

Does Educational Superiority Autonomize Daughters-in-Law Who Live With Their Mothers-in-Law in India? A Test of Caldwell's Thesis

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Abstract

Caldwell hypothesized that: 1) Indian daughters-in-law have less autonomy if they live with their mothers-in-law; but 2) even then, they can gain situational advantage over her if they are educationally superior to her. We tested these two hypotheses with data from the National Family Health Survey II (1998–1999) in the Republic of India. We measured women's autonomy along three dimensions: a wife's freedom to 1) go to market without permission, 2) set aside money for her own usage, and 3) have voice in the decision to obtain health care for herself. The first hypothesis was supported on all three dimensions. The second hypothesis was rejected on the first dimension of women's autonomy but supported on the other two dimensions. The contextual effects of region, religion, urbanism, employment for cash, and level of a woman's education are discussed, along with the implications for public policy and future research.

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Does Educational Superiority Autonomize Daughters-in-Law Who Live With Their Mothers-in-Law in India? A Test of Caldwell's Thesis

BACKGROUND

Within the past twenty years, studies on the social causes of declining fertility in Lesser Developed Countries have centered on the increasing autonomy of women. Following Jejeebhoy and Sathar (2001), we define women's autonomy as their freedom from control by men on three significant dimensions of social behavior: women's freedom to 1) make decisions about their own health care; 2) set aside money for their own discretionary spending; and 3) travel outside the home without a chaperone. All women in India experience the presence or absence of these types of autonomy in their daily lives. However, familial, educational, and religious institutions regulate the degree to which individual women are autonomous (Smith 1989).

The patriarchal, patrilocal family is the type of family institution that creates the greatest restraints on women's freedom from control by other adults in the household. The Indian bride enters a patriarchal family through an arranged marriage. Upon moving into the groom's household, she becomes obedient to him and his parents. Her mother-in-law curbs and monitors her access to material resources and external contacts. Consequently, co-residence with in-laws is associated with lower scores on measures of young wives' autonomy (Balk 1997; Jejeebhoy and Sathar 2001). Furthermore, due to the greater strength of the filial over the conjugal bond, young wives spend little private time with their husbands.

The birth of the first child, especially if it is a son, raises the status of the young wife. Her status climbs as she bears more children and goes even higher when she gains a daughter-in-law (Yanagisako and Collier 1987; Das Gupta 1996). As a mother-in-law, she will derive power from her social proximity to senior men and then will consolidate and perpetuate that patriarchal power over junior wives in the household.

The rules governing the arrangement of marriages create diversity in married women's access to intra-household power (Jejeebhoy and Sathar 2001). In North India, the bride and groom must not be related by blood and preferably must come from different villages. When the bride moves to her husband's village, her subsequent contacts with her natal village become infrequent. Her isolation from her family of origin strips her of social power within her family of marriage, but she regains it by the birth of sons (Basu 1992; Jejeebhoy and Sathar 2001; World Bank 1996).

In South India, cross-cousin marriage (the bride weds a son of her mother's brother) is the ideal. It often means that the bride and the groom come from the same village and that the bride's mother-in-law is her own aunt. As such, the young wife is not cut off from her natal kin nor sees her mother-in-law as a stranger. In this context, one might expect that the young wife would be more quickly trusted and granted autonomy in many ways. For instance, studies have found that the presence of members of the natal family within the marital household is associated with lower rates of domestic violence (Rao 1997; Koenig et al. 2003). The North/South regions of India define cultural boundaries within which women have, respectively, relatively less and more freedom from men (Dyson and Moore 1983).

Within both exogamous and endogamous marriages in India, one might expect diversity in a young wife's autonomy according to her educational attainment (Caldwell 1978; Das Gupta 1996; Basu 1992). Mass schooling, defined as having most school-aged children in class at least some of the time, changes the cultural superstructure by lessening "the hold of the patriarch," preparing the child to work in an extra-familial economy, teaching nationalism, and inculcating the values of the Western middle class (Caldwell 1980:235). Girls and boys who learn to read from Western-published primers are exposed to stories about nuclear families in which parents arrange love matches already underway, and husbands feel closer to their wives than to their mothers (Caldwell 1980:240). Coming to question traditional authority, the child begins to see itself as part of a larger world outside the patriarchal home. Caldwell (1979:412) concludes: "a woman with schooling is more likely to challenge her mother-in-law, and the mother-in-law is less likely to fight the challenge." He posits that more-educated daughters-in-law can often successfully bargain with less-educated mothers-in-law for a larger slice of the family budget to spend on food, medicine, and doctor's fees for their children. In short, Caldwell (1979:410) claims that a young mother's education not only enhances her knowledge of nutrition, food safety, and preventive and curative remedies, but also tips the "traditional balance of familial relationships" to be more favorable to her.

