

Social and Economic Context, Gender, and Care for the Elderly in Nepal

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ABSTRACT

Scholars and policy makers have expressed concern that social and economic changes occurring throughout Asia are threatening the well-being of the elderly, particularly women, by undercutting their systems of social support. Using a sample of 2,109 elderly men and women from the Chitwan Valley Family Study, we evaluated the relationship between proximity to markets and health services and the likelihood of receiving physical assistance in Nepal. Overall, we found that living near markets and health services increased the odds of receiving care and that this relationship varied by gender. When we analyzed only elderly women, those living near a market had nearly double the odds of receiving care compared to those living farther way. In contrast, among elderly men, living near a market more than doubled the odds of receiving care and living near a health service nearly quadrupled the odds of receiving care.

Introduction

Many countries throughout Asia are experiencing a rapid demographic transition, which has resulted in an increasingly aging population (Bisht 2002; Chaudhury, 2004; Mujahid, 2006; United Nations, 1999). At the same time, many countries are undergoing significant social and economic changes, including the spread of markets, health services, and other non-family institutions (Axinn & Yabiku, 2001; Thornton & Fricke, 1987). Urbanization and rural to urban migration also have led to the physical separation of parents and children (Knodel & Debavalya, 1992).

Scholars and policy makers have voiced concern that the demographic and socioeconomic changes taking place threaten the well-being of the elderly throughout Asia by reducing the availability of care givers. One primary concern is that the changes are weakening the institution of the family, which has historically held primary responsibility for the care of the elderly when disabilities or illness limit their ability to care for themselves. Another concern is that the changes have contributed to a weakening respect for the elderly and commitment to supporting one's parents. However, empirical evidence of the linkages between social and economic changes and the well-being of the elderly is lacking.

A common topic in the literature on care for the elderly in Asia is the particularly vulnerable position of elderly women. It is argued that the demographic and socioeconomic changes especially threaten the well-being of elderly women because of their inferior social standing throughout the life course (Knodel & Ofstedal, 2003; Mason, 1992). However, few studies have examined how socioeconomic changes may affect elderly men and women differently and our understanding of the potential mechanisms connecting socioeconomic changes, gender, and well-being remains limited.

Our study is an empirical analysis of the relationship between social and economic change and informal care for the elderly and, furthermore, how this relationship may vary by gender. In particular, we examine the extent to which proximity to markets and health services increases or decreases the likelihood of an elderly person receiving care. We also analyze the extent to which the factors affecting the likelihood of receiving care differ for elderly men and women.

This study advances our understanding of intergenerational support in four ways. First, by investigating aspects of both the individual and community context this study provides new information about the mechanisms through which changes in social context influence care of the elderly. Second, whereas many studies of gender among the elderly include only women (Knodel & Ofstedal, 2003), our study examines care for both men and women. Our ability to unpack the role of gender in the relationship between socioeconomic changes and care for the elderly greatly enhances our understanding of this relationship. Furthermore, our inclusion of men provides unique information on the well-being of elderly men in the midst of great social change. Third, our paper focuses on physical care for the elderly, which has received little attention, especially relative to the research on financial support and co-residence (Selvaratnam, 1989; Kinsella, 1990; Hasimoto, Kendig, & Coppard, 1992). Studying the influence of socioeconomic changes on physical care, as compared to financial care, is especially important, because it requires the caregiver to be physically present and governments or private corporations are far more limited in their ability to assist with physical care. Finally, our study relies on data from the Chitwan Valley in rural, south-central Nepal, an area which has recently undergone a period of rapid social change, which makes it an ideal setting for studying the relationship between social and economic change and care for the elderly.

Linking Markets and Health Services to Care Giving

Substantial bodies of literature exist on both the link between social context and individual behavior (Alexander, 1988; Caldwell, 1982; Durkheim [1933] 1984; Thornton & Lin, 1994) and on intergenerational support in Asia (e.g., Knodel, Chayovan, & Siriboon, 1992; Lee, Parish, & Willis, 1994, Natividad & Cruz, 1996). However, little research has brought these two topics together. In this paper we develop a framework for understanding the link between social context and care for the elderly and how this may vary by gender. According to this framework, the likelihood of an elderly person receiving care depends on two main factors. First, a potential care giver must have the desire to provide care. Second, a potential care giver must be available to provide care for the elderly person. In this section we will explain how proximity to markets and health services may influence an elderly person's likelihood of receiving care via its impact on one or both of these factors.

