Women's Age at Marriage and its Socio-economic Context in a Rural Area of Bangladesh

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Abstract

This study examined women's age at first marriage and its socio-economic context in a rural area of Bangladesh. Household-level information comprising the socio-economic, demographic and related characteristics of 550 ever married women was collected in 2007. Women and their parents' higher education was found positively correlated to women's increasing higher age at first marriage. Women with higher age at marriage were found to have fewer children than women with early marriage. Logistic regression was applied to analyse the multivariate impacts of socio-economic condition on women's age at first marriage. Women's participation in income generating activities before marriage was found to hinder women's early marriage. These issues along with other related factors should be considered during formulating policies and taking programmes by both government and non-government organisations to control women's early marriage and its holistic negative consequences for the population and development context of the country.

1.0. Introduction

Historically women in Bangladesh have a long tradition of getting married at an early age with a big age difference between husband and wife (Maloney et al., 1981; Aziz and Maloney, 1985; Kabir and Rab, 1990; Cleland et al., 1994). Like many countries and cultures of the world, marriage is an important social institution and almost universal in Bangladesh where entry into sexual union and child bearing usually happen within marriage (UN, 1981; Caldwell, 2005; NIPORT et al., 2009). Age at marriage can significantly affect population growth rate of a country where births take place within legal marriage (Coale and Tye, 1961). Early marriage almost leads to early pregnancy in South Asian countries, and women become exposed to a longer period of pregnancy, often leading to a larger family size and rapid population growth of a country (Islam, 1999; Bongaarts, 1994; Bates et al., 2007; Field and Ambrus, 2008). It is also associated with a number of poor social and physical outcomes for the young women and their children like the termination of women's education, lower status in husband's family, less bargaining power, higher rates of maternal morbidity and mortality, nutritional deficiency of children, higher infant and child morbidity and mortality, and domestic violence (UN, 1995; Zabin and Karungari, 1998; Jensen and Thornton, 2003; Burket et al., 2006; Field and Ambrus, 2008). On the other hand, women's higher age at first marriage is likely to

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reduce the reproductive period of women, increase the age at first birth and consequently reduce population growth and fertility and is expected to be associated with higher status and role of women as they enter their married life with greater maturity and capabilities (Sathar and Kiani, 1998; Jones, 2007). An increase in age at first marriage for women is also likely to reduce the age difference between husband and wife and thereby increase the bargaining power of the wife and reduce the power imbalance within the family power structure (Sathar and Kiani, 1998).

The Child Marriage Restraint (Amendment) Ordinance, 1984 (Ordinance No. XXXVIII of 1984), which was originally promulgated in 1929 (The Child Marriage Restraint Act, 1929), prohibited the solemnisation of child marriages and set the minimum age at marriage to 18 and 21 for women and men respectively (GOB, 2010). But it is very difficult to implement this law due to the absence of any legal system to prove the real age and a large proportion of marriages has taken place before the legal age, specially in the rural areas where more than 74 percent people live in Bangladesh in 2009 (Islam and Mahmud, 1996; Islam and Ahmed, 1998). Bangladesh has the lowest age at marriage among all South Asian countries although women age at marriage has increased considerably in different South Asian countries (Islam and Ahmed, 1998). Bangladesh Demographic and Health Survey (BDHS), 2007 has found 66 percent of women aged 20-24 were married before they reached 18 (NIPORT et al., 2009). Over the past two decades, the proportion of women marrying before the legal age gradually decreased from 73 percent in 1989 to 65 percent in 2000, then increased slightly (68 percent) in 2004 and declined again to 66 percent in 2007(NIPORT et al., 2009). The median age at marriage of women aged 20-49 was 14.2 in 1996-1997 which increased a little and became 15.3 in 2007(NIPORT et al., 2009).