In addition, religion may affect the speed with which education erodes the authority of seniors over juniors in the patriarchal family. One reason is that schooling in India often takes place in parochial institutions. Beyond that, "Christianity speaks more to the individual and less to the family than any other major religion" (Caldwell 1980:235). According to Caldwell (1980:245–246), Hinduism holds the patriarchal family to be a primary unit of society, and Islam "addresses itself chiefly to the patriarch. . . ." These relationships imply that Christian Indian women exercise more autonomy within their families than Hindu or Muslim women do.

THE EVIDENCE

Community-level Analysis

If institutions limit individual women's autonomy from men, then what is the appropriate aggregate unit of observation that allows institutional influences to enter the analysis? Smith (1989) advocated a quasi-experimental design: the aggregate units should be homogeneous with regard to all factors related to the dependent variable of interest, except for the test variable. In this way, any significant variation in the dependent variable can be attributed to the influence of the test variable.

Accordingly, Dharmalingam and Morgan (1996) investigated data collected in 1993 from two South Indian villages (in the State of Tamil Nadu) for which Hindus are the religious majority and the Najars, the caste majority. In both villages, marriages are so endogamous to the patriarchal family that "kin by blood and kin by marriage are very similar and equal" and most brides remain within the village or move to one nearby (Dharmalingam and Morgan 1996:188). In Village I, 80% of the women roll *beedis* (cigarettes) for pay and must pick up the raw materials in the morning and deliver the finished product in the same evening unaccompanied by

male relatives (lest they argue with the contractor when he rejects some cigarettes that are improperly rolled). Only the women can pick up their weekly pay, which most keep and spend at their own discretion on household needs. In Village II, the majority of wives (52%) work at home on household maintenance tasks for which they are not paid. As hypothesized, the majority of wives in Village I have a say in how their earnings are spent and in how the overall household income is spent, affirm that they could support themselves and other dependents without a husband (these three items are measures of economic autonomy), say that they ever talk to their husbands about finances and the number of children to have (these two items are measures of interspousal communication), and report that it is acceptable for them to go alone to the local market, other homes in the same village, the next village, or the cinema (these four items are measures of freedom of movement). A significantly smaller percentage of wives from Village II respond in these ways to all these items. The authors conclude that beedi work has given women from Village I access to and control over cash that is unavailable to women in Village II and thus has enabled the former to gain greater autonomy on three dimensions of women's status despite their lower level of educational attainment. As indirectly acknowledged by Dharmalingam and Morgan (1996:201), their comparison of these two villages prevents them from generalizing their findings to other villages in India where marriages are not endogamous or where Hindus are not the numerical majority.

Several newer publications on women's autonomy extend Dharmalingam and Morgan's (1996) experimental design to include more than one pair of communities in more than one nation. To this end, Morgan et al. (2002) study women respondents from fourteen pairs of communities (four from India, six from Malaysia, and two each from Thailand and the Philippines). In one community for each pair, Muslims constitute the religious majority; for the other community, they are the religious minority. To the extent possible, the paired communities are geographically close and ecologically and economically similar. The three dimensions of women's autonomy are: 1) freedom to move around unescorted between households and from home to public places and to extralocal places without getting permission; 2) degree of voice in generating or spending income for the household; and 3) freedom from intimidation by the husband psychologically (scolding) or physically (beating). For the fourteen pairs of communities, Muslim women have a lower autonomy score than do non-Muslim women in: nine pairs of the contrasts for the first dimension; four pairs of the contrasts for the second dimension; and six pairs of the contrasts for the third dimension.

There are several implications. First, the freedom of physical movement outside the home seems to be the hardest human right for Muslim women to seize. Family honor may be at stake. Second, Islam does not universally minimize the status of Muslim women relative to men. Rather, the status of Muslim women appears to vary with the structural organization of the family. For example, in Western Sumatra of Indonesia, matrilineal residence with matrilineal inheritance is typical. Congruently with this fact, Sumatran brides often bring more assets in the form of rice-paddy ownership to their marriages than do their grooms (Quisumbing and Maluccio 2003). Indeed, a national survey of Indonesia found that 14% of wives who had borne children within the past five years owned 51–74% of their household's assets (valued in *rupiahs*), as compared to 9% of their husbands. Wives who were relatively economically more powerful than their husbands had a greater chance of deploying some of their assets toward prenatal care. They were more likely to use prenatal care services in the first trimester and to

have the birth assisted by a trained midwife in their home or by a private doctor in a clinic (Beegle et al. 2001).

In contrast to the matrilineal, matrilocal Muslim family system prevailing in Sumatra, the Muslim family system in Egypt is typically patrilineal and patrilocal. According to Yount (2004), that makes Egyptian women relatively less autonomous than Sumatran women. In Yount's study of ever-married women in the Minya governate, she examines the relationship between the structure of the women's extended-family household and the search for health care for their children. Yount finds that when a mother lives in a household where her husband's parents or his brothers live, her daughter will have worse chances than her son of getting private medical care (which is more expensive than public care). Thus, in this type of household, mothers-in-law and brothers-in-law may wield patriarchy-based authority that protects the survival of its junior males over its junior females.

