; parents in these groups may be cautious about the premarital chastity of their daughters and may fear involvement of their daughter in love affairs or premarital sex, bringing dishonour to her family.

The findings show that Hindu and Muslim women in Nepal marry at an earlier age than Buddhist and 'Other'-religion women. From the combined caste/ethnicity and religion variable, the effect of religion on age at marriage was further visible among the same caste/ethnic groups who follow different religions. Hills middle-caste (Janajati) women who follow Hinduism were at a higher risk of marrying young than those who follow Buddhism and 'Other'-religion. This was also the case with 'Other'-caste Hindus and 'Other' religions. This is consistent with findings from previous studies (Adedokun, 1999; Aryal, 1991; Bista, 1996; Dixon, 1971; Grenier et al., 1987).

The following five factors may be responsible for this difference. First, Hindus and Muslims are more rigid and strict about social norms and traditions related to marriage. A higher percentage of respondents of Hindus (Brahmin, Chhetri and Thakuri, Hills lower-castes, and Terai caste groups) and Muslims believed that girls should remain virgin before marriage (data not shown here). A second possibility is that as a higher percentage of Hindu and Muslim respondents preferred, and had entered arranged marriage than Buddhist and 'Other'-religion respondents, this may have an effect on early marriage of girls (data not shown). A third possibility is that the older members of the family assume the religious role of arranging the marriage of their children (Dixon, 1971). Many of the orthodox Hindus still consider they will obtain religious merit if they marry their daughters at an early age, preferably before menarche (Bennett, 1978; Bista, 1996). Fourth, there is also evidence that attitudes towards premarital sexual relationships and freedom of selection of spouse are more relaxed in some of the indigenous groups of the Hills, but are more restricted among caste groups of Hindus (Bennett, 1978; Bista, 1996) and Muslims. Owing to the tradition of Ihi (symbolic marriage to a Bel tree) among Newar, parents give the marriage of their daughters to a man a lower priority (Bista, 1996; Majupuria, 2007), so marriage is delayed. Indigenous groups of the Hills and Newar follow both the Hindu and Buddhist religions; while Hindus of these caste/ethnic groups are attached to the strict marriage traditions, Buddhists and 'Other'-religions are much more flexible. A fifth factor may be associated with the stricter practice of dowry among Hindus in the Terai and Muslims, due to which parents may be pressured to arrange the marriage of their daughters at an early age to escape having to pay a higher dowry (Dahal, 1996; Hart, 2001; Rakesh, 1994).

The above analysis of risk of marrying earlier among various Terai caste-group women further indicates the inadequacy and irrelevancy of measurement and analysis of such demographic changes by geographic region. Most of the Terai caste-group women had a much higher level of risk of marrying early than the Hills caste groups.

Rural-urban place of residence: Previous studies from Nepal found that place of birth was associated with age at marriage of women (Choe et al., 2005; McLaughlin et al., 1993; Pradhan & Strachan, 2003; UNFPA, 2002; Westoff, 2003). According to these studies, women from rural areas are often married at earlier ages than urban women. However, findings from this analysis contrast to the findings from previous studies, but partly correspond with the findings of UNICEF (2005) in which the relationship between rural-urban place of residence and age at marriage was insignificant in 30 countries. They also correspond with findings from a study in Vietnam (Minh, 1997) in which there was an unclear association between rural-urban place of residence and age at marriage of females, but a clear association for males.

Types of marriage: Findings on relationship between age at marriage and types of marriage is consistent with past studies in Nepal and elsewhere (Adedokun, 1999; Dahal et al., 1993a; Dixon, 1971; Minh, 1995). This difference in age at marriage may be due to the fact that parents are the prime decision-makers in arranged marriage, and they decide according to their attitude, prevailing customary laws, and social norms and traditions. Another possibility is that age at menarche is considered as a social and cultural marker in traditional societies (Bennett, 1978; United Nations, 2004), so parents feel that their daughters at menarche are mature and ready for marriage. Third, parents and their relatives take marriage of their children as a religious duty, which they want to fulfil as soon as possible to gain religious merit (Bennett, 1978; Bista, 1996). Another reason may be that a majority of the people still have the attitude that girls should be married before their menarche or should be virgins before marriage (Bennett, 1978; Bista, 1996).