Motivation for care giving

The literature on care giving discusses two broad models of intergenerational transfers—the altruistic or mutual aid model and the reciprocal exchange model—both of which focus on individual or microlevel relationships. Under the altruistic or mutual aid model family members care for one another because they care about their well-being, with giving often occurring in times of need (Hogan, Eggenbeen, & Clogg 1993; Lee, Parish, & Willis 1994; McGarry & Schoeni, 1997).

Altruistic support from children may decrease as a result of the proliferation of non-family organizations, including markets and health services. As individuals have more exposure to markets and health services they may become increasingly independent from their families and more concerned with their own needs and wants. This is due to the increased time spent

away from the family, increased interactions with people who hold different, specifically non-family oriented values, and because of the new ideas introduced by non-family organizations themselves (Thornton & Fricke 1987; Thornton & Lin, 1994).

Under the reciprocal exchange model family members may offer assistance in response to actual previous or expected future gifts (Goldscheider, Thornton, & Yang, 2001). Three common examples of this are 1) adult children assisting their elderly parents to repay them for the assistance they received in childhood and 2) adult children assisting their elderly parents and expecting their parents to repay them through inheritance 3) parents assisting their children to insure that they will care for them (the parents) in their old age (Becker et al., 2003; Henretta et al., 1997; Silverstein, Parrott, & Bengtson, 1995).

There are several ways in the proximity to markets and health services, may influence care for the elderly under the reciprocal exchange model. In general, households that live near markets and health services tend to have more wealth than households located further away. Wealthier households tend to invest more in their children, such as money spent on their education and healthcare, which increases the debt that children must repay to their parents. In addition, children who hope to inherit wealth from their parents may have a greater incentive to care for them in their old age. We expect these relationships to be stronger among men than women, as parents in Nepal tend to invest more in sons and wealth is transferred to the next generation through sons.

Availability of care givers

Of course, situations may arise when family members recognize that an elderly person needs assistance and intend to help but are unable to do so. The proximity to markets and health services may influence whether family members are available to provide care for the elderly in

several ways.

First, elderly persons who live near markets and health services are more likely to have children, especially sons, living with them. Many young men whose families work in agriculture migrate to more urban locations in order to find employment. Men whose families live and work in the markets tend to be better off financially and, therefore, are more likely to remain with their parents instead of migrating. In Nepal only men can care for aging men, so a son's decisions to remain in the household instead of migrating may significantly impact whether his elderly father receives care.

Second, elderly persons who live near markets and health services may be more likely to receive care because it is more convenient for family members living elsewhere to visit them. Markets in Nepal often constitute a common meeting place or the center of neighborhood life. They are typically at crossroads and near bus stops—both heavily trafficked areas. Community members frequently visit the markets both for goods and services, but also in passing on the way to their fields or to non-family work environments. When elderly people live close to markets they may receive more care because it is easier for other people to visit them when they are conducting other business. The elderly living in remote areas may be less likely to receive care because it is more difficult for family members living elsewhere to visit them.

Third, the health services themselves may provide care to the elderly. Health services in Nepal range from local pharmacies staffed by the owner to government health clinics with doctors, nurses, and specific outreach programs. Health workers of all types often make house-calls, visiting individuals they know are too sick to come to the provider. These visits may be more common when the elderly person lives near the health service provider because it is easier for the worker to conduct the visit.

Data and Methods

The study uses data from the Chitwan Valley Family Study (CVFS) conducted in rural Nepal. This study combines survey and ethnographic methods to obtain detailed measures of community context and individual life histories. In 1996, the CVFS collected information from residents of a systematic sample of 171 neighborhoods in Western Chitwan Valley—it interviewed every resident between the ages of 15 and 59 in the 171 sampled neighborhoods, and their spouses. Because of large age differentials between spouses the age distribution of the final sample ranged from 13 to 80 years old. The overall response rate of 97 percent yielded 5,271 completed interviews. All interviews were conducted in the most common language in Nepal, Nepali (questions presented below are translated). Life History Calendar techniques were used to collect reliable information regarding residents' contraceptive behavior, marital and childbearing behavior, education, and labor force participation (Axinn, Pearce, & Ghimire, 1999). The CVFS also collected detailed accounts of neighborhood resources available since 1954.

