Child marriage and maternal health care service utilization in Ethiopia

Annie M. Dude

annie.dude@gmail.com

Abstract:

Childhood marriage is a common experience in Ethiopia: 41% of women aged 20 – 24 in 2011 were married prior to age 18. Child marriage is associated with increased risk of infant and maternal mortality. One cause of poor perinatal outcomes could be decreased access to antenatal, intrapartum, and postpartum care from trained providers in health facilities.

Using data from the 2011 Ethiopia Demographic and Health Survey, I show that women married prior to age 18 were significantly less likely to have had prenatal care from trained providers, to deliver in a hospital or health facility, to have their birth attended by a skilled provider, and to receive any postpartum care during their last pregnancy when compared to women married at age 18 or older. These results highlight one possible pathway linking child marriage to poorer reproductive health outcomes.

Introduction:

Child marriage, defined as marriage before age 18, is common in many parts of the developing world. Child and adolescent marriage is associated with a number of poor reproductive and sexual health outcomes, including increased rates of infant mortality, maternal mortality, HIV infection, and reproductive morbidity including obstetric fistulae (Santhya et. al. 2010). Worldwide, pregnancy – related complications are the leading cause of death among females aged 15 – 19 (Patton 2009). Common pathways cited for increased infant and maternal mortality among girls married as children include younger age at first pregnancy/birth, higher rates of unintended pregnancy and unsafe abortion, and rapid repeat pregnancies (Godha et. al. 2013). Child marriage is declining in Ethiopia; however, of women aged 20 – 24 in 2011, 16% were married by age 15 and 41% by age 18 (Central Statistical Agency [Ethiopia] and ICF International 2012).

Approximately 4% of Ethiopian women die during pregnancy, childbirth, or within 2 months of giving birth. While neonatal mortality has improved greatly over the past decade, maternal mortality has not. The main causes of maternal mortality in the country are unsafe abortion, hypertensive disorders, hemorrhage, sepsis, and uterine rupture, all of which can be prevented, or the effects mitigated, by access to quality obstetric care (Central Statistical Agency [Ethiopia] and ICF International 2012).

One factor that may increase maternal and infant mortality among women married as children is differential access to prenatal, intrapartum, and postpartum care from trained providers (Singh et. al. 2012; Nasrallah et al 2013). This paper examines whether women married before age 18 are less likely than women married at age 18 or above to have had access to formal obstetric care from trained providers for their last pregnancy.

Methods:

The data for this study come from the 2011 Ethiopia Demographic and Health Survey (DHS), a nationally – representative household survey of females aged 15 – 49 (Central Statistical Agency [Ethiopia] and ICF International 2012). In the survey, women were asked whether, where, and from whom they received prenatal, intrapartum, and postpartum care. In addition, the DHS contains information about demographic and socioeconomic characteristics.

The study sample was restricted to women aged 20 – 29 who had been married at least once and had given birth at least one time. Women were stratified into two groups based on age at first marriage, either prior to her eighteenth birthday, or after turning 18. Outcomes examined include whether a woman received prenatal care from a trained provider (doctor, nurse, or midwife), whether she delivered in a health facility (hospital or clinic), whether she was attended by a trained provider during delivery (doctor, nurse, or midwife) and whether she received any postpartum care. Chi square tests were used for bivariable comparisons and logistic regression was used for multivariable models. These multivariable models also controlled for urban residence, age, desired pregnancy, and household wealth. All analyses were weighted to account for survey design effects. Analyses were carried out in STATA release 11.0 (Statasoft Co). Comparisons were considered significant if the p value associated with the test statistic was < 0.05.

This study is registered with the University of Illinois at Chicago Institutional Review Board, and was deemed exempt from full review.

Preliminary Results:

The final sample consists of 4,280 women, 3,823 of whom have complete information on outcomes, age at marriage, and control variables. Of these, 24.0% were married before age 15 and 63.4% before age 18.

Further preliminary results are shown in Table 1 and Table 2 below.

Table 1 - Sample Summary Statistics

Variable	Married Before Age 18	Married After Age 18	P value
Age at marriage	14.6	19.7	< 0.001
Prenatal care from any trained provider	43.7	51.6	0.002
Delivered in health facility	11.5	20.7	< 0.001
Trained attendent at delivery	12.9	21.7	< 0.001
Any postpartum care	8.5	14.9	< 0.001
N	2, 394	1,429	

Table 2 - Early Marriage is Associated With Decreased Use of Obstetric Care

Variable	Odds Ratio	95% CI	P value
Prenatal care from any trained provider	0.86	0.70 - 1.07	0.18
Delivered in health facility	0.64	0.46 - 0.90	0.01
Trained attendent at delivery	0.69	0.50 - 0.95	0.03
Any postpartum care	0.68	0.49 - 0.94	0.02

Model controls for current age, urban residence, household wealth, and whether the pregnancy was desired

References:

Central Statistical Agency [Ethiopia] and ICF International. 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, MD, USA: Central Statistical Agency and ICF International.

Erulkar A. Adolescence lost: The realities of child marriage. J Adolesc Health 2013; 52(5): 513 – 4.

Godha D, Hotchkiss D R, and Gage A. Association between child marriage and reproductive health outcomes and service utilization: A multi – country study from South Asia. J Adolesc Health 2013; 52(5): 552 – 558.

Patton GC, Coffey C, Sawyer SM, et. al. Global patterns of mortality in young people: A systematic analysis of population data. Lancet 2009;374:881 – 92.

Nasrallah M, Zakar R, and Kramer A. Effect of child marriage on use of maternal health care services in Pakistan. Obstet Gynecol 2013; 122:517 – 24.

Santhya KG, Ram U, Acharya R, et. al. Associations between early marriage and young women's marital and reproductive health outcomes: Evidence from India. Intl Perspect Sex Reprod Health 2010;36: 132 – 39.

Singh L, Rai R K, and Singh P. Assessing the utilization of maternal and child health care among married adolescent women: Evidence from India. J Biosoc Sci 2012; 44: 1 – 26.