Parental education: Girls with educated parents are less likely to be married at an early age which is consistent with the findings from previous studies (Bates et al., 2007; Michael & Tuma, 1985). One reason may be that daughters of educated parents are more likely to be educated as they may consider their parents as role models (Michael & Tuma, 1985) and, therefore, aspire to higher education. Educated parents may also put emphasis on the education of their daughters as they want their daughters to be free of the drudgery of manual labour in the future through some level of education (Caldwell et al., 1983, 1988; Nag & Kak, 1984). Another factor associated with this may be the increased level of awareness of educated parents on gender issues and the implications of early marriage for the lives of their daughters. As a result, educated parents may give more importance to the education of their daughter by discouraging their marriage at an early age (Bates et al., 2007; Schuler et al., 2008).

The difference in the effect of education of father and mother on marriage age of women may be because women who are educated are aware of the consequences of early marriage. Having known the importance of education for themselves and their daughter, and being aware on the consequences of early marriage, mothers may have more influence in decisions related to education and marriage of their daughters (Schuler et al., 2008) than fathers. Although some studies have focused on the intergenerational effect of women's education on their daughters' marriage and birth timing (Bates et al., 2007; Schuler et al., 2008), there is little focus on the effect of fathers' education on their daughters' marriage.

Education of girls: Education of a girl has significant influence on her marriage age; this finding is also consistent with the findings from previous studies in Nepal and elsewhere (Adedokun, 1999; Axinn & Thornton, 1992; Bates et al., 2007; CBS, 2003; Choe et al., 2005; Glick et al., 2006; VandenHeuvel & McDonald, 1999; Westoff, 2003). This pattern may be associated with young women who aspire to continue further education at college level and generally do not marry while they are studying (Axinn & Thornton, 1992; De Silva, 1997).

Similarly, literacy and education can influence attitudes to marriage through the increased awareness of educated women (De Silva, 1997). Education also acts as modernization factor that changes the traditions regarding mate selection and postpones marriage (Goode, 1963). De Silva (1997) found in a study in Sri Lanka that while studying at a higher educational institution, students tend to develop friendships and have romantic relationships among themselves. Marriage in such cases is often delayed while they assess the desirability of making such relationships permanent. In such situations, they also want to be financially independent by obtaining employment before entering marital life.

In the case of arranged marriage, which is most often hypergamous and caste-endogamous in Nepal, the higher education of a girl may pose some difficulty in finding a suitable match, thus it takes a longer time to arrange the marriage. Consequently, education plays a key role in determining marriage age, and women with higher education tend to marry later.

The hazard rate of marrying of women of each educational category was substantially lower for women in NAYA than their counterparts in NDHS. One possible reason is that in NAYA, education of married women was enumerated at the time of marriage, whereas in NDHS, education of married women was enumerated at the time of survey. This indicates that education at the time of marriage is a better measure when assessing its association with age at marriage. Another possibility may be that the age difference of the respondents in NAYA (14-22 years) and NDHS (15-49 years) influence awareness level and empowerment through other factors than education and thus result in a sharp decline in risk of marrying. However, this needs to be further tested through further large studies.

Age at menarche: Finding related to association between age at menarche and age at marriage is consistent with the findings from studies in Britain, US, Belgium, Pakistan, Malaysia (Udry & Cliquet, 1982) and India (Surender, 1992). This may be for the following reasons. First, the age at menarche still remains as an important social and cultural marker in many societies, defining girls' exit from childhood and readiness for marriage and childbearing (United Nations, 2004). Second, this may also be associated with premarital sexual purity. As libido increases after menarche through the release of sexual hormones, and secondary sexual characteristics become prominent and attract males (Udry & Cliquet, 1982), parents may worry about their daughters' chastity after menarche, and wish to keep their daughters at home to ensure their virginity until marriage (Dyson & Moore, 1983; Waszak et al., 2003). Thus, parents may choose to arrange the marriage of their daughters to transfer their protection to the in-laws' family.