A comprehensive understanding of women's age at first marriage in its socio-economic and reproductive health context is very essential to achieve the targets of the Millennium Development Goals (MDGs) and implement different socio-economic strategies for the development of the country (GOB, 2005; GOB, 2009). Due to early marriage pattern in Bangladesh, early pregnancy and early childbirth with related complicacies and outcome are very common. Women also have a longer period of exposure to the risk of becoming pregnant and a greater number of lifetime births. If women's age at marriage increased, maternal and child health status would improve and fertility would decline to the desired level. In this context, the determination of the causes of women's early marriage and their association is crucially important to address the reproductive health status of women and other related issues. The major objective of this paper was to identify those socio-economic issues which have direct or indirect impacts on women's age at first marriage in a rural area of Bangladesh.

2.0. Data and Methods

Seventeen villages from five unions of Keraniganj upazila were selected as the study area. From each village, about 110 households were selected. From each household, one ever-married woman was considered as sampling unit and she was interviewed for necessary information through stratified random sampling method. Thus one household was taken after every 5 households and accordingly (5X110) or 550 sampling units were

taken as sample. Information on the related issues was collected by administering a structured questionnaire.

Validity and accuracy of the answers were checked after data collection. Each variable was coded on the basis of their category and for fulfillment of the study purpose. Analysis of individual variables, associations among variables, both bi-variate and multivariate were done. Logistic regression was applied to identify the risk factors for early marriage. In the model, age at first marriage was used as the dependent variable, which was dichotomized by assigning the value 1 for age at marriage in less than 18 years and the value 0 for age at 18 years and over and other selected characteristics were used as explanatory variables. As the minimum age of woman marriage in Bangladesh is 18 years and accordingly it was taken as the cut off point. The research question was, which factors were responsible for marriage before 18 years. So 18 year age was used to dichotomize the variable age at first marriage. The explanatory variables considered in the model were education of the women, women's father's education and occupation, women's mother's education and occupation, and women's work status before marriage.

3.0. Age at Marriage and its Socio-economic Context

The impact of women's age at marriage on population growth trends and its composition is 'only slightly less important' than 'the fact of marriage itself' which demographers have long been recognized as one of the principal proximate determinants of fertility differences among different societies (Matras, 1977; Bongarrats, 1978). Age at marriage can significantly affect population growth rate with other demographic, social and economic consequences where births take place within legal marriage (Coale and Tye, 1961; Bloom and Reddy, 1986). Marriage at an early age especially among girls had been similarly universal like the universality of marriage itself. Population replacement in primitive societies with high mortality and fertility was heavily dependent on early age at marriage as well as childbearing (Matras, 1973). The importance of these issues to determine the population trends in the modern time was most famously articulated in Thomas Robert Malthus' Essay on the Principle of Population (Morris, 1969). Malthus presented 'delayed marriage' as a 'preventive check' to control the high population growth trends and its impacts during the early 1900s (Matras, 1977). Impacts of age of entry into sexual unions which United Nations synonymously termed as age at marriage on the fertility trends of a society was later theoretically proposed in Kingsley Davis and Judith Blake's 'Social Structure and Fertility: An Analytical Framework' in the mid-1950s (Davis and Blake, 1968; UN, 1973).

Although Bangladesh has achieved steep fertility decline with some related population and development trends without expected corresponding socio-economic development, the importance of these issues to determine population and development trends of a country is well theorized and empirically documented(Goode,1963; Durch,1980; Rindfuss and Morgan, 1983; Lee, 1987; Thorton & Fricke, 1987; Cleland, 1994). Nationally it was found that women with completed secondary or higher education marry two years later than those with no education (NIPORT et al., 2009). Different population and development related policies in Bangladesh have adapted different strategies to enhance women's socio-economic status which is in many ways related to increase

women's age at marriage to achieve the broad population and development goals of the country (GOB, 2004, GOB, 2009).

4.0. Results and Discussion

The socio-economic, demographic and educational characteristics of women, their husbands and parents were presented in the first stage (Table 1 & 2). Different socio-cultural determinants of marriage, associations among the socio-economic variables and impacts of these variables on age at first marriage were analysed in the second stage (Table 3 & Figure 1) and third stage (Table 4) respectively.