Morgan and colleagues' work is complemented by Jejeebhoy and Sathar (2001), who use other data from the same 1993–1994 Survey on the Status of Women and Fertility in South and Southeast Asia (SWAF). Jejeebhoy and Sathar bring in the SWAF communities from Pakistan that Morgan et al. discarded due to the lack of Pakistani communities where Muslims are the demographic minority group. The comparison groups for Jejeebhoy and Sathar are the pairs of communities from North India (the State of Uttar Pradesh) and South India (the State of Tamil Nadu) studied by Morgan and associates. The essential question for Jejeebhoy and Sathar is: Does religion or region better capture the supra-individual effect on dimensions of women's autonomy in the Indian subcontinent? They find, *inter alia*, that the vast majority of all wives in the three areas co-reside with their mothers-in-law immediately after marriage, but that at the interview date, the prevalence rate of this type of co-residence is highly similar in Pakistan and Uttar Pradesh and much higher than in Tamil Nadu (where only about one-third of the Muslim women and one-fourth of the Hindu women still had this living arrangement). On all four dimensions of women's autonomy—1) freedom of movement outside the household, 2) freedom in economic decision making, 3) access to and control over resources, and 4) freedom from psychological or physical intimidation by the husband—Jejeebhoy and Sathar find that Muslim and Hindu women from Tamil Nadu are far more autonomous than those from Pakistan or Uttar Pradesh.

This finding supports several important conclusions. Jejeebhoy and Sathar decide that regionalism is a much more important context than religion in structuring women's domestic power/autonomy in South Asia. The maintenance of a patriarchal, patrilocal family structure, as symbolized by a co-residence with their mothers-in-law versus an independent residence (most characteristic of Tamil Nadu), is integral to younger wives' autonomy in South Asia. Finally and consistently with the report by Morgan et al. (2002), the freedom of physical movement outside the household is the one dimension on which Muslim women show the greatest contrast (less autonomy) vis-à-vis Hindu women in South Asia, even in Tamil Nadu.

The secular rise in women's educational attainment in India is leading not only to a larger prevalence of educated daughters-in-law but increasingly also to a greater presence of dyads of similarly better-educated mothers- and daughters-in-law. Among these dyads, the benefits of schooling can possibly raise the autonomy of both generations of wives and compound the health

payoffs to themselves and their children. Caldwell's studies alone (1978, 1979, 1980, 1986) and with others (Caldwell et al. 1985) necessarily focused on the first generation of educated Indian wives and thus could not distinguish the consequences for young wives' domestic autonomy from the *level* of their higher education versus its *distance* above the amount of schooling attained by their mothers-in-law. The purpose of the present study is to examine these two possible effects of women's schooling on their autonomy.

Such an examination must not confound the effects of education with those of region. However, the source of a regional influence is unclear. Jejeebhoy and Sathar (2001) point out that women in South India are less secluded than women in North India or Pakistan and are freer to go outside the home to attend school and work and thus have greater access to and control over resources. The relatively greater power of women in South India relative to other regions in the subcontinent is rooted in marriage within the kin network and often within the same village (Jejeebhoy and Sathar 2001:690).

Since consanguineous marriages are common among both Hindu and Muslim families, the possibly unique influence of religion on Indian wives' autonomy must be considered. Using data from Punjab Province in Pakistan, the State of Uttar Pradesh in North India, and the State of Tamil Nadu in South India, Jejeebhoy and Sathar (2001) found that a 59% majority of Hindu wives in Uttar Pradesh were living with their mothers-in-law; this share almost matched the 57% of Muslim wives who were doing so in Punjab. However, only a minority of Muslim (32%) and Hindu (25%) wives in Tamil Nadu were living with their mothers-in-law. Co-residence with mothers-in-law was significantly and negatively correlated with a composite measure of women's autonomy in Punjab and Uttar Pradesh but not in Tamil Nadu. Jejeebhoy and Sathar (2001:687) concluded that family structures conferring different degrees of autonomy to women vary importantly between North and South India and that once regionalism has been considered, "Muslim women exert about the same autonomy as Hindu women, wherever they reside."

