Work Status and Health of Women: A Comparative Study of Northern and Southern States of Rural India

Sharmishtha Basu, Research Scholar, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, 110067, India, Email: basu_jnu@yahoo.com

Shiv Narayan Sidh, Lecturer in Geography, Government Degree College, Gairsain, Chamoli, Uttarakhand, India, Email: shiv_sidh@yahoo.co.in

Abstract

The paper examines the net effect of work status on women's health and whether the effect persists after controlling for the influence of socio-economic factors. Our hypothesis is that working women face a greater risk of morbidity and mortality, given that most would be expected to shoulder dual responsibilities: market and household. The paper also examines whether the risk varies across regions. In particular, we examine whether the work status–health relationship differs between the southern and northern regions of India, which are known to be distinct in female autonomy.

While women in India face many serious health concerns, this analysis focuses on only two issues: nutritional status (as measured by body mass index and prevalence of anemia) and reproductive health (as assessed by the presence of reproductive health problems) of women from villages in the study area. Results show that though both work status and socio-economic factors influence health status, the latter are more important; most of the gross effect of work status is due to socio-economic conditions rather than work participation. This calls for policy intervention in providing better health facilities, female education and supplementary nutrition programs for poor women.

Introduction

Women's participation in the labour force is generally related to their empowerment through income generation (Gallin 1989; International Institute for Population Sciences [IIPS] and ORC Macro 2000; Johansson et al. 2007). On the other hand, "women's involvement in multiple roles (job plus

family responsibility) may harm their physical health." (Verbrugge 1983: 16) Thus the rewards and the "stress-and-strain" model involve the positive role of employment and its negative spillover on health, respectively (Gallin 1989; Waldron et al. 1998). In this paper we try to understand the negative effect of work on the health of women in India – the stress-and-strain model. Our particular focus is on whether working Indian women face even greater risks of morbidity and mortality, given their dual responsibilities of paid and household work.

India has a predominantly agricultural economy where rural women play a major role in both agricultural production and marketing (Chattopadhyay 1982). A large portion of working women come from the poorer sections of society, and their health reflects their poor living conditions (WHO 1992). This paper focuses on the work participation of women in rural areas because, in India, rural work participation is higher (42.1%) than urban (24.2%). Moreover, poor rural women are "altruistic and self-sacrificing in contributing towards common households and nutritional needs, [and] employment is a family obligation and a double burden rather than a basis of independence." (Malhotra and Mather 1997: 608) The National Family Health Survey-II (NFHS-II), 1998–99, reported that in rural areas in India, 76% of women who work are agricultural workers (farmers, farm workers and other agricultural occupations) (IIPS and ORC Macro 2000), which involves more physical labour.

NFHS-II also shows large interstate variations in work participation (economically valued) among ever-married women of age 15–49 years in rural India. The state of Maharashtra has the highest level of work participation (71.5%) among women of that age group, followed by Andhra Pradesh (68.6%). The lowest level of work participation is found in Punjab (6.4%), Haryana (10.5%) and Kerala (23.4%). (See Appendix – Table A2).

The health of Indian women is intrinsically linked to their status in society (Gothoskar 1997; Yadava and Yadava 1999). A high proportion are uneducated and have limited control over resources, even though their level of work participation is moderate. (According to NFHS-II 1998–99, 39% of ever-married women aged 15–49 were either currently employed or employed during the 12 months preceding the survey). Dyson and Moore (1983) note that the economic, educational and kinship status of women is higher in southern than in northern states. Against this backdrop, our research examines the north–south divide in the relationship between work status and health. Southern states such as Kerala and Tamil Nadu are linked with higher female autonomy than northern states such as Bihar and Uttar Pradesh. Women's autonomy can affect their health through health-seeking behaviour and access to resources (Nanda 2000).

This paper focuses on only two issues: nutritional status and reproductive health of rural women and how rural women's work status influences these factors. We chose nutritional status and reproductive health because they have been measured in some recent surveys with large sample sizes.

A proper understanding of women's health status and work participation, particularly in rural India, can provide helpful information for policy interventions in nutritional and healthcare programs for rural women as well as for socio-economic development.

