Domestic Violence, Couple Interaction and Children's Health in Latin America

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September 2006

Abstract

This paper examines the relationships between several measures of couple interaction and children's health. We hypothesize that more maternal input in decision-making, joint discussion of health issues, and the absence of violence and male control are conducive to better child health. Mortality and nutritional status are used as measures of child health. Analyses are based on Demographic and Health Surveys in five Latin American countries (Bolivia, Peru, Colombia, Haiti and Nicaragua). Violence is the best interaction predictor of poor nutrition and lack of female autonomy is the best predictor of higher mortality. Joint discussion of family planning and joint decision-making about household issues are also predictive of child health. Male controlling behavior did not have a strong relationship with health outcomes in most countries. Overall, findings indicate that positive couple interaction is associated with improved health outcomes for children.

Keywords: couple interaction, domestic violence, female autonomy, child health

Historically, machismo and male dominance have been prominent in traditional Latino families (Triandis, 1983; Baca Zinn, 1995; Shorris, 1992). Rigid gender roles in Latin America have in some cases given rise to negative patterns of couple interaction such as male dominance and domestic violence. Past studies have highlighted the negative effects of these patterns on women's health, yet couple interaction influences not only the husband and wife, but also the children. Examining the dynamics of couple interaction within the Latino context is essential to understanding the health and well-being of children in Latin America.

The health and survival of children is influenced by patterns of parental interaction. As the primary caregivers, mothers in particular need control over family resources and decision-making so that they can meet the health needs of their children; a large body of literature highlights the importance of female autonomy to child well-being. In contrast, negative or violent family interaction can threaten the survival and health of children. To examine these relationships in more detail, we examine three domains of couple interaction: decision-making, male control, and physical violence, and their relationship with child nutritional status and survival in five Latin American countries.

Domains of Family Interaction and Child Health

The family process literature highlights the importance of family decision-making and the contribution of each individual member to the health of the whole family unit (Day, Gavazzi, and Accock, 1997). Interaction patterns between husbands and wives influence not only the couple, but also children in the family. Das Gupta (1990) suggests that some couples may be better able to care for their children relative to others because of different abilities in utilizing available resources, differences in beliefs about personal efficacy, or differences in family priorities – even when families are under similar resource constraints.

Although little research has examined the influence of joint-parental decision-making on child health, several studies emphasize the importance of female decision-making and autonomy to child well-being (Caldwell and Caldwell, 1993; Kishor, 2000). Following Mason's seminal hypotheses that "women's autonomy and economic independence contribute to child survival by increasing the mother's ability to provide her children with adequate nutrition and medical care" (Mason, 1993: 25) and that women's status will lead to lower fertility (Mason, 1993:30-31), a growing body of research has demonstrated the important role that women's status plays in demographic change (Hogan, Berhanu and Hailemariam, 1999; Mason and Smith, 2000; Kishor, 2000; Upadhyay and Hindin, 2005). Most of this literature has examined aspects of contraception and fertility rather than the health benefits to children of having mothers with greater autonomy and status.

Several indicators of women's position, however, are associated with the health outcomes of children. One of the most consistent findings is that children are better off if mothers have more education. Several mechanisms explain this relationship including greater economic resources, better knowledge about health, greater access to and willingness to use beneficial health practices, and more influence in household decision-making (Frost, Forste and Haas, 2005). At the national level, measures of women's status are positively related to child survival (Boehmer and Williamson, 1996; Shen and Williamson, 1997).

Measures of objective status such as education and economic power are often used as indicators of women's power but objective status is not a strong predictor of women's sense of autonomy (Heaton, Hunstman and Flake, 2005). More direct measures of women's autonomy are harder to come by. Studies that include these direct measures do show significant benefits. Women in northern India who have greater freedom of movement obtain better antenatal care

(Bloom, Wypji and das Gupta, 2001). Kishor (2000) also provides evidence that measures of objective status and more direct measures of decision-making are beneficial to children. Improving the well-being of children has become one of the justifications for global efforts to empower women in activities such as the Fourth World Congress on Women.