In the current study, we compare three dimensions of wives' personal autonomy according to whether they live with their mothers-in-law. For daughters-in-law who live with mothers-in-law, we examine the possibly separate effects on personal autonomy of the younger wives' level of education and its similarity/dissimilarity to the educational attainment of the mothers-in-law. In addition, we control the possibly separate effects of the wives' religion and region of residence. To these ends, we include a larger number of states in India than were studied by Jejeebhoy and Sathar. Our two study questions are:

1. *Ceteris paribus*, do daughters-in-law have less autonomy if they live with their mothers-in-law?
2. *Ceteris paribus*, when a daughter-in-law lives with her mother-in-law, does the younger wife's autonomy increase with the level of her education *and* with its excess over that of her mother-in-law? In other words, we want to know whether co-resident daughters-in-law are autonomized just because they are educationally superior to the household's matriarch, or how much education does it take?

METHODS

Data

The data are from the second National Family Health Survey (NFHS II), conducted in India in 1998–1999. All ever-married women aged 13–49 belonging to a sampled household were interviewed. In the tables below, the data have been weighted to reflect the clustered nature of the random sampling. We used the weight supplied for each respondent in the NFHS II codebook.

Some scholars (e.g., Caldwell 1986) claim that the regional variation in women’s autonomy between North and South India stands proxy for the variation in the strength of the influences of the Muslim versus the Hindu faith upon family systems (the former religion granting less autonomy to women and being stronger in the North than in the South). Other scholars argue that region is more important than religion as a determinant of women’s autonomy (see Dyson and Moore 1983; Jejeebhoy and Sathar 2001). To examine both sides of this debate, we focus on respondents in eight states or provinces and include the Northeast region, which is usually ignored in studies of Indian women’s autonomy. Three areas are in the North: Himachal Pradesh, where Hindus comprise 92% of the population; Jammu, a Hindu-majority province within the Muslim-majority State of Jammu & Kashmir; and Uttar Pradesh, a Hindu-majority state where Muslims are a large minority (about 15%) (See Table 1). Three states—Meghalaya, Mizoram, and Nagaland—are in the Northeast, where Christians are the majority. Finally, two states are selected from the South: Tamil Nadu, where Hindus are a solid 88% majority; and Kerala, where Hindus are a slim 53% majority. Limiting the study to these eight states reduces computational burden while taking the variations created by region, religion, and religious majority/minority contexts into account.

Table 1. States of India in Study by Regional Location and Religious Composition

States	Region	Percent of Population Who Are:		
		Hindu	Muslim	Other Religion
Himachal Pradesh	North	92.47	3.71	3.82
Jammu & Kashmir	North	43.63	53.77	2.60
Uttar Pradesh	North	84.43	14.63	0.95
Meghalaya	Northeast	11.33	4.30	84.38
Mizoram	Northeast	2.60	0.33	97.07
Nagaland	Northeast	11.37	6.85	81.78
Kerala	South	52.69	28.73	18.58
Tamil Nadu	South	88.08	6.19	5.73

Note: “Other Religion” includes mostly Christians but also some Sikhs, Jains, Buddhists/Neo-Buddhists, et al.

We used the interviewer-constructed household roster that identified the household head and the relationship of all other residents to him/her. The joint presence of a mother-in-law and her daughter-in-law in the same household could be determined only when the woman respondent

was: 1) head of the household (N = 1,525); 2) wife of the head (N = 14,853); or 3) daughter-in-law of the head (N = 5,127). For this analysis, we included all “eligible” women in the household. We therefore had more than one woman from some households. Of the 21,505 Study Women (N varies slightly below this total in the tables below due to missing data), 68% have no mothers-in-law present in their households (but they may be the mothers-in-law who are living with their daughters-in-law); and 32% are daughters-in-law living in a household with their mothers-in-law (Table 2).

Dependent variables	N	Percent
Allowed to set aside money	13757	61.80
Does not need permission to go to the market	8232	38.10
Health care decision making		
<i>Self</i>	7110	35.10
<i>Others</i>	8579	45.70
<i>Jointly with others</i>	5815	19.10
Independent variables		
Co-reside with mother-in-law	6443	32.00
Education		
<i>Illiterate</i>	10748	49.98
<i>Literate, primary incomplete</i>	1277	5.94
<i>Primary complete</i>	3178	14.78
<i>Middle school complete</i>	2442	11.36
<i>High school complete</i>	2050	9.53
<i>Higher secondary and higher</i>	1808	8.41
Control variables		
Mean Age		32.1
Mean Asset ownership		1.6
Mean Number of sons		1.5
Mean Number of daughters		1.4
Religion		
<i>Hindu</i>		78.82
<i>Muslim</i>		15.60
<i>Other</i>		5.58
Urban residence	6354	24.40
Region		
<i>North</i>	12672	61.00
<i>South</i>	6358	37.50
<i>Northeast</i>	2475	1.50
Employment		
<i>Unemployed</i>	13939	66.30
<i>Employed, no cash</i>	2911	11.90
<i>Employed for cash</i>	4639	21.80

Three Dependent Variables

We capture a range in women's autonomous behaviors by using three dimensions of autonomy. The easiest (most prevalent) freedom is seen in a woman's ability to set aside money for her own usage (about 62% of Study Women affirm they do; Table 2). The hardest (least prevalent) freedom is the ability to go to the marketplace without permission (only 38% can). In between these two extremes lies the power to decide whether she can obtain health care.