Objectives

The objectives of this paper are to examine the overall effect of work status on the health of rural Indian women and to see whether such effects persist after controlling for the influences of socio-economic factors. The paper also reports on north–south differences in the relationship between work status and health.

Hypotheses

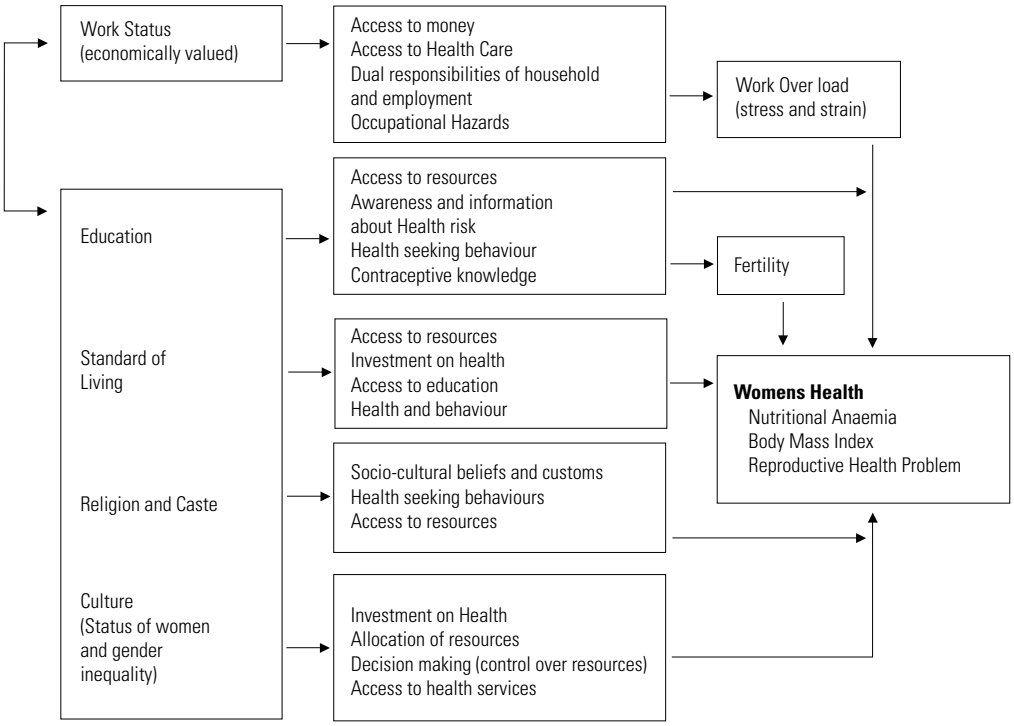
The hypotheses on which the study is built around are:

1. The net effect of work status on health of women residing in rural India is adverse.
2. The work status–health relationship differs between the southern and northern regions of India that are known to be distinct in female autonomy.

Conceptual Framework

The conceptual framework (Figure 1) showspathways of influence of work status and socio-economic variables on health status, which can be positively or negatively related. The analysis assesses the net influence of work and background factors (socio-economic). Intermediate variables are not directly addressed in this paper, as many are not easily measured.

Figure 1. Conceptual framework



Socio-economic factors have been conceptualized to affect women's health, particularly nutritional status and the presence of any reproductive health problems (WHO 2000). Women's workforce participation is also affected by socio-economic and cultural factors such as standard of living, education, religion and status (Nam 1991; Malhotra and Mather 1997; Panda 2003). Rural women's higher participation in the work force is probably necessitated by their poverty status. On the other hand, working status (economically valued) of women is expected to influence their health positively, through increased income leading to investment on health. Dual responsibilities of household chores and employment can lead to overload and role conflict, which results in increased stress and strain and finally contributes to poor health (Waldron et al. 1998). Much energy is needed by women who manage both employment and domestic chores; thus, there should be sufficient food to supply this need. As already stated, in rural India 76% of women who work are agricultural workers (IIPS and ORC Macro 2000). Responsibility for farm and family, if not supported by proper nutrient intake for the energy expended, can lead to a deterioration of women's nutritional health and, finally, reproductive health.