At the same time that research in less developed countries has focused attention on the characteristics of the mother, greater attention has been given to the importance of fathers in the United States (c.f., Booth and Crouter, 1998). Fathers, it is argued, can provide a variety of benefits in childrearing such as sharing household responsibilities, providing role models, increasing social capital, in addition to the socioeconomic resources they bring to the family (Biller, 1993; Marsiglio1995; Mackey, 1996; Amato, 1998). Various studies also demonstrate that fathers play a unique role in child development that benefits the cognitive maturation of children (Parke and Sterns, 1993; Harris, et al., 1998). Father's characteristics add predictive power to models of child outcomes in early adulthood (Yeung, Duncan and Hill, 2000). The role father's play in promoting the health of children in developing countries is a largely unexplored topic.

These two perspectives – female autonomy and the role of fathers -- each have merit, but fail to consider the benefits if both parents cooperate in using resources to promote children's well-being. Children are raised in households which generally include fathers and mothers. Thus, it seems more realistic to consider the influences of all family characteristics rather than simply focusing on fathers or mothers (Heaton, et. al., 2005). If fathers and mothers each have something to contribute to children's well-being, it stands to reason that involvement of both parents would be particularly beneficial. We, therefore, contribute to this literature by examining different modes of couple decision-making on children's health in a third world setting. We

expect that couple interaction which allows for female autonomy, and especially joint-decision making, will positively influence child nutritional status and survival.

In contrast to female autonomy and joint decision-making, male dominance or control in the family is prevalent in the pattern of machismo found in traditional Latin American families. Traditional gender roles involve the subordination of wives to their husbands in daily life (Triandis, 1983; Baca Zinn, 1995). Based on these gender roles men are expected to be dominant and authoritarian in the family, whereas women are the nurturers and caregivers (Triandis, 1983). In addition, studies have found machismo to be associated with other behaviors such as high alcohol consumption, sexual prowess, and domineering behavior (Panitz, McConchie, Sauber, and Fonseca, 1983). Lewis's (1960, 1961) ethnographic study of the family in Mexico in the 1960's described the father as not only as the master of the household, but also as the maker of all important decisions in the family.

More recent studies argue that men in Latin America have become more egalitarian (Powell, 1995). Such findings suggest that Latino men are more likely to be involved in child-rearing and to share equally decision-making with their wives than in the past (Baca Zinn, 1980; Ybarra, 1982; Zavella, 1987). However, most of these studies look at Latino families residing in the U.S. – not in Latin America. The traditional pattern of machismo in Latin America would suggest that fathers continue to dominant and control decision-making in the family.

Our measures of decision-making indicate who made specific decisions in various household domains, but not whether or not the decisions were made voluntarily. Male dominance can manifest itself as control over household decision-making (Kishor and Johnson, 2004) and this is not readily apparent in our decision-making variables. In our analyses, it is possible that some women made household decisions, but as directed or dictated by their

husband. For this reason we include a measure of husband control in addition to measures of decision-making. Given that women are generally the caregivers – if they do not have access or control over family resources -- it is expected that child well-being will suffer. We, therefore, anticipate that interactions in which the husband exhibits controlling behavior will negatively influence child nutritional status and survival.

Finally, male dominance can escalate and result in physical violence between couples and partner violence is not uncommon in Latin America (Flake and Forste, 2006; Gage, 2005). Various studies of women in less developed countries have found a negative relationship between domestic violence and reproductive health (Kishor and Johnson, 2006; Moore, 1999; Campbell, 2002; Pallitto and O'Campo, 2005). In addition to negatively affecting the health of the mother, domestic violence is also associated with the health of children. Straus and Gelles (1989) argue that men who physically abuse their wives are also likely to physically abuse their children. Kishor and Johnson (2004) in a multi-country study found domestic violence against mothers associated with higher rates of child mortality. Findings between violence and child nutritional status were mixed.

Studies from India demonstrate the relationship between domestic violence and increased pregnancy loss and infant mortality (Jejeebhoy, 1998). Other studies note a link between maternal stress and negative child outcomes such as low birth weight (Sable and Wilkinson, 2000). More specifically, domestic violence may have physical and emotional impacts on children, and reduce the ability of couples to cooperate in using resources to benefit children. We, thus, expect domestic violence against the wife to negatively influence child nutritional status and survival.

The multi-country study of domestic violence by Kishor and Johnson (2004) found rates of domestic violence to be negatively associated with shared decision-making by the couple, relative to either the husband or wife making decisions alone. In contrast, they also concluded that controlling behaviors by the husband were associated with an increased likelihood of domestic violence. The more controlling behaviors the husband exhibited, the greater the likelihood of violence (Kishor and Johnson, 2004). Based on these findings we also consider the interrelationship between decision-making, male controlling behavior, and domestic violence.