Economic status of the household: Findings from previous studies (Axinn & Thornton, 1992; Dahal et al., 1993a; Singh & Samara, 1996) show that women of higher socio-economic status marry at later ages than women of middle and lower socio-economic status. There are several possible reasons. First, marriage traditions are mainly guided by caste or ethnicity and religion which may vary little across economic status within the strata. Women of higher socio-economic status may have less freedom of movement than poorer women who have to do paid work outside

the home. The Nepal Labour Force Survey 2008 found that Hills lower-caste females on average spent 21 hours in paid work in the seven days preceding the survey; for Hills higher-caste females it was 18 hours. In the Terai Janajati and Dalit females spent 22.3 and 18.5 hours respectively in paid work. Terai higher-caste females spent just four hours and Terai middle-caste females 13.6 hours (CBS, 2009). As landlessness and poverty are widespread among the low-caste people in both the Hills and the Terai, the majority of these caste/ethnic groups may be in lower economic strata than the higher-caste groups. Further, economically well-off families may often be more concerned about prestige and status than poor families, so they may wish to avoid the shame or gossip caused by the late marriage of their daughters by arranging their marriage at an early age. However, a systematic study may be required on this matter.

LIMITATIONS

There are few limitations which are mainly associated with the secondary data available and used in this study. A brief account of such limitations is presented here.

NDHS 2006: Some variables in NDHS 2006 are not relevant for the study of age at marriage. Education status of women and men included in the survey is the current status at the time of survey and does not include the education status before or at the time of marriage. This potentially limits the use of this variable to assess its association with age at marriage because some women (and men) may have acquired some education after marriage. However, it is assumed that there is not much change in the education status of women after marriage so the education status at the time of survey is included in the analysis. Similarly, the NDHS 2006 data also lack information about education and occupation of parents at the time of marriage. This also limits the analysis as the effect of parents' education and occupation on marriage prevalence and age at marriage of their sons and daughters cannot be assessed. Further, the NDHS 2006 does not have information related to either attitudes or practices of dowry, ideal and legal age at marriage, legal provisions related to age at marriage and dowry, and age at menarche.

NAYA 2000: There are some limitations to this data set as well. Except for some basic background characteristics such as religion, place of residence (rural/urban), caste and education level, there is a lack of other variables. Further, information about parents' education was not available here. Similarly, the survey is cross-sectional and all the information collected was for the time of survey, rather than the time of marriage

CONCLUSION

The purpose of this paper was to investigate the reasons for early marriage of girls among some families in Nepal with particular focus on the Terai. This paper sought an answer to the research question 'What are the prominent socio-demographic and cultural factors that influence marriage timing of women in Nepal?'

Empirical data analysis reveals that determination of marriage timing is a complex phenomenon. There are several factors that influence marriage timing of women in Nepal. Although bivariate analysis shows a further elaborative list of factors, multivariate analysis confirms the effect of each variable while controlling the effect of other variables. The prominent factors influencing marriage timing of women are age, place of birth, age at menarche, education of women and their mothers, and caste or ethnicity, and religion.

The significant differences in the risk of marrying early among caste and religion groups, and the significantly higher risk among caste/ethnic groups of Terai origin and Muslims who reside mainly in the Terai, are supported by the distinct sociocultural differences with more strict marriage norms and practices prevalent among these groups. The low educational level of these groups in general and women in particular further increases their risk of marrying at an early age. An education level of some secondary and above seems to be a protective factor against early marriage, but many of the caste and ethnic groups (except Terai high-castes) and Muslims of Terai have substantially low education, particularly among women.

Lower age at menarche of girls of Terai origin⁴ (also in Aryal, 2004) may also be associated with early marriage as age at menarche and age at marriage of girls were positively associated. The lower age at menarche of girls of Terai caste groups in particular seems to be an important factor creating pressure on parents to arrange marriage of their daughters at an early age.

The hazard of marrying at an early age differed by geographic regions: women in the Terai, which includes both Hills and Terai origin women, had a higher hazard; but significant differences in the risk of marrying early by caste and religion groups along with the inter-caste group differences in marriage traditions indicate the inappropriateness of the use of the conventional tripartite divisions in Nepal to explain demographic changes including marriage patterns.

Another important issue is the relevance of variables to be studied in relation to marriage timing. Findings show that information enumerated before or at the time of marriage has a precise association with age at marriage (e.g. education level and place of residence) whereas the variables enumerated at the time of survey (e.g. NDHS in this case) have severe limitations.

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4 Mean age at menarche of Muslim girls 13.67 years, Terai middle-caste girls 13.48 years, Terai other-caste girls 13.64 years; mean age at menarche of Hills high-caste (Hindu) and Hills middle-caste Buddhist girls 13.98 years, Hills middle-caste Hindu 13.82 years and Hills lower-caste girls 13.81 years (calculated from 2000 NAYA data set, and ANOVA significant at the $p < .000$ level).

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