Educational status improves women's access to resources, awareness and information about health risks, ability to take decisions about well-being and utilization of healthcare (Jejeebhoy 1995; Bloom et. al. 2001). Education can also lead to increased contraceptive knowledge, which ultimately affects

reproductive health through its effect on fertility outcomes (Jeffery and Basu 1996; Ganguli 1998; Basu 2002) or directly influences reproductive health through use of contraception and prevention of sexually transmitted diseases. Standard of living is an important economic variable (Nanda 2000; Johansson 2007) affecting health through access to resources (Kimhi 2003; Davison et. al. 2006), education level, intake of balanced diet, access to health services and health-seeking behaviour (Adamson et. al. 2003). Religion (Chapple 1998) and ethnicity (Basu 1993) would plausibly affect health of women through their beliefs and customs.

In India, women's health is also shaped by culture. The status of women in southern India is considered higher than in northern India, and this can influence investment on healthcare and food allocation for boys and girls differently. Gender inequality affects the decision-making power as well as mobility of females (Rahman and Rao 2004). This affects health-seeking behaviour as well as investment on personal health expenditure through control over resources (Jejeebhoy 1995; Nanda 2000). Thus, region (northern or southern state) can influence the work status–health relationship.

Methodology and Database

This paper focuses on the issues of nutritional status and reproductive health, assessed by the presence of any reproductive health problems (Ramanathan 1998). Nutritional status is measured by two indicators – anemia and body mass index (BMI). Anemia is a low level of hemoglobin in the blood and results from a nutritional deficiency of iron, folate, Vitamin B12 and some other vital nutrients. Iron deficiency is the most widespread form of malnutrition. In India anemia affects almost 50% of women (IIPS and ORC Macro 2000); it may play a role in maternal mortality because of its detrimental health effects. The second indicator is BMI. A body mass index of <18.5 kg/m² indicates undernutrition, which is related to chronic energy deficiency and thus to morbidity.

Reproductive health (RH) is operationalized as the presence of RH problems. Reproductive morbidity can also capture reproductive health of women as it is a hindrance to reproductive goals (Qadeer 1998; Sagar 1994). Reproductive morbidity can further affect pregnancy-related complication, congenital infection, infertility and chronic pain (Zurayk et al. 1993; WHO 1990).

We used the NFHS-II 1998–99 data to examine selected socio-economic and demographic variables at the state and individual level. First, we conducted state-level analysis to test for regional variation. For a sharper and clearer picture, we conducted individual-level analyses.

State-Level Analysis

The state-level analysis used state-level data for both the dependent and independent variables. All variables in the state-level analysis are in the form of aggregates, mostly percentages, and are thus in continuous form. This facilitates multiple linear regression analysis. All variables are measured as a percentage of ever-married women aged 15–49 years for the rural areas of 19 states in India.

Dependent Variables

Percentage of women with moderate or severe anemia. The NFHS-II had undertaken hemoglobin testing in households. (The health investigator had read a detailed informed consent statement to the respondent, informing her about anemia, describing the procedure for the test and emphasizing the voluntary nature of the test.) Anemia among women was divided into three levels: mild (10.0–10.9 g/dl for pregnant women and 10.0–11.0 g/dl for non-pregnant women), moderate (7.0–9.9 g/dl) and severe (<7.0 g/dl).

Percentage of women with low BMI (i.e., <18.5 kg/m²). The second dependent or response variable is based on the BMI and can be used to assess both thinness and obesity. Body mass index is defined as the weight in kilograms divided by the height in square meters (kg/m²). Chronic energy deficiency is usually indicated by a BMI <18.5 kg/m². (In NFHS-II, ever-married women aged 15–49 were weighed using a solar-powered digital scale with an accuracy of ±100 g. Their height was measured using an adjustable wooden measuring board specifically designed to provide accurate measurement (to the nearest 0.1 cm).

Percentage of women with reproductive health problems. The third dependent variable considered in our study is any one or more symptoms of reproductive health problems (i.e., any reported reproductive health problem or not-reported problem). NFHS-II contains information on the following symptoms: vaginal discharge, pain during urination, pain in the abdomen or vagina during intercourse, and bleeding after intercourse, with a 3-month reference period. A woman reporting any one or more of these symptoms is deemed to have reproductive morbidity.