In 2007 the CVFS collected detailed information about all elderly residents in 151 of the sample neighborhoods.¹ We define elderly as aged 45 and older, which is lower than typically used in Western studies of aging and care giving. However, in this setting many individuals are already experiencing many of the physical and mental signs of aging by the age of 45. Work in Chitwan is generally very physically demanding and most people in their 40s have been participating in hard, physical labor for over 30 years. Additionally, medical resources in Nepal are vastly different from those available in Western countries. As a result, many people suffer debilitating physical impairments from relatively minor ailments. Using a younger age boundary

¹ Financial constraints limited data collection to only 151 neighborhoods.

to define our sample of interest is further supported by the fact that life expectancy in Nepal is only 62 years.

This 2007 survey of elderly respondents was conducted at the household level. If the elderly person was present at the time of the interview, the interviewer asked the questions directly of him or her. In situations where the elderly person was not present at the time of the interview, other household members served as proxy reporters. Information was gathered for 99 percent of eligible individuals, yielding 2,109 completed interviews. We present some descriptive statistics for all 2,109 individuals. The majority of our analyses use a sample of 1,403 individuals who were in the sample in 1996. We are forced to exclude 706 respondents who moved into the sample neighborhoods after 1996 because they have missing data on key independent variables.

Measures of whether an elderly person has received care

Respondents were asked a series of questions about their difficulty with activities of daily living, such as eating, bathing, and getting out of bed. Then they were asked, “Now I would like to talk about care received from other people. There are situations in which people receive care or assistance, perhaps because of difficulties with the activities just discussed, or because of a long-term physical or mental illness or a disability. During the past two weeks, have you (has she/he) received any such care or assistance?” The measure is equal to one if the elderly person reported receiving assistance and zero if not. Descriptive statistics for this, and all measures used in the analyses presented in this table can be found in Table 1. Approximately seven percent of all elderly individuals reported receiving care or assistance in the last two weeks.

(Table 1, About Here)

Measures of community characteristics

According to the argument outlined above, the extent of social and economic change in an elderly person's community may influence whether they receive care or assistance. As a result, we include two separate measures of the elderly person's exposure to health services and markets. The first measure equals one if the elderly person had a health service within a five minute walk from his neighborhood in 1996 (the last year when data was collected) and zero otherwise. The second measure is created similarly, but refers to whether the individual had a market nearby. Previous research has found that availability within a 5 minute walk is the appropriate radius of influence to consider in this specific rural context with limited transportation infrastructure (Axinn & Yabiku, 2001).

Gender

Because gender is of central importance to our research we incorporate it into our analyses in two ways. First, we create a variable equal to one if the elderly person was female and zero if male, and include this as an independent variable in our analyses of the relationship between social context and care giving. Second, we conduct separate analyses for men and women to ascertain any differential effects of gender for this relationship.

Controls

In order to properly specify the models, we control for various characteristics of the respondents that may influence both one's proximity to health services and markets and the likelihood of receiving care. First, it is important to control for the health of the elderly person, given that individuals in worse health are more likely to receive care. Our measure of health is based on responses to the question, "Overall, would you say that your (her/his) health is excellent, good, fair, or poor?" Responses ranged from one to four where one equals excellent

and four equals poor. Overall, respondents generally had low assessments of their health—the mean for all the elderly was almost 3.

We control for the respondent's age because individuals may be more likely to receive care as they grow older. We create dichotomous variables for four birth cohorts: ages 45 to 54, ages 55 to 64, ages 65 to 74, and ages 75 and over. The group ages 45 to 54 is the reference group in all analyses.

We also control for the number of sons and the number of daughters born to the elderly person. Children are traditionally responsible for the care of the elderly in Nepal, so more children means more potential care givers. We distinguish between the number of daughters and the number of sons for two reasons. First, providing assistance to elderly parents often requires intimate physical contact, so the care giver must be the same gender as the recipient of the care. Second, gender norms in Nepal also dictate that women are primarily responsible for care giving and domestic activities (Bennett, 1983).²

All models include a control for ethnicity. Ethnicity in Nepal is complex, multifaceted, and interrelated with religion. A full description of the ethnic groups in this setting is beyond the scope of this article (see Acharya & Bennett, 1981; Bista, 1972; Fricke, 1986; Gurung, 1980 for detailed descriptions). We use dichotomous variables to control for five classifications of ethnicity: Upper-caste Hindu, hill Tibeto-Burmese, Lower-caste Hindu, Newar, terai Tibeto-Burmese, and other caste. Upper-caste Hindu is the reference group in all analyses.

