Early Life Course Transitions and Their Impact on Later Life Maternal Reproductive Choices: A Case of Contraceptive Use Behavior in Uganda

Background

Poor maternal health outcomes characterized by poor maternal choices remains a significant public health challenge in Uganda, often influenced by early life course transitions and reproductive behaviors. Understanding the interplay between key early life events such as a woman's sequencing of first marriage, first sexual activity, and first childbirth and their impact on later contraceptive use is crucial for developing strategies that enhance maternal reproductive health choices, outcomes and reduce mortality rates.

The order of life events, specifically the timing of sexual initiation, marriage, and childbirth, has critical implications for contraceptive use dynamics. In different cultural contexts, the relationship between sexual initiation, marriage, childbirth and contraceptive practices can vary. In sub-Saharan Africa (SSA), the timing of sexual initiation and premarital childbearing are closely linked, with significant implications for contraceptive use and reproductive health policies (Clark, Koski and Smith-Greenaway 2017; Melesse, Cane, Mangombe *et al.* 2021; Budu, Seidu, Armah-Ansah *et al.* 2023). Research indicates a significant evolution in these dynamics across different societies. In China, previous studies highlight a trend where the age at marriage has increased while the interval between marriage and the first birth has decreased – reflecting a change in sexual behaviours among young couples and suggesting a move towards more intimate relationships before marriage and a rise in premarital conception rates (Feng and Quanhe 1996; Lofstedt, Ghilagaber, Shusheng *et al.* 2005). A study by Yu & Xie (2022) emphasizes the impact of the timing of first sexual intercourse on marriage and childbirth. Their findings suggest that earlier sexual initiation correlates with earlier marriage and childbearing, underscoring the interconnectedness of these life events (Yu and Xie 2022).

Objective

This study investigated how four distinct sequences of early life events i.e. Marriage-Sex-Birth (MSB), Sex-Marriage-Birth (SMB), Sex-Birth-Marriage (SBM), and Sex-Birth-no Marriage (SBnoM) affect contraceptive behavior among 13,740 parous women in Uganda with implications for maternal mortality prevention.

Data and Methods

We utilized data from the 2016 Uganda Demographic and Health Survey, a representative, multistage, cross-sectional household survey. A multinomial logistic regression model was applied to identify the factors that influence contraceptive behavior among parous women and by extension, their potential impact on maternal mortality rates.

Results

Sequence and timing of marriage, first sexual, and birth events

Table 1 shows that most of the women (43%) followed the MSB sequence and the least (5.4%) were in the SBnoM sequence. Women who followed the SMB and SBnoM sequence had a higher sexual debut (18 years) compared to their counterparts. The average age at first marriage was highest (21) among women who followed the SBM sequence.

Table 1: Sequence and timing of first marriage, first sexual, and first birth events.

Sequence	Number of women, n (%)	Median age in years (Inter-Quartile Range)		
		First quartile	**Second quartile**	**Third quartile**
Marriage, Sex, Birth (MSB)	5902 (42.9)	16 (14, 18)^M	17 (15, 18)^S	18 (16, 19)^B
Sex, Birth, Marriage (SBM)	2271 (16.5)	16 (14, 17)^S	17 (16, 19)^B	21 (19, 25)^M
Sex, Marriage, Birth (SMB)	4835 (35.2)	16 (15, 18)^S	18 (17, 20)^M	19 (18, 22)^B
Sex, Birth, no Marriage (SBnoM)	732 (5.4)	16 (15, 18)^S	18 (17, 21)^B	-
Total	**13740 (100%)**			

Note: ^{S} stands for Sex, ^{M} stands for Marriage, ^{B} stands for Birth

The effect of early life sequence on later life contraceptive use

Women who followed the MSB sequence (RRR=1.23; CI=1.01 - 1.51) were more likely to use modern contraception compared to those in the SBnoM sequence, which is critical for spacing births and reducing maternal mortality risks. Socio-demographic factors including education level, wealth status, and regional differences were also significant, with higher education and wealth being associated with increased contraceptive use and potentially lower maternal mortality (p<0.05). Older age and negative pregnancy outcomes were linked to contraceptive non-usage, increasing the risk of adverse maternal health outcomes (p<0.05).