4.1. Socio-economic and Demographic Background

Most of the women (45.5 percent) were from age group 20-30. The mean age of the women was 30.51 years. Almost all of them (97.5 percent) were currently married. The

Table 1
Socio-economic and Demographic Condition of the Women

Socio-economic and Demographic Variables	Respondents Number(n)	Percentage (%)	Statistics	
Age of respondents (year)				
Less than 20	52	9.5	Minimum: 16	
20-30	250	45.5	Maximum: 50	
30-40	208	37.8	Mean:30.51	
More than 40	40	7.3	SD: 7.105	
Marital status				
Married	536	97.5	-	
Widow	9	1.6		
Divorced/Separated	5	0.9		
Age at marriage(year)				
Less than 15	95	17.3	Minimum: 7.0	
15-19	328	59.6	Maximum: 30.0	
20-24	106	19.3	Mean: 17.24	
More than 24	21	3.8	SD: 3.23	
Work before marriage			p: 51	
Nothing	342	62.2	-	
Study	173	31.5		
Work	35	6.4		
Decision maker of marriage			3	
Grandparents	5	0.9		
Parents	437	79.5	2.1	
Uncle	5	0.9		
Elder brother/sister	42	7.6		
Self	59	10.7		
Others .	2	0.4		

Socio-economic and Demographic Variables	Respondents Number(n)	Percentage (%)	Statistics		
Family monthly income (in					
BDT)	244	44.4			
Less than 5000	144	26.2	Minimum:00		
5000-10000	65	11.8	Maximum:1,00,000.00		
10000-15000	46	8.4	Mean:10,710.00		
15000-20000	20	3.6	SD: 12,587.36		
20000-25000	31	5.6			
More than 25000					
Amount of land(acre)		ž			
No land	24	4.4	Minimum: 0.0		
Less than 0.20	345	62.7	Maximum: 674.0 Mean:34.04		
0.20-0.40	67	12.2			
0.40-0.60	24	4.4	SD: 66.93		
0.60-0.80	25	4.5			
0.80-1.00	9	1.6			
More than 1.00	56	10.2			
Employment status					
Housewife	505	91.8	18		
Agriculture labour	4 -	0.7	¥		
Non-agriculture labour	5	0.9			
Mill/factory worker	1	0.2			
Teacher	16	2.9	8 4		
Government service	2 .	0.4	39		
Non-government service	5	0.9	*		
Sewing	11	2.0			
Domestic worker	1	0.2			

Source: Field Survey

mean age at marriage was 17.24 years which was below the minimum legal age at marriage for women in Bangladesh. More than three-fourths of the women (76.9 percent) were married before they reached age 20. The majority (62.2 percent) of the women did nothing before their marriage. Less than one-third (31.5 percent) of the women were studying. A few (6.4 percent) were engaged in income generating activities before marriage.

Discrepancy in income and land ownership patterns among the respondents was very high. Most of the respondents' (44.4 percent) monthly family income was less than Tk.5000. More than half of the households (62.7 percent) had less than .20 acre of land. Housewife (92 percent) was the most common status of the women. A few were engaged in different professions like agricultural and non-agricultural labour, mill/factory work, teaching, government service, sewing, etc.