Wealth is an important characteristic to control for when investigating any type of support for the elderly and we include four measures in these analyses. In Chitwan, Nepal

² Over 93% of the elderly was living with a child in 2002. When we included a control for whether the elderly person was living with a child, the coefficients on proximity to health services and markets changed very little. (Results not shown.)

household goods and landownership are a much more meaningful measure of wealth or of need of support than cash income and these wealth measures reflect this fact. The first measure is a dichotomous measure equal to one if the couple's household owns the land their house is on and zero otherwise. The second and third measures are counts of the number of large livestock and consumer durables the family owns, respectively. The livestock measure includes bulls, cows, buffaloes, sheep, goats, and pigs. The consumer durables measure includes radios, televisions, bicycles, motorcycles, carts, tractors, irrigation pumpsets, gohar gas plants, and farm tools such as threshers, chaff cutters, sprayers, and corn shellers. The fourth measure is a count of the number of stories in the house that the family is living in.

Analytic Strategy

Our analysis consists of three parts. In the first part we assess the extent to which elderly persons in this sample are receiving physical care. In the second part we use multivariate regression to model the relationship between community characteristics and receipt of care for all respondents present in both the 1996 and 2007 surveys. Then, for the third part, we run the models separately using a sample women only and then a sample of men only.

To model the elderly person's likelihood of receiving care we estimate logistic regression of the form:

$$\ln\left(\frac{p}{1-p}\right) = a + \sum (\beta_k)(X_k).$$

where p is the probability of an individual having received care, $p / 1-p$ is the odds of this level of certainty, a is a constant term, β_k represents the effects parameters of the explanatory variables, and X_k represents the explanatory variables in the model.

Preliminary analysis

Prevalence of care giving

Overall, only a small percentage of the elderly persons (7%) reported receiving care or assistance because of a long-term physical or mental illness or a disability in the last two weeks (see Table 1). In Table 2 we show the bivariate relationships between receiving care and health status and gender, respectively. Fewer than three percent of those in excellent health reported receiving care. Surprisingly, only 16 percent of the respondents who reported having poor health also reported receiving care in the last two weeks. This indicates that a significant number of elderly persons in the sample have suffered from health problems but have not received assistance. Future research should investigate this population further, as they are likely the ones being most harmed by the changes in family organization.

(Table 2, About Here)

Social context and care giving

In Table 3 we estimate the effects of community characteristics on the likelihood of an elderly person receiving care. The sample for these analyses includes both men and women. The coefficients displayed are the multiplicative effects on the odds of receiving care. An exponentiated coefficient greater than 1.00 represents a positive effect, less than 1.00 a negative effect, and equal to 1.00 no effect.

The results indicate that the presence of non-family organizations in the community significantly increases the likelihood of an elderly person receiving care after controlling for other key characteristics. Column 1 presents a model of the impact of having a health post within a 5-minute walk from the neighborhood on the likelihood of having received care. We find that

having a health post within a 5-minute walk nearly doubles the odds of receiving care, relative to the group who lived more than a 5-minute walk from a health post.

We also find a significant relationship between health status and care receipt. As we expected, reporting worse health appears to increase the likelihood of receiving care.

Women were also more likely to receive care than men, which is somewhat surprising. Given that Nepal is a patriarchal society in which men hold the position of greatest power (Acharya, Mathema, & Acharya, 1999; Mason, 1992), we expected to find that men are more likely to receive care. There are a few reasons why women may be more likely to reporting receiving care than men. First, women tend to live longer and to have more health problems than men (Chaudhury, 2004; Mujahid, 2006). Although we controlled for both the elderly person's age and health condition, these variables may have failed to account for the greater care needs of women in Nepal. Second, female family members are more likely to stay at home throughout the day and so are more available to care for the same-gender parent (Niraula & Morgan, 1996). Third, because of gender norms that associate men with strength and independence, men may be more sensitive to social desirability bias and fear that reporting having received care will signify weakness. Similarly, family members may hesitate to report that male household members have received care in order to avoid insulting them or dishonoring their position.

Column 2 presents a model of the impact of having a market within a 5-minute walk of one's neighborhood on the likelihood of having received care. We find that living near a market doubles the odds of receiving assistance among the population, compared to not living near a market. Again, we find that the likelihood of receiving care increases as reporting health status worsens and that women are more likely to have received care than men.

(Table 3, About Here)

Differential effects of social context on care giving by gender

In Table 4 we run similar models to those presented in Table 3, but here we estimate separate samples for elderly women and men. In Model 1 we show the relationship between proximity to a health service and the likelihood of receiving care for elderly women. The effect of having a health service within a 5-minute walk is not statistically significant. In Model 2 we see that having a market within a 5-minute walk is related to a higher likelihood of receiving care. This coefficient is similar in magnitude to that shown in Table 3—proximity to a market essentially doubles the odds of elderly women receiving care.