However, all the above symptoms were self-reported rather than the result of clinical or laboratory tests, a limitation of the study.

The explanatory variable work status is measured as the percentage of ever-married women aged 15–49 years currently working. Control variables in the analysis included percentage below the poverty line and percentage of literate women.

All these variables are measured as percentage of ever-married women aged 15–49 years for the rural areas of 19 states in India. Multiple linear regression analysis was done to capture the relationship between work participation and health of women (nutritional and reproductive). This model tries to answer the question whether women's health (nutritional status, moderate or severe anemia, low BMI and any reproductive health problems) is dependent on the work participation variables which is percentage currently working even when controlled for other socio-economic variables or the gross effect of work status is due to the socio-economic condition (Velkoff et al. 1998) rather than work participation.

Individual-Level Analysis

We chose six states for individual level analysis, three each from the northern and southern regions to see the north–south divide in the linkage between women's health status and their work participation. Northern and southern states are different in various socio-economic conditions, and above all, southern states are distinct in their degree of female autonomy. The particular states from north and south represent high, medium and low percentages of women currently working in rural India. The highest percentage in the northern region is in Rajasthan, and in the southern region, Andhra Pradesh. Medium levels are seen in Uttar Pradesh and Tamil Nadu, and low levels work in Punjab and Kerala, respectively.

The individual-level analysis uses the following response variables:

Dependent Variables

Anemia among women. Our study has two categories (dichotomous response variable): moderate or severe anemia (>10 g/dl) and mild or no anemia (≥10.0 g/dl).

Body mass index: The dichotomous response variable used to measure nutritional status has two categories: BMI <18.5 kg/m2 and BMI ≥18.5 kg/m^2.

Presence of any reproductive health problem: The third dependent variable considered in the present study is any one or more symptoms of reproductive health problems (i.e., any reported reproductive health problem or not-reported problem).

Explanatory Variables:

Available literature has suggested that women's health is a function of societal factors – cultural, economic, education, social and political (Basu 1993). Standard of living is particularly strongly related to chronic energy deficiency. Nutritional anemia and low BMI, which show that chronic energy deficiency increases fatigue, are related to household income and thus to standard of living. A number of variables were chosen to represent socio-economic factors. These are in a categorical form. The logistic regression programs allow the use of categorized explanatory variables, with one category designated as reference. The five independent variables for the individual analysis are: respondents currently working (Yes/No), religion (Hindu, Muslim, Others), ethnicity (SC, ST, OBC, Others),

educational level (no education, primary, secondary and higher secondary), and standard-of-living index (low, medium and high).The recoding list is given in Table A1 (Appendix).

For individual-level analysis, we used only the rural sample. The multivariate statistical analysis used in the paper is logistic regression, in order to estimate the net effects of each variable on probability of occurrence of mild or severe anemia, low BMI and presence of any reproductive health problems. The dependent variables are dichotomous, so the technique of logistic regression has been adopted instead of multiple regressions (Rutherford and Choe 1993). Moreover, multiple linear regressions cannot predict the value of a categorical outcome. For explanatory variables in a categorical form, a category is designated as "reference" and if Bk is the logistic regression coefficient for category '*k*', then exp (Bk) is the odds ratio, which is the ratio of odds for the category '*k*' to the odds for the reference category.

Results and Discussion

The state-level analysis tested only our first hypothesis.

The NFHS-II survey provides the figures of anemia, BMI and reproductive health problems. Tables A2 and A3 (Appendix) show the state-level percentages pertaining to those variables. The state with highest percentage of moderate and severe anemia is Assam (27.3%); lowest is Kerala (3.1%). The percentage of women with low BMI is highest in Orissa (40.0%), West Bengal (49.8%) and Maharashtra (49.3%). The percentage of currently working women is highest in Andhra Pradesh (68.6%) and lowest in Punjab (6.9%).

Multiple regression analysis is done and the equation is represented in the linear form as follows:

$$Y = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \ldots\ldots + e$$

where Y is the dependent variable, $\chi 1$, $\chi 2$, $\chi 3$… are the independent variables, 0, 1, 2, 3 are the regression coefficients and e is the error term.