The NFHS II asked respondents: "Who makes the decision for obtaining health care for yourself?" We scored the responses: 1) respondent alone; 2) respondent jointly with any others; 3) others, not respondent. This trichotomy is instructive because it shows that a slim—54.2%—majority of Study Women make this decision either alone (35.1%) or in consultation with others (19.1%) (Table 2). For a near majority of 45.7% of women, others make this decision made for them.

Two Test Variables

One test variable is whether the Study Woman lives with her mother-in-law (1 = yes; 0 = no). Since only about one-third do so (Table 2), it is infeasible to use many categories to contrast the educations of these two women if they co-reside. Hence, we trichotomize the latter variable as: 1) daughter-in-law has no more education than her mother-in-law, regardless of the level of education; or daughter-in-law has more education than her mother-in-law and it is 2) less than middle-school or 3) middle-school or higher.

Control Variables

A daughter-in-law living with her mother-in-law is more likely to be educationally above her if the household is in an urban area, for there are more educational opportunities for young people in urban than rural India. Thus, we control whether the household is located in an urban place (1 = yes; 0 = no). Only about one-quarter of the Study Women are urbanites (Table 2).

It is important to take the stage of the life course into account, because an increase in age and in number of children (especially sons) improves the social power of Indian women within their households. Study Women are an average of 32 years old and have an average of 1.5 sons (Table 2). The total average number of children of either sex (2.9 per Study Woman) is almost equal to the Total Fertility Rate of India in 2004 (3.1 children/woman; see Population Reference Bureau 2004).

The socioeconomic status of the household can determine how much space can be provided to enable sons to bring brides into the home. Household wealth is measured by the Asset Ownership Index (AOI), a ratio scale (0–6) summing the number of luxury items owned by the household: radio, television, refrigerator, bicycle, motorcycle, and car. The average AOI is a modest 1.6.

Because it tends to be poverty-driven, female employment does not absolutely guarantee female autonomy (Mason 1985). Yet, perhaps women who work for remuneration in a cash or a barter

economy can claim control over part of their earnings (Dharmalingam and Morgan 1996). Only about 22% of the Study Women work for cash, while about 12% work for non-cash remuneration (Table 2).

Finally, religion shapes the social structure of the South Asian family, with the greatest family power being vested in senior males (patriarchs), who are Muslims, Hindus, and Christians, in that order. The study sample is composed of 78.82% Hindus, 15.60% Muslims, and 5.58% members of other religions (Table 2). The percentages of Muslims and other non-Hindus are overrepresented in this study sample relative to their national share due to our choice of states and provinces within India that reflect heavy concentrations of non-Hindu people. However, to avoid empty cells in the categorical analyses presented below, we have collapsed the religion variable into a Hindu/non-Hindu dichotomy.

Statistical Method

Given the polytomous nature of the three dependent variables, we performed logistic regressions by means of the STATA software package (Version 8.2). The “svymlogit” command was used to compute the trinomial logistic regression when the health-seeking dimension of autonomy was the dependent variable; the “svylogit” command was used for the binomial logistic regressions for the other two dimensions of autonomy.

RESULTS

Question 1: Ceteris paribus, do daughters-in-law have less autonomy if they live with their mothers-in-law?

As previously stated, of the three dimensions of women’s autonomy studied here, the freedom to set aside money for one’s own discretionary usage is the easiest for a woman to report in India. Study Women from the South are 1.7 times as likely as those from the North to be able to set aside discretionary, personal money (column 2, Table 3). Regardless of region, urban women are 1.5 times as likely as rural women to exercise this right (Table 3), perhaps because urbanites have greater access to a cash-based economy.

Consistently with the findings from Tamil Nadu by Dharmalingam and Morgan (1996), women who are employed for cash are almost twice as likely as women who are not employed to set aside money for themselves. Evidently, a cash-paying job and an urban residence each play a role in structuring women’s control over financial resources. When all these variables are held constant in a multivariate logistic regression, a woman who lives in the same household as her mother-in-law is only about two-thirds as likely as other women to have her own spending money (Odds Ratio [OR] = 0.637, $p < .001$). This outcome answers Question 1 affirmatively.