Table 2:

Characteristics	Model for modern contraceptive methods	Model for traditional contraceptive methods
Sequence (RC=Sex, Birth, no Marriage)	RRRs [95% CI]	RRRs [95% CI]
Marriage, Sex, Birth	**1.23 [1.01 - 1.51]**	1.73 [0.90 - 3.35]
Sex, Birth, Marriage	1.21 [0.97 - 1.50]	1.63 [0.83 - 3.20]
Sex, Marriage, Birth	1.15 [0.94 - 1.41]	1.65 [0.85 - 3.20]
Current age group (RC=15-24)		
25-29	1.07 [0.94 - 1.23]	1.39 [0.95 - 2.02]
30-34	0.95 [0.81 - 1.11]	1.37 [0.92 - 2.05]
35-39	0.87 [0.73 - 1.04]	1.23 [0.79 - 1.92]
40-49	**0.59 [0.49 - 0.71]**	1.38 [0.86 - 2.21]
Religion (RC=Anglican)		

Catholic	0.92 [0.82 - 1.03]	1.01 [0.77 - 1.33]
Muslim	**0.79 [0.67 - 0.93]**	1.16 [0.78 - 1.73]
Pentecostal	**0.80 [0.69 - 0.94]**	0.70 [0.48 - 1.01]
Seventh Day Adventist	0.80 [0.56 - 1.14]	**2.03 [1.13 - 3.64]**
Others	**0.61 [0.43 - 0.87]**	0.53 [0.21 - 1.33]
Place of residence (RC=Urban)		
Rural	0.91 [0.80 - 1.04]	1.02 [0.78 - 1.35]
Highest level of education (RC= No education)		
Primary	**1.73 [1.47 - 2.03]**	1.40 [0.97 - 2.00]
Secondary	**2.30 [1.90 - 2.78]**	**2.15 [1.37 - 3.36]**
Higher	**2.57 [2.02 - 3.26]**	**3.43 [1.97 - 5.96]**
Wealth Index (RC=Poor)		
Middle	**1.35 [1.18 - 1.54]**	**1.45 [1.03 - 2.03]**
Rich	**1.61 [1.41 - 1.83]**	**2.13 [1.55 - 2.93]**
Region (RC=Central)		
Eastern	0.89 [0.76 - 1.05]	**0.71 [0.52 - 0.97]**
Northern	**0.76 [0.65 - 0.88]**	**0.54 [0.38 - 0.77]**
Western	0.96 [0.82 - 1.11]	1.15 [0.87 - 1.54]
Pregnancy termination (RC=No)		
Yes	**0.89 [0.80 - 0.98]**	1.27 [0.99 - 1.63]
Number of children ever born (RC=1-2)		
3-4	**1.51 [1.33 - 1.71]**	1.14 [0.85 - 1.54]
5-6	**1.82 [1.56 - 2.11]**	**1.58 [1.10 - 2.27]**
7-8	**2.02 [1.68 - 2.42]**	**1.68 [1.06 - 2.65]**
>=9	**2.07 [1.66 - 2.59]**	**2.12 [1.23 - 3.66]**
Occupation (RC=Not working)		
Working	**1.17 [1.02 - 1.34]**	**1.49 [1.01 - 2.19]**
Sex of household head (RC=Male)		
Female	**0.68 [0.62 - 0.76]**	**0.50 [0.37 - 0.68]**

Conclusion

These findings highlight the importance of a life course approach in reproductive health policies particularly in enhancing maternal mortality rates. Tailored family planning and sexual health education that considers the specific needs and life event sequences of women can play a vital role in reducing maternal mortality by improving overall maternal reproductive health choices and outcomes.

References

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