Other Factors Influencing Child Well-being

In addition to couple interaction, other factors have been found to influence child well-being. Children in rural areas are at greater risk of stunted growth and mortality relative to urban children (Heaton and Forste, 2003), and unsanitary conditions such as no flush toilets (Forste, 1998) increase the likelihood of poor nutritional status in children. Maternal characteristics, including education (Bicego and Boerma, 1993; Jejeebhoy, 1995) and age at birth (Forste, 1994; Frost, Forste, and Haas, 2005) influence child well-being and survival. Low maternal education and young age at birth negatively influence child health.

Husband's education or occupation, as well as household socio-economic indices, influence the resources available to families in Latin America. Low socio-economic status, as well as low parental education, negatively influence child survival (Barrett and Browne, 1996; Kuate-Defo, 1996; Frost, Forste, and Haas, 2005). Child characteristics, such as parity and birth order, are also predictive of child health and well-being. Higher parity births and short birth-spacing decrease the likelihood of child survival (Forste, 1994; Forste, 1998). Given the influence of these parental, household, and child characteristics, controls are included for these factors in our models of couple interaction and child health.

Based on data from five Latin American countries, we explore the relationship between various patterns of couple interaction and child health. In particular, we model the influence of decision-making, male dominance, and domestic violence on child nutritional status and child survival. In addition, we include controls for other parental and child characteristics that influence child well-being. First, we consider the degree to which various dimensions of family interaction are interrelated. Second, we compare the relative strength of the relationships between each measure of couple interaction and the two indicators of children's health.

Data and Methods

Data

Data are taken from recent Demographic Surveys from Colombia (2000), Peru (2000), Haiti (2000), Nicaragua (1997/98) and Bolivia (2003). These surveys have several advantages including large representative samples, questions on the variables of interest, and comparability in terms of question content and administration of the surveys. Data are based on interviews with women of childbearing age. Our analysis is restricted to women who are currently married. Detailed information is also collected for children aged 5 or younger. Our analysis is based on these young children. Detailed descriptions of the samples, methods and questionnaires are available at www.measuredhs.com.

Measures

Two measures of children's well being are included. First, nutritional status is measured by the z-score for the child's height to age ratio when compared with the World Health Organization's standard. A score two standard deviations below the mean is assumed to reflect chronic malnutrition. Malnutrition can result both from inadequate diet and from depletion due to diarrhea. Malnutrition demonstrates an inability to provide basic food and health care for

children. Low birth weight is associated with lower educational attainment and academic achievement (Conley and Bennett, 2000; Boardman, et. Al., 2002; Behrman, 1993). Child malnutrition is associated with a variety of negative long term consequences including lower school enrollment and lower physical activity (Alderman, et. al., 2001; Dufour, 1997). Finally, child mortality is included as an extreme measure of failure to provide basic care for children.

Couple decision-making is measured by five questions regarding who makes the final decision on the respondent's health care, large household purchases, everyday household purchases, visits to relatives, and food to be cooked each day. Two variables are created from these items. If the respondent says she has the final say, the response is coded as autonomous. If she says she and her husband decide together, the response is coded as joint decision-making. Responses are summed and divided by 5. Thus, each variable ranges from 0 if no responses, to 1 for all responses. Interaction on fertility decisions is measured by a dichotomous variable indicating whether the couple has discussed family planning. Research indicates that agreement on pregnancy intentions has health benefits for the child (Korenman, Kaestner and Joyce, 2002)

Questions on physical violence vary from country to country. In order to create a variable with a comparable range of responses, each item is coded 1 if the wife reports her spouse has ever committed a violent act (e.g., pushing her, hitting her, kicking her or trying to strangle her). These items are summed and divided by the number of items to create a score ranging from zero if no acts occurred, to one if each of the acts occurred. Husband controlling behavior is treated like the violence measure because the number of items varies by country. Each item is coded one or zero, the items are summed and divided by the total number of items. Country specific items are show in Table 1.