Table 1 shows that moderate or severe anemia is not significantly related to the percentage of women currently working but is significantly related to levels of literacy in rural areas.

This shows that at the state level our first hypothesis is not supported; that is, the net effect of work status (economically valued) is inconsistent and weak. However, the negative relationship of literacy and prevalence of moderate and severe anemia can be explained by poor access to resources, by no awareness of or information about balanced diet and health risks, and by not seeking health services when necessary. Higher levels of literacy also affect the number of children and nutritional status. Thus, higher educational status is related to lower prevalence of moderate to severe anemia.

The percentage of women with low BMI is significantly related to work status. Adjusted R^2 value of the low BMI equation is higher than both the severe and moderate anemia equation and any reproductive health problem equation. Any reproductive health problem is also not significantly related to women's work status.

Following this, we take up individual-level analysis of three northern and three southern states to test both our hypothesis. Table 2 shows results of logistic regression for the southern states and Table 3 the northern states.

Table 2 shows that in Tamil Nadu rural working women have a lower probability of severe and moderate anemia than non-working women. In contrast, the probability of lower BMI among rural working women in Tamil Nadu is high, along with those in Andhra Pradesh. This may be explained by the fact that in rural areas most women currently working are engaged in strenuous physical labour. Thus energy loss is not replaced by proper food intake. Education has a mild effect on undernutrition in all three southern states (Andhra Pradesh, Tamil Nadu and Kerala), showing lower odds ratio for primary and secondary education compared to illiterates. On the other hand, income as examined through the standard-of-living index has a strong effect, and the probability of moderate and severe anemia is lowest in those with a medium or high standard of living. To some

extent this is also true for anemia. Religion and ethnicity, however, show no clear effect in the south. Reproductive morbidity does not seem to be influenced by these socio-economic factors.

Table 1. Work status and health relationship: state-level multiple regression analysis

Explanatory variables (χ)	Dependent variables (Y)		
	Percentage of women with moderate or severe anemia	Percentage of women with low BMI	Percentage of women with any reproductive health problem
	Regression coefficient (metric)		
• % of women currently working	0.0028	0.302**	-0.181
• % below poverty line	0.170	0.154	-0.317
• % of literate women	-0.226**	0.004	-0.003
Constant	11.934	34.547	75.317
R^2 (adjusted R^2)	0.322	0.486	0.188
n	19	19	19

** Significant at 1% level; * Significant at 5% level. BMI = body mass index.

Table 2. Logistic regression: Southern states

	Dependent variables	Moderate and severe anemia			Low BMI			Any RHP		
Background Variables	States	AP	TN	Kerala	AP	TN	Kerala	AP	TN	Kerala
		Exp (β)								
Respondent currently working										
No (RC)										
Yes		0.950	0.605**	0.897	1.543**	1.336**	1.246	0.658	1.359	.363
Religion										
• Hindu (RC)										
• Muslims		0.355**	1.191	0.462**	1.047	0.424	0.835	0.638	0.005	0.755
• Others		1.648**	0.918	0.652	0.799	0.858	0.610**	0.741	2.063	0.723
Ethnicity										
• SC (RC)										
• ST		0.711	0.668	0.472	0.780	2.194*	1.528	0.324	0.005	0.906
• OBC		1.00	0.865	0.370**	1.054	0.839	1.055	1.208	0.901	0.527
• None of Them		1.142	1.211	0.758	0.800	0.321	0.978	0.774	0.006	0.799
Educational level										
• No (RC)										
• Primary		1.197	0.799*	0.582	0.780**	0.866	0.642*	1.085	1.772	0.412
• Secondary		0.784	0.824	0.417	0.697**	0.765**	0.722	2.037	1.682	0.517
• Higher Secondary		0.564	0.442	0.324	0.510	0.721	0.593	2.032	1.962	0.999
Household standard-of-living index										
• Low (RC)										
• Medium		0.785**	0.674**	0.605	0.690**	0.752**	0.520**	1.241	1.627	2.216
• High		0.752	0.321	0.619	0.328**	0.214**	0.290**	1.271	0.525	2.148
Constant		0.255	0.566	0.215	0.974	0.777	0.737	0.021	0.011	0.058
-2LL		2682.40	2956.02	554.77	3499.26	3444.56	1798.57	537.78	526.59	542.7
Pseudo R^2		0.019	0.044	0.059	0.091	0.084	0.073	0.030	0.036	0.046
N		2826	2478	1925	2625	2304	1851	2593	2227	1882

** Significant at 1% level; * Significant at 5% level.
AP = Andhra Pradesh; TN = Tamil Nadu; BMI = body mass index; RHP = reproductive health problem; RC = reference category; SC = scheduled caste; ST = scheduled tribe; OBC = other backward classes.

