

A MODERNIZING MIDWIFE

Improving Guatemalan Health Outcomes While Preserving Tradition

Tierney Wolgemuth, LACS Capstone, Washington and Lee University

INTRODUCTION

- Public health authorities seek to improve maternal and child health outcomes by diffusing positive practices into the population
- Guatemalan society is very ethnically and socially divided, making diffusion difficult
- Midwives are a possible diffusion network
 - Oversee up to 70% of births in Guatemala¹
 - Play significant medical, social, and spiritual roles in communities²
 - Many are divinely called, and believe authority to be spiritually granted³
- Efforts to train midwives have produced mixed results in terms of midwife practices⁴
 - Most studies examine a single community⁵
- Guatemala is a good case study because of available data, prevalence of traditional practices, and traditionally weak state

KEY QUESTIONS

- Which factors affect midwife practices?
- Does type of delivery attendant affect maternal practices?

DATA & METHODS

- Data: 1995 Guatemala Family Health Survey⁶
 - Collected from four rural departments from May to October 1995
 - Included 2,872 mothers and 68 midwives
 - RAND Corporation & Princeton University
- Analyzed with Ordinary Least Squares and Logistic Regression
- Midwife controls: years experience, formal education, training course
- Maternal controls: attendant, age, ethnicity, children, electricity status (proxy for income)

MIDWIFE OUTCOMES

REFERRAL FREQUENCY

- Whether a midwife was divinely called had a negative effect on referral frequency
 - Effect remained when controlling for having taken a training course
 - Referral frequency in the case of complications is an important means of improving maternal and fetal outcomes
- Midwives who were divinely called were busier than those recruited by formal means
 - Suggests greater community trust in traditionally called midwives²

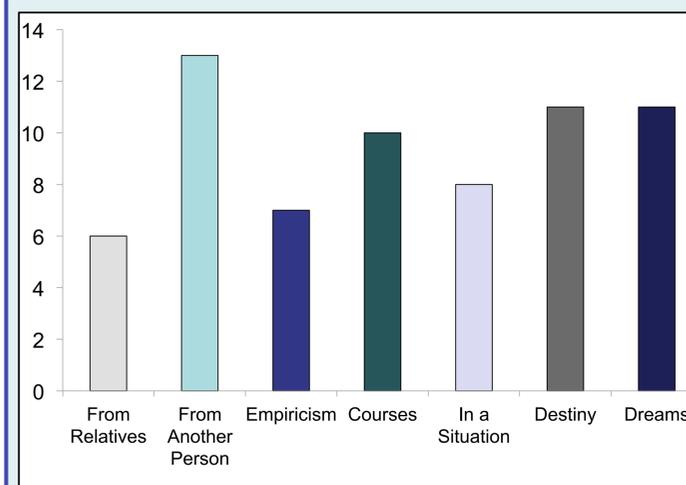


Figure 1: Histogram of midwives' Perceived Education.

INEFFECTIVENESS OF COURSES

- Whether a midwife had taken a course had limited effect on midwife practice
 - Course decreased use of injection to speed delivery
 - No effect of course on recommending immunization, follow-up, tying stomach, or use of prayer or ritual
- This may be due to poor pedagogical methods, instructor demographics, and uneasiness with biomedical professions⁶
 - Courses often lack emphasis on hands-on experience and personal narratives

MATERNAL OUTCOMES

EFFECT OF ATTENDANT

- Women attended by midwives are more likely to breastfeed and more likely to breastfeed for a greater number of months
 - Women attended by midwives less likely to have children who received a follow-up
- Age, ethnicity, number of children, and electricity status are predictors of type of attendant used

EFFECT OF ETHNICITY

- Ladina mothers are less likely to breastfeed than indigenous counterparts, and breastfeed for fewer months
- Children of Ladina mothers are more likely to have a follow-up visit
- Indicates that attendant is not the only factor affecting maternal practices

MATERNAL HEALTH BELIEFS

- Woman with biomedical attendant and electricity more likely to attribute disease to biomedical causes
 - No effect of Ladina ethnicity on disease-source beliefs
- Causality may go in opposite direction– i.e. mothers who have particular health beliefs choose a certain type of attendant
 - Causal inference not possible due to data limitations

	Months Breastfed	Infant Visit	Maternal Visit	Immuniz.	Health Beliefs	Attend.
Attend.	***	■			■	
Age	***			**		***
Eth: Ladina	***	***	**	**		***
Children	***			*		***
Electricity					**	■

Figure 2: Regression significance from analysis of maternal practices. *** p-value < 0.001, ** p-value < 0.01, * p-value < 0.05, · p-value < 0.1. Teal symbols denote positive effects; purple symbols denote negative.

TAKE-AWAYS

- The existing midwife network can be used to spread valuable biomedical practices
 - Replacing traditional midwives with biomedically-trained providers is ineffective
 - Midwives derive authority from divine calling, not from government or education
 - Similarly, community has greater trust for midwives that are spiritually sanctioned
- Which provider attends delivery likely has a role in maternal practices
 - Mothers attended by midwives breastfeed and for a greater number of months
 - Mothers attended by biomedical provider more likely to get a follow-up visit for child
- However, simply training midwives in biomedicine won't fully address the problem
 - Maternal practices also affected by other factors, like ethnicity and electricity status
 - Indicates deeper structural barriers to improving outcomes, such as ethnic discrimination and poverty
 - These issues must be addressed along with improvement in midwife training
 - Negotiating authority is a critical aspect of improving midwife use of biomedical practices

FUTURE QUESTIONS

- Which midwife training methods are most effective?
- How does one respect spiritual authority while promoting positive biomedical practices?

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ACKNOWLEDGEMENTS

RAND Corporation and Princeton University, Professor J. Eastwood, Carol Karsch, Professor H. Markowitz, Washington and Lee Latin American and Caribbean Studies Program.