A variety of control variables are included to account for possible confounding influences. Socioeconomic status is measured by the number of household items present such as electricity, radio, television, refrigerator, and telephone. The list varies slightly from country to country so this variable is calculated as a percentage of all items included in the list. Sanitation is based on presence of a flush toilet and a finished floor (e.g., tile or cement). Scores for unsanitary conditions range from 0 for presence of a finished floor and a flush toilet to 1 if neither are present. Respondent's education is measured on a four point scale ranging from 0 for no education to 5 for post-secondary education. Dichotomous variables are included for informal unions (compared with legal marriages), and first births. Presence of the husband in the household is a dichotomous variable. Husband's education ranges from zero for no education to 3 for post-secondary education. Length of the preceding birth interval is coded in months and given the mean value of 46 for first births. Type of residence is coded one for rural and zero for urban areas.

Two different statistical procedures are used because the outcomes have two different distributions. OLS regression is more appropriate for nutritional status because it has an approximate normal distribution. Cox regression is used for child mortality because the outcome includes whether or not the child survived to age 5 as well as the age of death for children who did not survive. First, all couple interaction variables are included in the model to distinguish which aspects of interaction have the largest influence. Then, control variables are included. In this final step, only family variables found to have statistically significant coefficients in step two are included.

Results

Latin American countries are of interest because although they share similarities in language and history, there is still substantial variation in indicators of child well-being and socioeconomic standing. The cultural value of machismo suggests that men should have some authority, but also implies men have important responsibilities within the family (Mirande, 1998). Table 1 shows percentages for each of the items measuring couple interaction. This table is useful both as a way of showing cross-cultural variation and to get a sense for the variables included in the analysis.

(Table 1 about here)

Wives report substantial autonomy in these countries as they report having the final say about 40 percent of the time. The wife is most likely to have control over food to be cooked, and then over her own health care. The exception is Nicaragua. Joint decision-making tends to be comparable to, but a little lower than female autonomous decision-making in Colombia and Peru. Joint decision-making is much more common in Nicaragua. Haitian women report more autonomy than joint decision-making, while Bolivian women report slightly more joint decision-making. Most couples do appear to discuss family planning a great deal, except in Colombia.

Physical violence is high ranging from about a fourth in Nicaragua to over 50 percent in Bolivia. Pushing and hitting are the most common forms of violence reported. More extreme forms of violence such as strangling, hitting with an object, or threatening with a weapon are less common. Various husband controlling behaviors are evident in each country, and percentages of women reporting these controlling behaviors generally range between 20 to 50 percent.

Nutritional status and mortality are shown in figures 1 and 2 respectively. The average height for newborns is very near the WHO norm. But failure to thrive is evident in the dramatic

declines in standardized height for age indicators. By the age of two, the average height falls more than one standard deviation below the norm in each country. The jump in height at age two is most likely due to a change in measurement procedures when the child reaches age two. Nutritional status is lower in Bolivia, Peru, and Nicaragua, than in Colombia or Haiti. There is substantial cross-national variation in mortality rates. Colombia has the best survival probability where two percent of infants die before reaching age 5. Rates are about twice as high in Nicaragua, Bolivia and Peru where about four percent of children die before reaching age 5. The health crisis in Haiti is evidenced by the estimate that about ten percent of children die before reaching age 5.

(Figures 1 and 2 about here)

Table 2 reports correlations among different measures of couple interaction. These correlations show the degree of overlap in couple behaviors. Violence and controlling behaviors are closely related in three of the countries and correlations are moderate or low in the other two. It appears that controlling behavior and violence are measuring overlapping forms of conflict and coercion. Joint decision-making and autonomy are negatively associated. This is expected because the responses are mutually exclusive. Nicaragua is the exception because many people report that someone else in the household makes the decision. Interestingly, other correlations are quite small. There is evidently little overlap between the control/violence dimensions, the two variables measuring decision-making, and discussion of family planning. Results suggest that couple interaction encompasses a variety of different behaviors that are not closely related.

(Table 2 about here)

Interaction and child health

Children born in violent homes are less likely to receive adequate nutrition and are more likely to die (see Tables 3 and 4). The direction of this relationship is consistent across outcomes and countries. The relationship is stronger in some contexts than others and several of the coefficients are not statistically significant, but the overall pattern of results is compelling. In some countries, the strength of the relationship is diminished when control variables are added to the model, but this is not the case in all countries.

The negative consequences of controlling behaviors are not as evident nor as consistent across countries and outcomes. Moreover, not all of the coefficients are statistically significant when control variables are added. This mixed pattern of results suggests that husband controlling behavior is not as harmful to children's health as is physical violence.