Among the northern states in Uttar Pradesh and Punjab, a significant effect of work status on BMI and reproductive health is seen. In Uttar Pradesh the probability of low BMI among rural working women is higher than among non-working women. Moreover, the probability of reproductive health problems among rural working women is higher than among non-working women.

Religion, ethnicity and education show no clear or consistent effect in the northern region. Similar to southern states, a higher standard-of-living index leads to better health status, particularly in terms of BMI (moderate and high standard-of-living odds ratios are lower for low BMI in Rajasthan, Uttar Pradesh and Punjab and for moderate to severe anemia in Rajasthan).

The above discussion highlights that neither hypothesis stated initially is empirically validated. The effect of work status on the health of women residing in rural India is mild or insignificant. Moreover, the work status–health relationship does not differ between the southern and northern regions of India that are known to be distinct in female autonomy (Rahman and Rao 2004).

Thus, northern states sketch a more or less similar picture to that of the southern states, though the socio-economic setting is different (Table 3). The effect of work status on women's health is generally insignificant when the explanatory variables are controlled for the logistic regression.

Table 3. Logistic regression: Northern states

	Dependent variables	Anemia			BMI			Any RHP		
Background variables	**States**	**RJ**	**UP**	**Punjab**	**RJ**	**UP**	**Punjab**	**RJ**	**UP**	**Punjab**
		Exp (β)								
Respondent currently working										
No (RC)										
Yes		0.883	0.876	0.869	0.975	1.215**	0.778	1.001	2.228**	3.901**
Religion										
• Hindu (RC)										
• Muslims		1.331*	1.162	1.024	1.184	1.264*	0.139*	0.549*	0.532	0.003
• Others		0.034	4.764	1.486	0.769	0.026	0.654	0.065	0.014	5.488*
Ethnicity										
• SC (RC)										
• ST		1.065	0.954	0.507	0.828*	0.749	1.611	1.080	1.972	0.007
• OBC		0.872	1.062	0.604*	0.854	0.864	0.833	1.210	0.754	1.073
• None ofn tThem		0.954	0.772	0.648**	0.722**	0.895	0.782	1.455	0.613	1.214
Educational level										
• No (RC)										
• Primary		1.029	0.779	0.991	0.925	1.121	0.743	0.680	1.546	2.782**
• Secondary		0.893	1.074	1.100	0.808*	0.794	0.779	0.984	1.554	1.633
• Higher Secondary		0.962	0.853	0.648	0.636**	0.564	0.894	0.853	1.208	0.002
Household Sstandard-of-living index										
• Low (RC)										
• Medium		0.793**	0.888	0.711	0.991	0.784**	0.550**	0.803	1.406	0.971
• High		0.756**	0.855	0.622	0.564**	0.496**	0.275**	0.741	1.875	0.108
Constant		0.244	0.223	0.379	0.920	0.919	0.911	0.038	0.020	0.010
-2LL		5200.41	3579.41	1427.0	7488.47	4958.65	1670.42	1949.53	960.632	389.26
Pseudo R^2		0.008	0.010	0.038	0.040	0.037	0.078	0.008	0.034	0.075
N		6010	4253	1682	5745	3804	1593	6512	4084	1606

** Significant at 1% level; * Significant at 5% level.

RJ = Rajasthan; UP = Uttar Pradesh; BMI = body mass index; RHP = reproductive health problem; RC = reference category; SC = scheduled caste; ST = scheduled tribe; OBC = other backward classes.

