

PAA 2014 Extended Abstract

Title: Investigating pathways linking women's status and decision-making power to the use of skilled birth attendants at childbirth in Senegal and Tanzania.

Background. Maternal mortality remains unacceptably high, especially in sub-Saharan Africa, where more than half of live births are unattended by Skilled Birth Attendants (SBA).¹ SBAs are “trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the identification, management and referral of complications in women and newborns”.² Increasing the coverage of SBA has been identified as a core strategy to prevent maternal deaths, yet the progress in increasing SBA use, as well as reducing maternal mortality, has stagnated especially in countries where maternal deaths are more prevalent. Among various factors affecting delivery care seeking and outcomes, women’s status – mostly operationalized through women’s education level – has shown a positive association with delivery care seeking and outcomes in low resource settings.^{3,4,5}

Findings on the effect of women’s empowerment on delivery care seeking are inconsistent.^{3,4} The contextual nature and multi-dimensionality of empowerment as defined by Kabeer (2001) is often neglected, mostly due to the lack of clear scientific consensus on the definition, operationalization, and measurement of empowerment.^{6,7} The effect of early childbearing on empowerment is not well understood,⁸ and its effect on delivery care seeking is least analyzed. There are few theory-based studies, and pathways among these determinants are rarely examined using relevant statistical approaches.

Aim and Hypotheses. This study aims to assess pathways linking women’s status and decision-

making power to the use of skilled birth attendant (SBA) at childbirth in Senegal and Tanzania. Research hypotheses include: 1) women's education status and household decision-making power are positively associated with SBA use; and 2) the relationship between women's education status and SBA use is mediated by household decision-making power.

Data and Methods. This study employs the 2010 Demographic and Health Survey in Senegal and Tanzania, and the study sample includes married women of age 15-49 who gave birth in the five years preceding the survey (weighted $n=7,137$ in Senegal and $n=4,516$ in Tanzania). The present study examines the potential causal pathway from women's status (operationalized as educational level), through empowerment (operationalized as household decision-making power, based on the number of decisions that women participated), then to SBA use (at most recent birth).

The analysis employs the integrated conceptual framework based on the theory of gender stratification and the three delays model.^{9,10,11} The statistical analysis consists of univariate and bivariate analyses, multivariate analysis using logistic and multi-linear regression analyses, and mediation analysis using Sobel tests in accordance with MacKinnon's elaboration model approaches.¹² The regression analysis controls for sociodemographic characteristics of women and household, including age, parity, employment, household relationship (i.e. household head or not), household wealth, residence, and age at first childbearing.

Results. Women's education status and decision-making power are positively associated with SBA use, in support of Hypothesis 1, only in Tanzania. Relative to women with primary

education, women with no formal education have 33.5 % lower odds of using a SBA (OR=0.665); women with high education have 1.88 times higher odds (OR=1.884), after controlling for sociodemographic characteristics. Yet, in Senegal, neither the odds for women with no formal education (OR=0.879, $p=0.16$) nor those with high education (OR=1.116, $p=0.65$) are statistically significant, net of sociodemographic characteristics. The effect of women's household decision-making power (scored 0-3) has a positive significant association with the use of SBA (OR=1.171), net of sociodemographic characteristics in Tanzania; however, this effect is at borderline significance (OR=1.076, $p=0.08$) in Senegal. Additionally, in both countries, women's age, household wealth, and urban residence show significant positive associations with the use of SBAs, while parity is negative. Age at first childbearing and employment are positively associated with SBA use in Senegal, but these associations are not significant in Tanzania.

Moreover, household decision-making power mediates the relationship between women's education status and SBA use, in support of Hypothesis 2, only in Tanzania. The focal relationship between women's education status and SBA use appears to be mediated by household decision-making power, especially among women with no formal education (OR=0.98, Sobel test statistic=-2.325, $p=0.02$). The proportion of indirect effect over the total effect is moderate, with 6.2%. The mediation effect was not significant among women with secondary or higher education (OR=1.02, Sobel test statistic=1.197, $p=0.23$). In Senegal, the mediation by decision-making power is not significant, either among women with no formal education (OR=0.99, Sobel test=-1.365, $p=0.17$) or those with high education (OR=1.01, Sobel test=1.359, $p=0.17$).

Discussion. The results suggest a potential causal pathway from women's status, through empowerment, then to SBA use, by showing the moderate mediation effects of decision-making power on the relationship between education and SBA use, particularly in Tanzania. These results are consistent with previous empirical findings, because women's status – most notably their education status – affects the use of sexual and reproductive health services and outcomes.^{3,4,5} The findings about the mediation effects of empowerment are also supportive of the proposed conceptual framework based on the existing theoretical frameworks.^{9,10,11} This analysis supports evidence that early childbearing is a risk factor for maternal mortality and mortality; this effect is particularly pronounced in Senegal. The variation of effects of women's status and empowerment in two settings affirms the importance to consider the contextually of empowerment, as well as the multi-dimensionality that potentially explains differentiate empowerment dimensions and respective effects.

Therefore, it can be recommended that maternal health programs should focus on integrating women's socioeconomic development and empowerment and preventing early childbearing to accelerate SBA use and maternal mortality reduction. Yet the contextual nature of women's status and empowerment should be carefully examined and considered in research and practice. Further understanding of the mechanisms in which women's status and empowerment affect SBA use is needed to further inform policy and programming.

References

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