About one-third of the women and women's husbands (33.8 percent and 35.3 percent respectively) and more than half of the women's parents (53 percent fathers and 69.8 percent mothers) had no education. More than one third of the women (37.8 percent) had

Table 2
Educational Status of the Women, their Parents and Husbands

Education Level	Women's Education		Father's Education		Mother's Education		Husband's Education	
	n	%	n	%	n	%	n	%
No education	186	33.8	294	53.5	384	69.8	194	35.3
Primary(1-V)	115	20.9	112	20.4	115	20.9	107	19.5
Secondary(V1-X)	208	37.8	125	22.7	51	9.3	190	34.5
Higher Secondary(XI-XII)	26	4.7	8	1.5	*	-	29	5.3
Degree and above(XIII and above)	15	2.7	.11	2.0	÷	-	30	5.5
Total	550	100	550	100	550	100	550	100

Source: Field Survey

secondary and about one-fifth (20.9 percent) of them had primary education. A few had graduation (2.7 percent) and higher secondary (4.7 percent) education. Women's mothers' educational status was comparatively low. The highest educational status of the women's mothers was secondary and only 9.3 percent had this education. About one-fifth of the mothers (20.9 percent) were primarily educated. Women's fathers' education was comparatively better than women's mothers' education. More than one-fifth of the women's fathers had primary and secondary (20.4 percent and 22.7 percent respectively) education. Women's husbands' education was comparatively better. More than one-third (34.5 percent) had secondary and more than 5 percent had higher secondary and graduation (5.3 percent and 5.5 percent respectively).

4.2. Determinants of Marriage

4.2.1. Decision Making of the Marriage

Most of the decisions (79.5 percent) about timing of the marriage were taken by respondents' parents. Only 10.7 percent women took decision about their marriage time and potential spouse. Other decision makers about age at marriage were grandparents (0.9 percent), elder brother/sister (7.6 percent) and uncles (0.9 percent). One-fifth of the respondents (20.9 percent) did not know why they were being married off at that age and they said that their parents knew about it.

4.2.2. Timing of Marriage and its Causes

Very young girls are being married off for different reasons in the rural area of Bangladesh. One-fifth of the respondents said that getting a good or suitable groom was the main reason for their marriage at that age. Fifteen percent said that the time and age of their marriage was a suitable enough age to marry at that time although their age was

not more than the legal age of marriage of 18 years. Ten percent had mutual affairs and friendship and they chose their own potential spouses and took the decision to marry at that age. Other reasons for marriage at that time were the discontinuation of study, finishing of the study, more number of sisters in the family, father's death, eve teasing, social tradition of early marriage, grandparent's will, lack of security, etc.

4.2.3. Associated Variables with Age at Marriage

Association between women's educational status and their age at marriage was clearly visible. Women with lower educational background were married at an early age and inversely women age at marriage increased with higher educational background. Before coding, age at marriage, women's years of schooling as well as their parents' were in interval scale. Accordingly Pearson correlation coefficient was calculated among age at marriage, women's education, women's mothers' education, women's fathers' education in Table 3.

Table 3
Pearson's Correlation among Women's Age at Marriage,
Women's and their Parents' Education

Variables	Age at Marriage	Education of Women	Mothers' Education	Fathers' Education
Age at marriage	1	0.308**	0.227*	0.192**
Education of the respondent	0.308**	1	0.512**	0.565**
Mothers' education	0.227*	0.512**	1	0.626**
Fathers' education	0.192**	0.565**	0.626**	1

^{**}Correlation is significant at the 0.01 level (2-tailed), N=550

Women's age at marriage, women's education, women's parents' education were positively correlated. Other socio-economic variables were not significantly correlated with age at marriage. Chance of getting married was equal for women who did nothing and who were studying. But women engaged in income generating activities had a chance to be married late. Women's mothers with secondary education married off their daughters later than mothers with primary education and no education did. Mothers who were teachers wanted their daughters' marriage at a later date. Other occupations of the parents had no influence on their daughters' age at marriage.

4.2.4. Age at Marriage and Number of Children

A clear and strong association was observed between age at marriage and number of children ever born. Average number of children ever born to a woman who got married



Figure 1. Women Age at First Marriage and Number of Children

aged below 10 years is about 6. It dropped dramatically for those women who married at 11 years and above to 3 children, and up to marriage age to 25 years, it ranged from 2 to 3 children. On average, 2 children were born to the women who were married after 25 years.

