# Maternal Care Among Young Mothers in Latin America and Caribbean Countries

Mariachiara Di Cesare[1] and Tiziana Leone[2]
[1] Department of Social Policy, London School of Economcis
[2] LSE Health

## Abstract

Latin America and the Caribbeans have experienced a peculiar fast fertility decline alongside a worrying stalling, at times increasing, teenage fertility over the last three decades. Several papers have highlighted how adolescent mothers are more vulnerable in economic, social and health terms. However more analysis is needed on their access to health services while pregnant. Using data from the last wave of the DHS surveys this paper will explore the determinants of maternal health care access among teenage mothers in 7 Latin American countries. Multi-variate, multilevel logistic models are being used to assess the effect, among others, of age, socio-economic and community determinants, on the timing (within the first trimester) and quantity of antenatal visits.
Results show that age and SES play a fundamental role in explaining access to prenatal care. More specifically young age and poverty are key barriers to usage of maternal health care services.

## Background

Adolescent fertility is an important matter in developing as well as developed Countries, because of its adverse implications to individual, family and social level.
Adolescent mothers childbear in a period of their life in which they are socially, biologically or emotionally more vulnerable. From the social point of view, adolescence should be devoted to invest in individual human capital. (e.g. education), which generally speaking is not compatible with the maternity responsibilities. From the biological point of view, different studies have demonstrated that adolescent fertility is associated with higher risk of maternal morbidity and mortality, greater complications at childbirth, higher infant mortality rates and worse child health conditions (McAnarney and Hendee, 1989; United Nations, 1989; Buvinic and Kurtz, 1998; Bledsoe and Cohen, 1993; Floréz and Nuñez, 2003). From the emotional point of view, various studies state that for female adolescents, pregnancy implies, on average, a reduction of self-esteem and woman's satisfaction (Lipovsek et al, 2002) and consequently a strong negative effect on woman's perception of happiness (Kohler et al, 2005).
Additionally, young pregnant women have a higher risk of resorting to abortion (Bledsoe y Cohen, 1993).
From the family point of view, adolescent fertility represents a family matter. Parents of adolescent mothers are involved in bringing up the baby, which frequently includes co residence as well as other direct supports. In such sense adolescent fertility has direct implications on the family budget as well as on family daily life. Moreover, adolescent fertility has a negative impact on

woman's condition, because it anchors women's life to a reproductive and domestic role (United Nations, 1989). As stated by different authors, adolescent fertility has a positive effect on total fertility rate (TFR) "women who have their first child during adolescence have between 2 and 3 more children than women who have their first child after 20 years old" (Welti, 2005; Wulf and Singh, 1991; Buvinic, 1998).
Teenage fertility does not only matter because of its adverse effects (that even though are well documented are not free of criticism) but also because: a) it is higher among poor groups (Rodríguez, 2005; Green and Merrick, 2005; Cepal, 2004; Flórez and Núñez, 2003); b) as recent data show, in Latin American and the Caribbean countries, it is stalling if not increasing; and c) new tendencies show independence between fertility (in particular the adolescent one) and union formation (Guzmán et al, 2001; Buvinic, 1998; McDevitt et al, 1996). It follows that the experience of motherhood is lived in a condition of triple disadvantage (precocious, poor and in the absence of the partner as well as the father of the child).

Several studies (Rodriguez and Hopenhayn, 2007; Di Cesare, 2007) confirm how LA&C countries are characterised by higher level of adolescent fertility among the most vulnerable socio economic groups.
In a setting where teenage childbearing creates a vicious circle with poverty and disadvantage, it is important to highlight whether pregnant adolescents receive the right care at a vulnerable time of their life.
The aim of this study is to analyse barriers to access to antenatal care in different central and Latin American countries. We wish to highlight how age and social background can act as barriers to antenatal care.
More specifically this paper intends to answer the following research questions:

1) Given the higher vulnerability are teen mothers receiving adequate social, emotional and medical support?
2) How is the access and availability to prenatal care for young mothers?
3) Does SES act as a barrier to achieving the basic care for pregnant mothers?
4) Are there any other factors that act as obstacles?