The freedom to go shopping without permission is the least prevalent form of autonomy for women to exercise in India. Women from the South are over nine times as likely as women from the North to exercise this right, and women from the Northeast are over three times as likely (column 1, Table 3). Perhaps because urban women may not need to take as much time for

Table 3: Odds Ratios from Three Logistic Regressions of Female Autonomy on Their Co-residence with Their Mothers-in-Law, Plus Control Variables

	Does not need permission to go to the market (ref: not allowed/ needs permission)	Allowed to set aside money for later use (ref: not allowed)	Decision to seek health care (ref: self-decision)	
			Husband/ others decide	Jointly decide with others
Co-residence with mother-in-law (ref: No)	0.484 ***	0.637 ***	1.506 ***	1.689 ***
Education (ref: illiterate)				
<i>Literate, primary incomplete</i>	0.830	1.256 ***	0.845	1.180
<i>Primary complete</i>	1.032	1.402 ***	0.790 ***	1.084
<i>Middle school complete</i>	1.256 **	1.453 ***	0.775 ***	1.026
<i>High school complete</i>	0.951	1.791 ***	0.556 ***	0.842
<i>Higher secondary complete</i>	1.448 ***	2.686 ***	0.543 ***	0.796 *
Age	1.027 ***	1.013 ***	0.957 ***	0.966 ***
Employment (ref: unemployed)				
<i>Employed, no cash</i>	1.329 ***	1.379 ***	0.708 ***	0.666 ***
<i>Employed, cash</i>	1.765 ***	1.942 ***	0.738 ***	0.710 ***
Religion (ref: non-Hindu)				
<i>Hindu</i>	1.852 ***	1.055	1.210 ***	1.132
Area of residence (ref: rural)				
<i>Urban</i>	1.946 ***	1.509 ***	0.853	0.907
Region (ref: north)				
<i>South</i>	9.116 ***	1.712 ***	0.465 ***	0.440 ***
<i>Northeast</i>	3.162 ***	0.864	1.215	6.104 ***
Asset ownership	1.004	1.196 ***	1.113 ***	1.142 ***
Number of sons	0.981	0.953 ***	0.983	0.920 ***
Number of daughters	1.053 ***	0.983	0.968	0.927 **
N	21483	21412		21486
F statistic	89.59	44.69		41.67
Prob > F	0.0000	0.0000		0.0000
Degrees of Freedom	16	16		32

*** P ≤ .001; ** p ≤ .01; * p ≤ .05

travel or to go as far as rural women to get to the market, urban women are almost twice as likely as their rural counterparts to go marketing without needing permission (OR = 1.946, $p < .001$; Table 3). Moreover, employment for cash or non-cash-equivalent pay is associated with much higher odds of autonomy on this dimension (respective ORs = 1.765 and 1.329, p 's $< .001$), maybe because the very nature of being employed requires a woman to have freedom of movement outside her home. However, women who live with their mothers-in-law have slightly less than half the chance as other women of going to market without obtaining permission (OR = .484, $p < .001$). This finding says "yes" to Question 1.

Participation in the decision to seek health care for oneself is reported by a slim majority of 54% of the Study Women. We trichotomize the answer to reflect one's decreasing voice: 1) the Study Woman decides alone (the reference category); 2) the Study Woman decides together with her husband or someone else; 3) the Study Woman has no voice. From the multinomial logistic regression (last two columns, Table 3), it is apparent that women in the South are only 0.465 times as likely as those from the North to have this decision made by someone else rather than to decide it by themselves and only 0.44 times as likely as those from the North to participate in making this decision with someone else rather than to make it alone. As such, Southern women have the greatest health-seeking autonomy of all women from the three regions studied here. Study Women from the Northeast have the second most autonomous score; they do not differ from their Northern female peers in the odds of having someone else make the decision for them (OR = 1.215, not statistically significant), yet they are more than six times as likely as women from the North to have participatory decision-making power (OR = 6.104, $p < .001$). But regardless of region, employment for cash or other goods significantly reduces the odds that a woman will have this decision made for her or will share the decision-making power with someone else rather than to decide alone (Odds Ratios in columns 3 and 4 for rows 8 and 9, Table 3, are much below unity). Congruently with Caldwell's (1980) thesis, educated women have lower odds than illiterate women that someone else will make this decision for them, rather than the decision being theirs alone. In summary, the possession of socioeconomic resources enhances a woman's autonomous health-seeking behavior; but it is also shaped by region of residence.

Ceteris paribus, women living with their mothers-in-law are 1.5 times as likely as other women to have the health-seeking decision made for them rather than to make it solely by themselves (the least autonomous response) and almost 1.7 times as likely as other women to decide the matter jointly with others (the most democratic response from the standpoint of the household; see row 1, columns 3 and 4, Table 3). Religion is a factor shaping this complexity: Hindu women are much more likely than other women to have the health-seeking decision made for them rather than to make it alone (OR = 1.21, $p < .001$). Contrary to Jejeebhoy and Sathar, both region and religion appear to create social contexts within which women experience autonomy, at least in the decision to purchase health care. The findings for this dimension of women's autonomy offer a qualified "yes" as the answer to Question 1.

Question 2: Ceteris paribus, when a daughter-in-law lives with her mother-in-law, does the younger wife's autonomy increase with the level of her education and with its excess over that of her mother-in-law?