5.0. Impacts of Socio-economic Condition on Age at Marriage

Logistic regression was done to identify the risk factors for early marriage. In the regression model, age at first marriage was used as the dependent variable, which was dichotomized by assigning the value of 1 for age at marriage being less than 18 years and

Table 4
Logistic Regression and Related Odds Ratios Indicating the Impacts of Socioeconomic Condition on Age at Marriage

Variables	N	Coefficient(β)	St. error of coefficient	Odds Ratio	
Dependent variable:	4	-0.717	0.424	-	
Age at Marriage		(Intercept)			
Less than 18	249	G & S			
More than or equal to 18	301			N = =	
Independent variables:		- The state of the			
Education level					
(No education)	186	0	0 -	a	
Primary	115	0.227	0.262	1.255	
Secondary	208	1.080	0.287	2.944	
Higher secondary and above	41	2.719	0.581	15.17	
Work before marriage					
(Nothing)	342	0	0		

Variables	N	Coefficient(β)	St. error of coefficient	Odds Ratio (OR)
Study	173	-1.130	0.265	0.323
Work	35	0.683	0.404	1.979
Father's occupation	30			
(Unemployed)	28	0	0	11407
Agricultural work	159	0.103	0.443	1.108
Non agricultural work	241	0.0492	0.437	1.050
Service	122	0.317	0.470	1.373
Mother's occupation		5.		
(House wife)	530	0	0	
Agricultural work	3	0.405	1.374	1.500
Non agricultural work	6	-0.326	0.898	0.722
Service	11	0.669	0.706	1.952
Father's education			v v	
(No education)	294	0	0	(9.5
Primary	112	0.223	0.583	1.250
Secondary	125	0.263	0.582	1.301
Higher secondary and above	19	0.155	0.564	1.168
Mother's education				
(No education)	384	0	0	2 1090 ₂ 1
Primary	115	0.110	0.270	1.116
Secondary	51	0.615	0.404	1.850

Note: Reference category is within parentheses, Significance Level:5%

the value 0 for age 18 years and older. Selected socio-economic characteristics were used as explanatory variables. The explanatory variables considered in the model were education of the respondent, father's education, mother's education, father's occupation, mother's occupation and respondent's work status before marriage.

Logistic regression coefficients (β) corresponding to the independent variables, standard errors of the coefficients and odds ratio were calculated for each category of the categorical variables considering 5 percent level of significance in Table 4. The category with relative odds of 1.00 represents the reference category for that variable. If the odds ratio is greater than unity, the probability of age at marriage occurring below 18 years is lower than that of age at marriage occurring at 18 years and older.

From the results of the logistic regression analysis, it appeared that respondents' education was the most important factor that influenced age at marriage at below 18 years, when the other variables were controlled. The differential analysis also substantiated these results. Similarly, women who were engaged in different income generating activities before marriage were more likely to be married off after they reached the legal age of marriage than women who were studying or doing nothing. These results again proved that parents' education has a positive effect on their

daughters' age at marriage. Daughters with educated parents had a greater chance of getting married after they reached 18 years and over than daughters with uneducated parents. Parents' occupation also had some impact on their daughters' age at marriage. But it varied from profession to profession.

6.0. Conclusions

Increase in age at marriage of women in Bangladesh has been remarkably slow during the last few decades as compared to other South Asian countries. Due to different socio-economic and cultural reasons, a significant proportion of women become married before they reach puberty. Of the several background variables included in this study, illiteracy has emerged as the most significant factor in explaining the high incidence of early marriage. Education is one of the most viable determining factors for enhancing the status of women vis-à-vis increasing the age at first marriage as well as reducing fertility. Premarital work status of the women remains a strong predictor of age at first marriage in the rural area. Parents' education has strong impacts on their daughters' age at first marriage. Educated parents know the adverse effects of early marriage and they want to carry on their daughters' education. The findings of the study hold implications in formulation and implementation of policies by government and relevant authorities that could be useful in devising ways to solve the issues related to early marriage, maternal and child health and high fertility in Bangladesh.