Cross country comparison allows to highlight common patterns of barriers to access to maternal health care in very different cultural and health systems settings. To the best of our knowledge no study has attempted to analyse these issues using a comparative approach.

**Data and Methods**

The data used for this study come from the last wave of Demographic Health Survey (DHS) for Bolivia 2003, Colombia 2005, Dominican Republic 2007, Honduras 2005/2006, Haiti 2005/2006, Nicaragua 2001. Brazil (2006) will be included in the final analysis. Preliminary analysis have been done using multivariate logistic regression on the dependent variables: 1) At least 4 antenatal visits; 2) first visit within the first 12 weeks using the sub-sample of mothers aged 15-49. Both measures have been chosen as WHO recommends at last 4 visits and one visit within the first trimester and they are often used as a public health indicator. The explanatory variables include

demographics, socio-economic and community effects: Age at last birth (5 years age groups); Number of children ever born; Region; Marital status; Time wanted pregnancy; Ever use of any method; Visited health facilities last 12 months; Education in single years; Wealth index calculated using asset indicators. A further stage of this analysis will consider multilevel effects at cluster and country level.

**Preliminary results**

*Demographic setting*

Latin America and Caribbean has experienced a fast fertility transition over the last three decades, the TFR was equal to 5 children per woman in 1970 while at 2007 it was just 2.3 – equal to Asia and Oceania macro regions - with some exception below the replacement level (such as Brazil, Chile, Argentina). At the same time the region has witnessed a stalling of the level of teenage fertility with a teenage fertility rate equal to 79 in the 1970s and 76 in 2007 (with few countries showing an increase) - almost two times the one observed in Asia and three times the one observed in Oceania. The trend has been characterized by a U-shape trend with a decline up to the 90s. Considering the proportion of births from teen mothers, the LA&C show the highest proportion in the world with 18% of births born from teen mothers. The change in the teen fertility rate shows between 1990 and 2005 a decrease of 5.6% the lowest observed all around the world (http://mdgs.un.org).

Table 1 – Percentage who had children or is currently pregnant (among teens)

| | **15** | **16** | **17** | **18** | **19** | **Total** |
|---|---|---|---|---|---|---|
| Bolivia 2003 | 3.8 | 6.9 | 14.3 | 25.7 | 33.9 | **15.7** |
| Bolivia 1994 | 2.8 | 8.1 | 14.9 | 27.8 | 40.3 | **17.5** |
| Brazil 2006[1] | 9.6 | 10.9 | 20.0 | 29.1 | 41.0 | **23.1** |
| Brazil 1996 | 4.4 | 10.6 | 20.5 | 25.3 | 34.8 | **18.0** |
| Colombia 2005 | 6.5 | 11 | 19 | 29.6 | 39.1 | **20.5** |
| Colombia 1995 | 4.9 | 9.4 | 14 | 25.6 | 38.6 | **17.4** |
| Dominican Republic 2007 | 6.6 | 11 | 19.6 | 31.4 | 39.3 | **20.6** |
| Dominican Republic 1999 | 4.6 | 8.8 | 28.7 | 37.1 | 33.8 | **20.8** |
| Haiti 2005-06 | 1.6 | 5.9 | 11.4 | 22.9 | 29.1 | **14** |
| Haiti 1994-95 | 2.3 | 5.9 | 14.7 | 19.6 | 36 | **14.5** |
| Honduras 2005-06 | 5.4 | 11.7 | 23.5 | 31.6 | 40.2 | **21.5** |
| Nicaragua 2001 | 7.9 | 10.5 | 25.4 | 35.2 | 45.5 | **24.7** |
| Peru 2004-2008 | 1.5 | 5.8 | 10.8 | 20.8 | 28.0 | **12.7** |
| Peru 1996 | 2.6 | 7.8 | 11.6 | 17.9 | 29.8 | **13.4** |

Source: STATcompiler – DHS, [1] Pnad 2006

Table 1 shows the proportion of teens who are mothers or currently pregnant in different LA&C countries. Very early fertility (15 years or less) increased in all the countries (except for Peru and for Honduras and Nicaragua which have just one reference time).
The data show how in all the countries (except Peru) more than 30% of women aged 19 are mother or are pregnant.