We recomputed Table 3 by limiting it to the daughters-in-law living with their mothers-in-law and by changing the education variable so as to control simultaneously the absolute level of the younger woman's education and its relationship to the educational level of her mother-in-law (Table 4). Region emerges as the strongest predictor of women's freedom to go to the market without permission (column 1, Table 4). For example, women from the South are almost twelve times as likely (OR = 11.616) and women from the Northeast are almost seven times as likely (OR = 6.553) as women from the North to be free to leave the household for the market without obtaining approval for this errand. However, even when region of residence is controlled, Hindu women display greater odds than other women to have this freedom of movement outside the home (OR = 1.789), perhaps because Muslim women in purdah predominate among the non-Hindu Study Women. After controls for both region and religion, women who have more education than their co-resident mothers-in-law are not more likely to be autonomous in this way than are women who are not more educated than she. The results on this dimension of autonomy result in a negative reply to Question 2.

The answer to Question 2 changes to an affirmative reply when women's freedom to set aside money for their own later usage—the easiest form of autonomy to achieve—is considered. *Ceteris paribus*, among daughters-in-law who live with their mothers-in-law, the younger woman who is educationally superior to the older woman has greater odds than other such younger women to have their own money; and their odds of exercising this form of autonomy are greater if they have middle-school or higher education than if they have less than a middle-school education (ORs = 1.667 and 1.232, respectively; Table 4). Perhaps a daughter-in-law who is educationally superior to her mother-in-law is perceived to be capable of counting rupees and of avoiding shortchanges. The results show that educational superiority to a mother-in-law can empower a daughter-in-law, as Caldwell (1980) claimed; but we extend his work by demonstrating that the level of education attained by the educationally superior daughter-in-law matters, too.

On the third dimension of autonomy—the ability to decide if one can seek medical care—a woman living in the household with her mother-in-law has a much higher chance of participating in the decision to seek health care for herself (rather than to decide unilaterally) if she has more education than her husband's mother. This relationship holds true regardless of whether the educationally superior daughter-in-law has less than a middle-school education (OR = 1.379) or at least a middle-school education (OR = 1.322) (row 1 and 2, column 4 of Table 4). As Caldwell (1980:229) stated: "Educated mothers usually see to it that their children obtain a larger share of the family pie, *and justify this to their husbands or the older generation*" (emphasis added). This justification may be reported in surveys as joint decision-making about a woman's expenditures. Caldwell's statement was in the context of seeking health care for children, but a woman emboldened by her educational superiority over the matriarch is likely to seek the care for herself, too. In summary, the answer to Question 2 is that a woman whose education exceeds that of her mother-in-law is more likely to have a voice in the purchase of her own health care, but the chance of her participation does not increase with the absolute level of her education.

Table 4: Odds Ratios from Logistic Regressions of Three Dimensions of Wives' Autonomy on Selected Predictors for Those Residing with the Mother-in-Law

	Does not need permission to go to the market (ref: not allowed/ needs permission)	Allowed to set aside money for later use (ref: not allowed)	Decision to seek health care (ref: self-decision)	
			Husband/ others decide	Jointly decide with others
Education (ref: daughter-in-law not more educated than mother-in-law, irrespective of her own level of education)				
<i>Daughter-in-law more educated than mother-in-law, but has less than middle school education</i>	0.825	1.232 *	1.210	1.379 ***
<i>Daughter-in-law more educated than mother-in-law, and has middle school or higher education</i>	0.987	1.667 ***	1.604 ***	1.322 ***
Age	1.036 ***	1.025 ***	1.072 ***	1.010
Employment (ref: unemployed)				
<i>Employed, no cash</i>	1.165	1.201	1.153	0.727 **
<i>Employed, cash</i>	2.064 ***	2.104 ***	1.248	1.034
Religion (ref: Non-Hindu)				
<i>Hindu</i>	1.789 ***	0.930	0.710 ***	1.008
Area of residence (ref: rural)				
<i>Urban</i>	1.842 ***	1.553 ***	1.135	1.046
Region (ref: North)				
<i>South</i>	11.616 ***	1.447 ***	2.954 ***	0.975
<i>Northeast</i>	6.553 ***	0.885	0.481 **	3.622 ***
Asset ownership	0.993	1.218 ***	0.917 **	0.977
Number of sons	1.068	0.957	1.065	0.902 **
Number of daughters	1.043	0.9808	0.997	0.915 *
N	6435	6421		6435
F statistic	45.08	25.36		19.62
Prob > F	0.0000	0.0000		0.0000
Degrees of Freedom	12	12		24