There is one point regarding the controls that is important to make here. The measure of number of daughters born to those women was positively and statistically significantly related to the likelihood of receiving care. That is, elderly women who had more daughters were more likely to receive care. This finding further supports our theories about the consequences of the strict gender barriers common in Nepal. Because only other women may care for elderly women, those women who had more daughters are more likely to be getting care. Having many daughters is especially important because daughters typically leave their natal homes to live with their husband and his family. If an elderly woman had more daughters, she has a higher probability that at least one of them has married into a family living nearby, increasing the daughter's opportunities to provide care for her non-residential mother.

Models 3 and 4 show the results for elderly men only. Here we see markedly different results regarding both community characteristics and childbearing experiences. Elderly men who lived near a health service had an odds of receiving care over 4 times that of men living farther than 5 minutes from a health service. Similarly, men living near a market had an odds of receiving care almost 2.5 times that of men living farther away.

Surprisingly, self reported health status was not related to men's actual receipt of care. Also, contrary to what we found for women the number of same gender children was not related to receiving care. Both of these findings may be because the factors motivating care for elderly men are different from those motivating care for elderly women. If women care for the elderly more for altruistic reasons than individual characteristics such as the elderly women's health and the need for that one person to give care (i.e. if she has many sisters) may be the important factors determining whether the elderly person receives care. On the other hand, men may be more motivated by expectations of inheritance or some other form of reciprocal giving. In this case, access to the elderly men may be a more important predictor of receiving care. Elderly men living in high traffic areas or in areas where many young men are still living and working may be more likely to get care for these reasons.

(Table 4, About Here)

Discussion

The rapid and dramatic social change that has swept through Nepal, and in many other countries, over the past 50 years has brought about many changes in the family. Historical systems of care, living arrangements, and familial responsibilities that once centered around or within the family network are changing to look more like Western, individualistic systems. By exploring care for the elderly in a setting currently experiencing such dramatic social and economic change we learn new information about the relationship between social context and care for the elderly. By including both men and women in our analyses we are able to understand the role of gender in this relationship.

The results presented here are preliminary. However, our findings thus far fail to support the widespread concern that social and economic changes are threatening the well-being of the

elderly in Nepal. On the contrary, we find that proximity to markets and health services may help to improve the well-being of the elderly. When we analyzed men and women together we found that living close to markets and health services was associated with a higher likelihood of receiving care.

Gender norms appear to play an important role in the relationship between community context and care giving. When we analyzed women alone we found that only the proximity to markets increased the likelihood of receiving care. In comparison, men who live near a health service and those who live near a market have much higher odds of receiving care than men who live further away. At this time we cannot determine whether the gender differences we find are related to differences in motivation for care giving or the ability of care givers. For example, we cannot say whether men who live close to markets are more likely to receive care than men who live farther away because their sons are more motivated by potential future inheritances or because there are simply more men available to provide assistance. In the future we plan to analyze data on the attitudes of elderly parents and their children. We also hope to learn more about the barriers to care giving by analyzing information on the identity of the care givers and information about the children of the elderly.

Overall, our results were positive in that living close to a health service or market increases the likelihood of an elderly person receiving care. However, many of the elderly individuals in our sample reported their health as poor but were not receiving assistance. Also, many reported difficulty with daily activities such as eating, bathing, or getting out of bed but were not receiving assistance. We plan to devote more attention to this sub-group in future research, as a different set of factors may influence who receives care among those who have the greatest needs.

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Table 1. Descriptive Statistics