The mean timing to first antenatal visit and the mean number of antenatal visits by wealth index for women aged 15-19 (Figure 1) clearly show in all countries the poor quality of antental care which characterised poor teens mothers.

**Figure 1 - Mean timing at first antenatal visit and mean number of antental visits, 15-19 mothers at last birth by wealth quintile (1-poorest, 5- welthiest)**

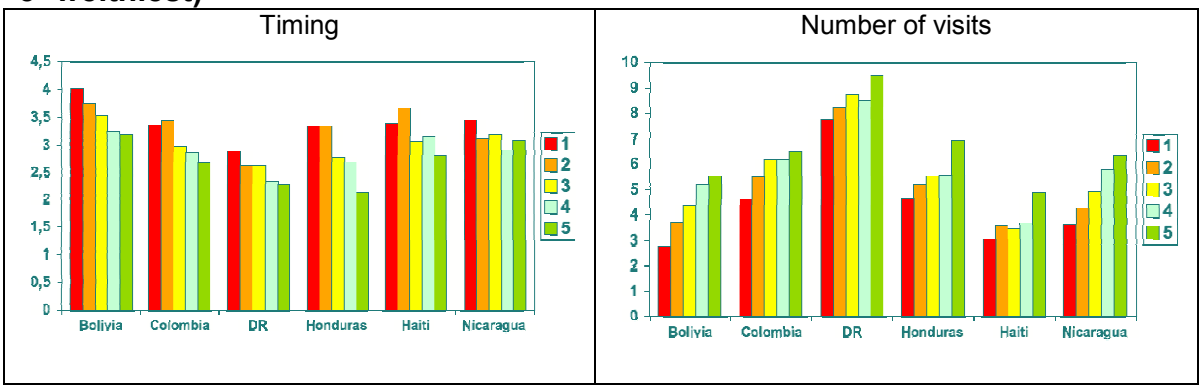
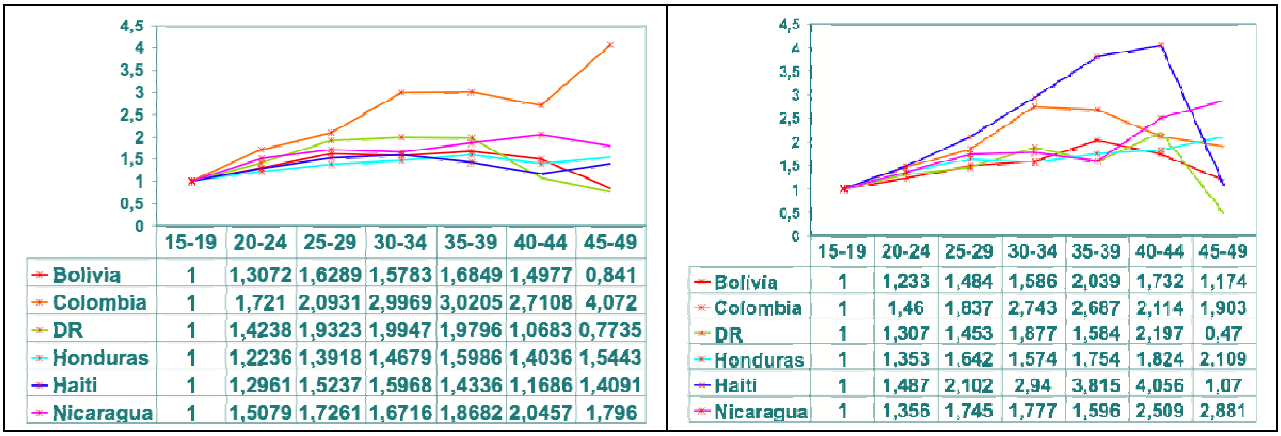



Figure 2 and 3 show the odds ratios for the two logistic models – timing at first antenatal visit and number of prenatal visits – is shown. In all the countries access to prenatal care indicators are worse for teens than for older mothers (with the exception for very old mothers). Moreover, prenatal care access is lower for lower income groups. The effect of the other variables is as expected, in particular, single women are less likely to have at least the minimum number and early timing for prenatal care visits bringing young mothers to be characterized by a triple disadvantage: precocious motherhood, poor SES, and without partner.