(Tables 3 and 4 about here)

There is some evidence that female autonomy is beneficial for children. Autonomy is associated with better nutritional status in each of the countries except Haiti, but the coefficients become small and are not statistically significant when control variables are added. Likewise, child mortality rates are lower in homes where mothers have more autonomy, but effects are reduced or even reversed when control variables are added. The preponderance of evidence also indicates that joint decision-making is beneficial for children. Joint decision-making is positively associated with nutritional status in three of the five countries and is associated with lower mortality rates in all five countries. These effects are diminished but not eliminated when other variables are included in the model.

Results for the indicator of interaction specific to family planning also suggest that couple interaction is beneficial for children. Couples who discuss family planning have children

who have better nutritional status in three of the five countries and children in these homes have higher survival probabilities in each of the five countries.

With few exceptions, control variables either have the anticipated effects or are not statistically significant. Higher SES and parental education, later initiation of childbearing, more sanitary living conditions and longer intervals between births of children are associated with improved nutritional status, and lower infant mortality. However, measures of family structure including consensual unions, presence of the husband, and mother's age are generally not statistically significant. Rural children tend to have lower nutritional status. Consistent with the observed decline in nutritional status reported in figure 1, nutritional status declines as children age.

Conclusion

A growing body of research indicates that female status and autonomy may have beneficial health outcomes for children. Less attention has been given to other aspects of couple interaction. Our analysis indicates that several aspects of interaction can impact the well-being of children. Averaging effects over the five countries, we find that children in homes where mothers have experienced spousal violence score nearly a third of a standard deviation lower on height for age than children in homes with no spousal violence. Maternal input on household decisions is associated with child mortality rates about one third lower compared to households where husbands or other household members make decisions. Couple discussion of family planning is also associated with better nutritional status and lower child mortality. Once these measures are considered, male controlling behavior has a negligible relationship with the measures of child health considered here. In short, more positive couple interaction is associated with better child health.

The finding that a variety of couple behaviors are important for children's health is particularly important given that there appears to be little correlation across these behaviors. Violence and decision-making processes are largely independent of each other in the data considered here. Independence among measures raises the possibility that additional aspects of couple interaction may also be important. For example, positive communication skills, willingness to pool resources, and cooperation in obtaining goals may be beneficial. We suspect that inadequate measurement of concepts we have included and inability to measure a wider domain of behaviors limits our ability to fully assess the importance of couple interaction.

Inclusion of control variables generally diminishes but does not eliminate relationships between interaction and children's health. Of course, positive interaction could be a cause, as well as a consequence of socioeconomic status and reproductive behavior. Thus, the relative influence of control variables and measures of couple interaction must be interpreted with caution. In general, results suggest that couple interaction can be important, even after other more commonly studied family characteristics are taken into account.

Despite these general tendencies, there is substantial variation across the five countries considered. A few of the coefficients imply opposing influences in different countries, and magnitudes of coefficients show considerable variation. Without a larger sample of countries, it is difficult to identify country level characteristics that account for these differences. Clearly, the general trends we have described are not universal. Still, results point to the need for models of child health to consider the ways in which couples interact with each other.

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Figure 1 Nutritional Status (standard deviation of height for age) by Country