<i>Variable</i>	<i>Full Sample</i>					<i>Interviewed in 1996 and 2007 (N=1394)</i>			
	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
<i>Dependent Variable</i>									
<i>Gets care</i>	2155	0.07		0	1	0.06		0	1
<i>Community Characteristics</i>									
<i>Health service within 5-minute walk</i>	1496	0.27		0	1	0.27		0	1
<i>Market within 5-minute walk</i>	1496	0.46		0	1	0.46		0	1
<i>Female</i>	2030	0.51		0	1	0.53		0	1
<i>Control variables</i>									
<i>Health status (1=excellent, 4=poor)</i>	2154	2.90	0.86	1	4	2.87	0.85	1	4
<i>Age cohort</i>									
<i>45 to 54 years</i>	2155	0.42		0	1	0.51		0	1
<i>55 to 64 years</i>	2155	0.31		0	1	0.37		0	1
<i>65 to 74 years</i>	2155	0.17		0	1	0.12		0	1
<i>75 and over</i>	2155	0.10		0	1	0.00		0	1
<i>Childrearing experiences</i>									
<i>Number of daughters ever born</i>	1414	2.48	1.75	0	9	2.47	1.74	0	9
<i>Number of sons ever born</i>	1414	2.42	1.50	0	9	2.42	1.50	0	9
<i>Ethnic group</i>									
<i>Higher Caste Hindu</i>	2030	0.47		0	1	0.47		0	1
<i>Hill Tibeto Burmese</i>	2030	0.19		0	1	0.17		0	1
<i>Lower Caste Hindu</i>	2030	0.10		0	1	0.11		0	1
<i>Newar</i>	2030	0.07		0	1	0.07		0	1
<i>Terai Tibeto Burmese</i>	2030	0.16		0	1	0.18		0	1
<i>Other caste</i>	2030	0.00		0	1	0.01		0	1
<i>Wealth</i>									
<i>Owns land</i>	1916	0.91		0	1	0.92		0	1
<i>Number of livestock</i>	1916	4.45	3.88	0	28	4.61	3.90	0	28
<i>Number of durables</i>	1916	2.30	1.58	0	8	2.30	1.57	0	8
<i>Number of stories in house</i>	1913	1.55	0.55	1	4	1.58	0.54	1	4

Table 2. Percent of elderly receiving care

Variable	% receiving care
Health status	
Excellent	2.55
Good	8.13
Fair	5.11
Poor	15.97
Gender	
Men	4.45
Women	9.51

N=2154

Table 3. Logistic regression estimates of the influence of elderly individuals' proximity to non-family institutions on the odds of receiving physical care

	Model 1	Model 2
<i>Community characteristics</i>		
Health service within 5-minute walk	1.87*	
Market within 5-minute walk		2.00**
<i>Control variables</i>		
Health status (1=excellent, 4=poor)	1.93***	1.87***
Age cohort ^a		
55 to 64 years	0.74	0.72
65 to 74 years	0.96	1
75 and over	----	----
Female	1.71*	1.74*
Ethnicity ^b		
Hill Tibeto Burmese	1.04	1.14
Lower Caste Hindu	1.26	1.21
Newar	0.60	0.70
Terai Tibeto Burmese	0.83	0.71
Other caste	3.19	3.56
Childbearing experience		
Number of daughters ever born	1.14	1.14
Number of sons ever born	1.01	1.02
Wealth		
Owens land	1.10	1.23
Number of livestock	1.01	1.00
Number of durables	0.94	0.93
Number of stories in house	0.75	0.72
Chi-square	36.41**	40.09***
N	1393	1393

*p<.05, **p<.01, ***p<.001

^aExcluded group is ages 45-54; ^bExcluded group is Upper Caste Hindu

Table 4. Logistic regression estimates of the influence of elderly individuals' proximity to non-family institutions on the odds of receiving physical care, by gender

	Women		Men	
	Model 1	Model 2	Model 3	Model 4
<i>Community characteristics</i>				
Health service within 5-minute walk	1.22		4.25**	
Market within 5-minute walk		1.88*		2.42*
<i>Control variables</i>				
Health status (1=excellent, 4=poor)	2.62***	2.59***	1.29	1.22
Age cohort ^a				
55 to 64 years	0.80	0.81	0.63	0.55
65 to 74 years	0.68	0.73	1.42	1.33
75 and over	----	----	----	----
Ethnicity ^b				
Hill Tibeto Burmese	1.02	1.08	0.94	1.23
Lower Caste Hindu	1.10	1.02	1.72	1.76
Newar	0.75	0.73	0.39	0.61
Terai Tibeto Burmese	0.70	0.63	1.06	0.78
Other caste	7.88	9.22	----	----
Childbearing experience				
Number of daughters ever born	1.24*	1.25*	0.98	0.98
Number of sons ever born	0.98	0.99	1.07	1.07
Wealth				
Owns land	0.95	1.04	1.39	1.42
Number of livestock	0.99	0.99	1.06	1.03
Number of durables	0.91	0.89	0.99	0.99
Number of stories in house	0.79	0.76	0.67	0.63
Chi-square	30.04*	34.07**	17.33	11.26
N	734	734	655	655

*p<.05, **p<.01, ***p<.001

^aExcluded group is ages 45-54; ^bExcluded group is Upper Caste Hindu