*** P ≤ .001; ** p ≤ .01; * p ≤ .05

DISCUSSION

For this study, the three dimensions of women's autonomy are the ability to: 1) set aside money for one's own discretionary usage; 2) make an individual or a joint decision to seek health care for oneself; and 3) leave the residence to go to market without permission. Caldwell theorized that women's autonomy on any of these three dimensions might be curtailed by their co-residence with their mothers-in-law but enabled by having more education. But Caldwell's evidence was based on his small, ethnographic studies in South India in the 1970s and early 1980s. Our research updates Caldwell's work and expands it geographically. Using data from ever-married women responding to the 1998–1999 (most recent) National Family Health Survey of India, we contrast the association of a woman's residence with her mother-in-law (vs. independent residence) with her score on each dimension of autonomy. For daughters-in-law living with their mothers-in-law, we examine the absolute and the relative (to the mother-in-law's) effects of the daughter-in-law's education upon the three dimensions of autonomy. While most subnational studies on these issues have not focused on the Northeastern states with Christian-majority populations, we include three such states (Meghalaya, Mizoram, and Nagaland) because Christianity is theorized by Caldwell (1980:245–246) to be more permissive of individualism than is Islam or Hinduism. We thereby avoid confounding any true effects of education with effects of region or religion upon women's autonomy in India.

According to the percentage of Study Women's replies affirming their autonomy on the three dimensions, the easiest (most prevalent, 62%) is setting aside money for her discretionary spending. The hardest (least prevalent, 38%) is going outside the residence to the public market without first asking permission. The middling (a slim 54% majority) happens when it is exercised through decision-making—alone or with others—about seeking health care. In the second (most difficult) dimension of autonomy, residing in the South or the Northeast rather than in the North is the strongest predictor of the freedom to go to market without obtaining permission; and living in an urban rather than in a rural area is the second strongest. It is apparent that urbanism frees women to travel outside the home, independently of region. In addition, being a Hindu rather than a member of another religion increases women's autonomy on this dimension. While Jejeebhoy and Sathar (2001) report that religion confounds the effects of region on women's autonomy, their result may be an artifact of using data from only one Northern and one Southern state (respectively, Uttar Pradesh and Tamil Nadu, which are also present in our data). Yet even when we control region, rurality, and religion, we find that a woman living with her mother-in-law has weaker odds of giving autonomous replies to all three dimensions than does a woman not living with her mother-in-law. This portion of Caldwell's thesis is confirmed.

When a daughter-in-law lives with her mother-in-law, the younger woman's ability to set money aside for herself (the easiest expression of autonomy) is strengthened by having more education than the older woman; and the higher the level of the younger woman's schooling, the greater is her autonomy on this dimension. However, contrary to Caldwell's thesis, the hardest form of female autonomy to achieve—the ability to leave the home for the marketplace without permission—is not attained by junior wives through having a high level of education or having more education than their co-resident mothers-in-law. These results emphasize that women's education does not have a magical, across-the-board impact on liberating them from domination

by senior household members in all facets of family life. Future studies are needed that show variations in female autonomy that are rooted in women's education but are constrained by structural features of their households and villages (e.g., Caldwell 1979; Dharmalingam and Morgan 1996) and nations of residence (Jejeebhoy and Sathar 2001; Morgan et al. 2002). These studies will define the social ecologies wherein higher education can upgrade the status of women in South Asia in the twenty-first century.

When a daughter-in-law lives with her mother-in-law, the junior wife's employment for cash predicts her autonomy on not only the most prevalent but also the least prevalent dimension of women's autonomy more consistently than does her absolute level of schooling or its relationship to the absolute level of schooling of her mother-in-law. In addition, working for cash means that a wife is less likely to consult with others before purchasing health care for herself than to make this decision alone (this is the third dimension of women's autonomy studied here). An implication is that economic development policies that expand women's share of jobs in the cash sector of the economy will increase the status of cash-earning women in the households of India.

The present study raises several questions for new research. For example, we are precluded by the cross-sectional nature of the NFHS II from determining whether greater initial autonomy on all three dimensions studied here will enable the wife to enter employment in the cash economy, or whether earning cash empowers her (whether or not she lives with her mother-in-law) on all three dimensions. Similarly, we cannot discriminate between the selective and the causative effects of women's education on their living arrangements or on their domestic autonomy. Young women with low or no education might selectively marry into families requiring them to live with and serve their mothers-in-law, while young women with lengthy educations might reject a proposal of marriage implying this kind of living arrangement. Caldwell (1982:322) argued that daughters-in-law living in an extended family would be more successful in persuading their husbands to exit into a separate, nuclear family household if these junior wives were educated. Future research on longitudinal data sets is needed to sort out the directions of causality.

Finally, we did not examine the freedom from domestic violence as an indicator of women's status. Therefore, future studies should explore how females' education and their residence in an extended family affect their odds of being physically assaulted. The cultural tolerance of wife beating may be a significant reason for the gender gap in life expectancy that favors men in India.

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