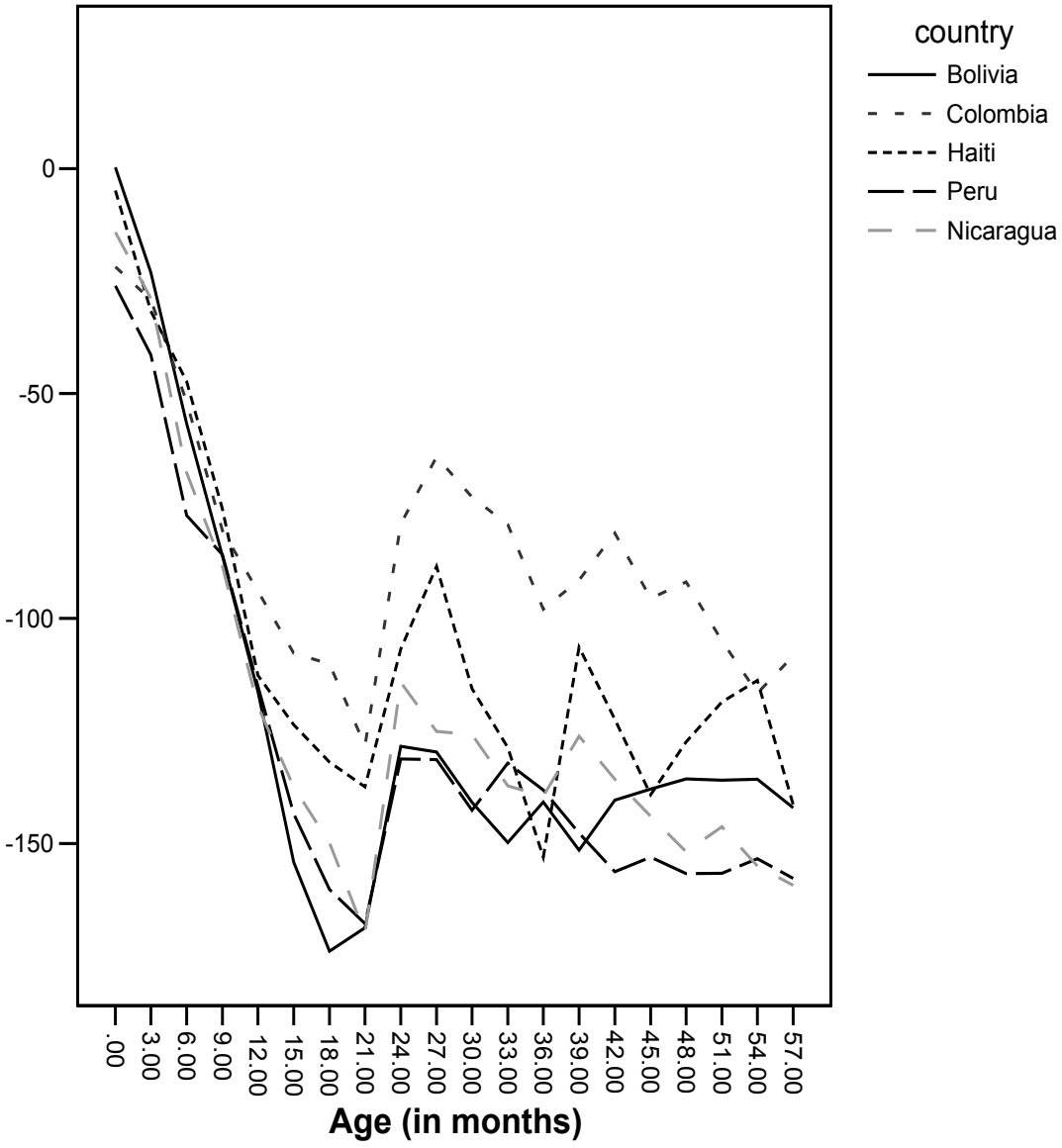

Figure 2 Survival Probabilities by Country

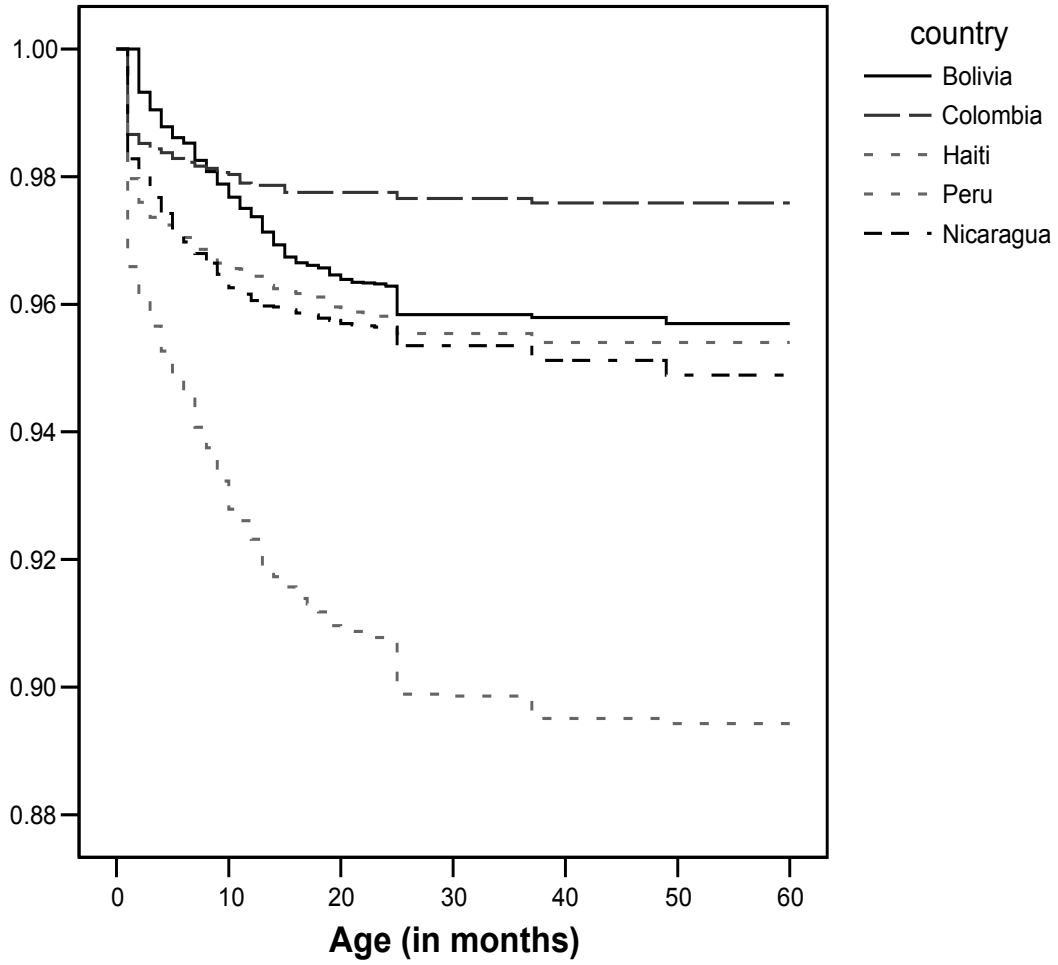

Table 1. Indicators of Family Interaction

Charateristics	Bolivia	Peru	Colombia	Haiti	Nicaragua
Controlling behavior:					
Accuses unfaithfulness	31.5		20.9	23.7	15.4
Limit contact w/ family	26.4	22.5	15.8		12.6
Tells her she's good for nothing	34.8	26.4			
Threatens to leave	22.9	22.6	18.7		
Threatens to cut of support	19.6		10.2		
Threatens to take children		22.9	19.6		
Yells at her		47.5			
Limits contact w/ friends			26.3	30.8	
Must know where she is			41.8	31.7	41.4
Doesn't trust her w/ money			22.8		
Humiliated her			24.2		
Jealous				56.3	36.1
Hides income					17.5
Indifferent		35.5			
Forbids visiting					15.2
alpha	.799	.825	.796	.701	.790
Violence:					
Pushed	45.2		31.0	11.9	22.2
Hit-hand or foot	39.9		6.0		16.4
Hit with harmful object	9.9		5.4	6.6	19.2
Strangled	7.7		3.3	2.4	6.9
Forced to have sex	14.8		6.5	19.3	7.8
Physical violence		39.0			
Slapped or twisted arm			22.5	10.4	