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References:

- Aziz, K M Ashraful and Clarence Maloney (1985), Life Stages, Gender and Fertility in Bangladesh, Research Monograph No. 3, Dacca: International Centre for Diarrhoeal Disease Research, Bangladesh.
- Bates, Lisa M., Maselko Joanna and Sidney Ruth Schuler (2007), "Women's Education and the Timing of Marriage and Childbearing in the Next Generation: Evidence from Rural Bangladesh", *Studies in Family Planning*, New York: Population Council, vol. 38, No. 2, pp.101-112.
- Bloom, David E. and Reddy, P.H. (1986), "Age Patterns of Women at Marriage, Cohabitation, and First Birth in India", *Demography*, vol.23, No. 4, pp.509-523.
- Bongaarts, John (1978), "A Framework for Analyzing the Proximate Determinants of Fertility", Population and Development Review, vol. 4, No.1, New York: Population Council, pp.105-132.
- Bongaarts, John (1994), *Population Policy Options in the Developing World*, Research Division Working Paper No. 59. New York: Population Council.
- Burket, Marry K., Mohammad Alauddin, Abdul Malek and Mizanur Rahman (2006), Raising the Age of Marriage for Young Girls in Bangladesh, Dhaka: Pathfinder International.
- Caldwell, Bruce K. (2005), "Factors affecting female age at marriage in South Asia", Paper presented at the XXV International Population Conference of the International Union for the Scientific Study of Population, Tours, France: 18-23 July.

- Cleland, J., James F. Phillips, Sajeda Amin and G. M. Kamal (1994), The Determinants of Reproductive Change in Bangladesh: Success in a Challenging Environment, Washington, D. C.: The World Bank.
- Coale, Ansley J. and C. Y. Tye (1961), "The Significance of Age Patterns of Fertility in high Fertility Population", *Milbank Memorial Fund Quarterly*, vol. 39, No.4, pp.631-646.
- Davis, Kingsley and Judith Blake (1968), "Social Structure and Fertility: An Analytic Framework", Charles B. Nam (ed.), *Population and Society*, Boston: Houghton Mifflin Company, pp.196-215.
- Durch, J. S. (1980), Nuptiality Patterns in Developing Countries: Implications for Fertility (Reports on the World's Fertility Survey No.1), Washington D.C.: Population Reference Bureau.
- Field, Erica and Attila Ambrus (2008), "Early Marriage, Age of Menarche and Female Schooling Attainment in Bangladesh", *Journal of Political Economy*, The University of Chicago, vol.116, No. 5, pp.881-930.
- Goode, W.J. (1963), "Comparative Perspective", M.B. Sussman & S.K. Steinmentz (Ed.), Handbook of Marriage and the Family, New York: Plenum, pp.59-80.
- Government of Bangladesh (2004), Bangladesh Population Policy, Dhaka: Government of Bangladesh.
- Government of Bangladesh (2005), Bangladesh: Unlocking the Potential, National Strategy for Accelerated Poverty Reduction, Dhaka: Government of Bangladesh, Available at:http://planipolis.iiep.unesco.org/upload/Bangladesh/PRSP/Bangladesh %20PRSP%202005%20Unlocking%20the%20potential.pdf.
- Government of Bangladesh (2009), Bangladesh Population Policy (Draft), (in Bangla) Dhaka: Government of Bangladesh, Available at:http://www.dgfplmis.org/ index.php? option=com_docman&task=cat_view&gid=19&Itemid=2
- Government of Bangladesh (2009), The Millennium Development Goals: Bangladesh Progress Report 2009, Dhaka: Government of Bangladesh, Available at: http://www.undp.org.bd/info/pub/Bangladesh%20MDGs%20Progress%20Report%202009.