Consistently all the countries analyzed show how young mothers and especially poor young mothers are excluded by a minimum standard of prenatal care, making them more vulnerable. This first result calls for more in depth analysis of the dynamics between teenage fertility, socio-economic determinants and access to health care.
The next steps include: 1) inclusion of Brazil; 2) construction of a new wealth index (separately for urban and rural); 3) multilevel logistic model.
Multilevel modeling will help us to understand how community and country effects impact antenatal care access.

**Figure 2 – Odds ratio time at first visit (<=3 months) and odds ratio number of visits (>=4) by age at first birth**

| Timing | Number of visits |
|---|---|




| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
|---|---|---|---|---|---|---|---|
| Bolivia | 1 | 1,3072 | 1,6289 | 1,5783 | 1,6849 | 1,4977 | 0,841 |
| Colombia | 1 | 1,721 | 2,0931 | 2,9969 | 3,0205 | 2,7108 | 4,072 |
| DR | 1 | 1,4238 | 1,9323 | 1,9947 | 1,9796 | 1,0683 | 0,7735 |
| Honduras | 1 | 1,2236 | 1,3918 | 1,4679 | 1,5986 | 1,4036 | 1,5443 |
| Haiti | 1 | 1,2961 | 1,5237 | 1,5968 | 1,4336 | 1,1686 | 1,4091 |
| Nicaragua | 1 | 1,5079 | 1,7261 | 1,6716 | 1,8682 | 2,0457 | 1,796 |

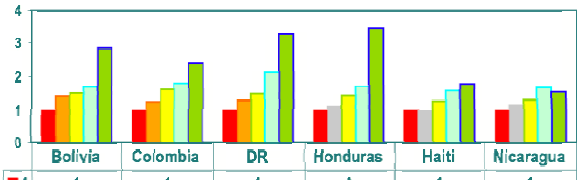



| | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
|---|---|---|---|---|---|---|---|
| Bolivia | 1 | 1,233 | 1,484 | 1,586 | 2,039 | 1,732 | 1,174 |
| Colombia | 1 | 1,46 | 1,837 | 2,743 | 2,667 | 2,114 | 1,903 |
| DR | 1 | 1,307 | 1,453 | 1,677 | 1,584 | 2,197 | 0,47 |
| Honduras | 1 | 1,353 | 1,642 | 1,574 | 1,754 | 1,824 | 2,109 |
| Haiti | 1 | 1,487 | 2,102 | 2,94 | 3,815 | 4,056 | 1,07 |
| Nicaragua | 1 | 1,355 | 1,745 | 1,777 | 1,596 | 2,509 | 2,881 |

Note: Red star in correspondence of siginificative values p<0.1

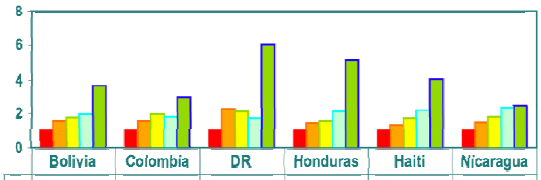
**Figure 3 – Odds ratio time at first visit (<=3 months) and odds ratio number of visits (>=4) by wealth index**

Timing




| | Bolivia | Colombia | DR | Honduras | Haiti | Nicaragua |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1,4 | 1,24 | 1,28 | 1,12 | 0,98 | 1,15 |
| 3 | 1,49 | 1,6 | 1,47 | 1,42 | 1,27 | 1,31 |
| 4 | 1,67 | 1,79 | 2,14 | 1,7 | 1,57 | 1,66 |
| 5 | 2,84 | 2,39 | 3,29 | 3,46 | 1,77 | 1,53 |

Number of visits




| | Bolivia | Colombia | DR | Honduras | Haiti | Nicaragua |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1,53 | 1,55 | 2,26 | 1,41 | 1,31 | 1,48 |
| 3 | 1,74 | 1,96 | 2,1 | 1,54 | 1,69 | 1,79 |
| 4 | 1,93 | 1,8 | 1,71 | 2,11 | 2,19 | 2,37 |
| 5 | 3,66 | 2,96 | 6,07 | 5,15 | 4,05 | 2,48 |

Note: Grey bar if not significative p>=0.1

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