Kicked or dragged			8.9	4.7	9.3
Bitten			2.8		
Threaten with weapon				2.0	8.7
Alpha	.752		.790	.757	79.2
Female autonomy (she decides):					
Her health care	54.9	52.0	65.4	44.0	
Large household purchases	12.5	17.3	18.3	35.1	5.9
Daily needs	52.7	42.5	39.8	44.7	
Visits to family/friends	23.9	26.0	28.2	54.4	8.8
Food to be cooked	75.7	71.0	72.0	74.5	37.7
Children's visits to doctor					20.4
Children's education					10.1
Contraceptive use					16.0
Children's discipline					9.4
Alpha	.635	.638	.586	.701	.792

Table 1 continued	Bolivia	Peru	Colombia	Haiti	Nicaragua
Joint decisions (both decide);					
Her health care	31.7	25.0	21.1	29.4	
Large household purchases	58.6	48.7	47.4	34.7	36.0
Daily needs	30.6	32.5	34.6	29.3	23.2
Visits to family/friends	57.3	51.8	52.1	34.6	41.2
Food to be cooked	12.8	12.9	14.3	9.0	
Children's visits to doctor					36.5
Children's education					45.1
Contraceptive use					33.6
Children's discipline					50.1
Alpha	.750	.761	.712	.780	.912
% Discussed family planning	73.8	76.3	14.6	70.6	75.1