 pdf:
- Government of Bangladesh (2010), The Child Marriage Restraint Act, 1929.(Act NO.XIX of 1929), Available at: http://bdlaws.minlaw.gov.bd/print_sections_all.php?id=149
- Islam, M. M. (1999), "Adolescent Childbearing in Bangladesh", *Asia-Pacific Population Journal*, Bangkok: Economic and Social Commission for the Asia and the Pacific, vol. 14, No.3, pp.73-87.
- Islam, M. Mazharul and Mamun Mahmud (1996), "Marriage Patterns and Some Issues Related to Adolescent Marriage in Bangladesh", *Asia-Pacific Population Journal*, Bangkok: Economic and Social Commission for the Asia and the Pacific, vol.11, No. 3, pp.27-42.
- Islam, M. Nurul and Ashraf U. Ahmed (1998), "Age at First Marriage and its Determinants in Bangladesh", Asia-Pacific Population Journal, Bangkok: Economic and Social Commission for the Asia and the Pacific, vol.13, No.2, pp.73-92.
- Jensen, Robert and Rebecca Thornton (2003), "Early Female Marriage in the Developing World", in Caroline Sweetman (ed.), *Gender, Development and Marriage*, Oxford: Oxfam GB, pp.9-19.

- Jones, Gavin W. (2007), "Delayed Marriage and Very Low Fertility in Pacific Asia", Population and Development Review, New York: Population Council, vol.33, No.3, pp.453-478.
- Kabir, M. and A K Ubaidur Rab (1990), "Fertility and its Proximate Determinants", in M. Badrud Duza, (ed.), South Asia Study of Population Policy and Programmes: Bangladesh, Dhaka: United Nations Population Fund, pp.53-86.
- Maloney, Clarence, K M Ashraful Aziz and Profulla C. Sarker (1981), *Beliefs and Fertility in Bangladesh*, Research Monograph No.2, Dacca: International Centre for Diarrhoeal Disease Research, Bangladesh.
- Matras, Judah (1973), Population and Societies, New Jersey: Prentice Hall, Inc., Englewood Cliffs.
- Matras, Judah (1977), Introduction to Population: A Sociological Approach, New Jersey: Prentice Hall, Inc., Englewood Cliffs.
- Morris, Judy K. (1969), "Professor Malthus and His Essay", Kenneth C.W. Kammeyer (ed.), Population Studies: Selected Essays and Research, Chicago: Rand Mcnally & Company.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International (2009), Bangladesh Demographic and Health Survey 2007, Dhaka, Bangladesh and Calverton, Maryland: NIPORT, Mitra and Associates, and Macro International.
- Rindfuss, Ronald R. and S.Philip Morgan (1983), "Marriage, Sex and the First Birth Interval: The Quiet Revolution in Asia", *Population and Development Review*, vol. 9, No.2, New York: Population Council, pp.259-278.
- Sathar, Zeba A. and M. Framurz Kiani (1998), "Some Consequences of Rising Age at Marriage in Pakistan", *The Pakistan Development Review*, vol. 37, No.4, pp.541-556.
- Thornton, Arland and Thomas E. Fricke (1987), "Social Change and the Family: Comparative Perspective from the West, China and South Asia", *Sociological Forum*, vol. 2, No.4, Special Issue: Demography as an Interdiscipline, pp.746-779.
- United Nations (1973), The Determinants and Consequences of Population Trends: New Summary of Findings on Interaction of Demographic, Economic and Social Factors, Volume 1, New York: United Nations.
- United Nations (1981), "Nuptiality", Country Monograph Series No. 8: Population of Bangladesh, New York: United Nations, pp.77-104.
- United Nations (1995), The World's Women, 1995: Trends and Statistics, New York: United Nations.
- Zabin, Laurie Schwab and Kiragu Karungari (1998), "The Health Consequences of Adolescent Sexual and Fertility Behavior in Sub-Saharan Africa", *Studies in Family Planning*, New York: Population Council, vol. 29, No.2, pp.210-232.