Table 2. Correlations Among Aspects of Couple Interaction

	Controlling	Violence	Autonomy	Joint decisions	Discuss family plan.
Controlling:					
Bolivia	1.00	.66*	.15*	-.16*	-.01
Peru	1.00	.44*	.11*	-.17*	.04*
Colombia	1.00	.61*	.07*	-.15*	.01
Haiti	1.00	.29*	-.13*	.09*	.03
Nicaragua	1.00	.15*	.01	-.20*	.00
Violence:					
Bolivia		1.00	.12*	-.12*	-.03*
Peru		1.00	.07*	-.08*	.01
Colombia		1.00	.08*	-.12*	-.03*
Haiti		1.00	.07*	-.10*	-.01
Nicaragua		1.00	.08*	-.15*	.02
Autonomy:					
Bolivia			1.00	-.63*	-.02
Peru			1.00	-.50*	.08*
Colombia			1.00	-.58*	-.04*
Haiti			1.00	-.60*	-.04*
Nicaragua			1.00	-.11*	.04*
Joint decisions:					
Bolivia				1.00	.07*
Peru				1.00	.04*
Colombia				1.00	.11*
Haiti				1.00	.07*
Nicaragua				1.00	.06*

Table 3. Effects on Child Nutritional Status (height for age)

	Bolivia		Peru		Colombia		Haiti		Nicaragua	
Violence	-38.9*	-23.3*	-2.5	-3.2	-9.6*	-5.1	-81.6*	-81.4*	-25.9*	-11.1
Controlling	-.4	2.9	-9.9	4.3	-21.2*	-11.5	13.7	7.4	8.1	6.8
Autonomy	10.9	-10.9	45.6*	-3.3	27.1*	6.5	-35.6*	-35.0*	32.1*	10.2
Joint d.m.	-11.6	-16.2*	15.8*	9.4	10.6	-3.7	-23.9	-13.3	49.2*	28.5*
Discussed f.p.	53.6*	9.9	30.0*	2.4	3.9	-5.0	-8.0	-12.4	13.9*	3.1
Rural		-11.2*		-23.9*		-.7		-10.1		11.5*
Unanitary		-29.2*		-51.7		8.7		-48.7*		-32.6*
Mother ed.		13.4*		14.2*		4.8*		16.3*		9.6*
SES		1.7		-.5		69.1*		-4.2		10.3
Consensual		4.8		-.8		-.5		-42.5		-6.5
H. present		6.7		-.1		-.4		-4.0		.6
H. ed.		6.9*		3.8		13.4*		7.1		1.6
1st birth		-5.3*		-4.1		16.4*		-9.9*		-6.2*
Prior interval		.5*		.4*		.6*		.6*		.5*
M. age		1.1		1.5		-.3		3.3*		1.7
M age at 1st bir		-.7		1.0		1.0		-2.0		.9
Child age		-1.3*		-1.9*		-.8		-1.8*		-1.7*
(n)	8027		4798		3086		1869		4792	
R^2	.021	.150	.025	.222	.013	.133	.010	.123	.018	.140

Table 4. Effects on Child Mortality

	Bolivia		Peru		Colombia		Haiti		Nicaragua	
Violence	1.798*	1.613a	1.116	1.153	1.348	1.352	1.695	1.909	1.224	1.061
Controlling	.913	.921	.802	.762	1.979	1.936	.859	.721	1.175	1.187
Autonomy	.785	1.158	.724	1.060	.162*	.161*	.661	.800	.745	.866
Joint d.m.	.864	.956	.742	.801	.518	.498	.726	.922	.568*	.693
Discussed f.p.	.609*	.853	.831	.989	.741	.785	.711	.715	.795*	.910
Rural		1.082		.924		1.261		.819		1.112
Unanitary		1.118		1.314		.769		2.116*		1.036
Mother ed.		.887		.776*		1.176		.925		.896
SES		1.067		.997		.393		1.184*		1.006
Consensual		1.200		1.089		.871		.827		1.120
H. present		1.223		.800		.796		.885		.710
H. ed.		.709*		1.029		.806		1.048		.924
1st birth		1.041		1.040		.879		.977		1.176*
Prior interval		.985*		.993*		1.002		.996		.992
M. age		.979		.996		1.006		.988		.954*
M age at 1st bir		1.012		.991		.996		.990		1.019
N	8811		5704		3412		2240		5880	
X^2	14.9*	90.8*	7.1	53.0*	32.2*	39.8*	6.5	32.8*	19.4*	70.9*

a. violence significant when other interaction variables excluded.