Conclusions

Women's health is a function of their work status as well as socio-economic and cultural factors (Prasad 1989). However, from the discussion above, we infer that socio-economic factors affect the health of women, rather work status alone. From the state-level analysis, we see that effects of work status and women's education on nutritional health are unclear. At the individual level, results indicate a weak effect on nutritional health and reproductive health in some states. On the other hand, the effect of standard of living is strong and consistent in both north and south India. Consequently, the net effect on women's health status is mostly due to economic conditions rather than to work status per se. We found no indication of a north–south divide is the relationship between work status–health relationships in our study.

Work participation alone did not seem to have a clear adverse effect on women's health, contrary to the popular belief. However, the effects of education and standard of living were significant.

As socio-economic factors affect women's health, free health provisions and health awareness should be an integral part of governmental policy. Further, supplementary nutrition programs should be made available to poor women because of its importance for nutritional health. India's Integrated Child Development Scheme (Nutritional Program), which provides supplementary nutrition to children, has also been including pregnant and lactating women. Thus policy attention is addressing the issue of women's health. The Maternity Benefit scheme covers poor women, but otherwise there is nothing for the wider group of poor rural women. In addition, secondary school education for girls is an important means of promoting women's health status. Rural employment programs for women can also include nutritional components.

Future research on women's health should redefine "work" status of women and also look into the intermediate pathways of effect.

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Appendix

Table A1. Coding of variables included in analysis

Label	Coding	Recoding	New Variable	Reference Category
Independent Variables				
Religion	Hindu = 1 Muslims = 2 Christian = 3 Sikh = 4 Buddhist = 5 Jain = 6 Jewish = 7 Zoroastrrtian/Parsi=8 No Rreligion=9 Others = 96	Hindu = 1 Muslims = 2 Others=3	V130_cd	Hindu
Ethnicity	S.C = 1 S.T = 2 O.B.C = 3 None of them = 4			Scheduled Caste
Highest Education Level	0 = No education 1 = Primary 2 = Secondary 3 = Higher			No education
Household standard-of-living index	Low = 1 Medium = 2 High = 3			Low
Respondent currently working	No=0 Yes=1			No
Dependent Variables				
Respondent's haemoglobin level (gram/decilitre)	Mild anaemia = 10.0—-11.0 0 g/dl = 1 Moderate anemia = 7.0—9.9 g/dl = 2 Severe anaemia = < 7.0 g/dl = 3	Mild and no anaemia (10.0 g/dl or higher) = 0 Severe and mModerate anaemia (<10 g/dl) = 1	ANA_Cd	
Body Mass Index(BMI) of Respondent		High BMI = ≥18.5 kKg/m^2 = 0 Low BMI = <18.5 kKg/m^2 = 1	BMI_Cd	
Itching/irritation Bad odour Abdominal pain Fever Other Problems Pain or burning while urination Pain during intercourse Blood visible after sex	No = 0 Yes = 1	No = 0 Presence of any reproductive health problems (S486A, S486B, S486C, S486D, S486E, S487, S489, S490 = Yes) = 1	RH_CD	

SC = scheduled caste; ST = scheduled tribe; OBC = other backward class; BMI = body mass index.

Table A2. India, NFHS-II (1998–99) rural

States	Percentage				
	Bpl*[a]	Msanaei	BMI	RHP	Currwor
Andhra Pradesh	15.77	18.1	43.2	48.8	68.6
Assam	33.47	27.3	27.9	51.9	19.8
Bihar	42.6	20.8	40.3	45.1	26.5
Goa	4.4	9.4	30.3	43.5	46.2
Gujarat	14.07	19.9	47.7	28.7	64.2
Haryana	8.74	17.9	30.8	39.9	10.5
Himachal Pradesh	7.63	9	31	34.6	18.2
Jammu & Kashmir	3.48	20.5	30.4	61.4	41.7
Karnataka	20.04	18.2	47	18.9	62.6
Kerala	12.7	3.1	19.9	44	23.4
Madhya Pradesh	37.43	18	41.8	46	63
Maharashtra	25.02	18.1	49.3	36	71.5
Orissa	47.15	18.5	49.9	27.4	29.9
Punjab	6.16	14.2	22.2	27.5	6.4
Rajasthan	15.28	16.4	38.7	44.3	48.3
Sikkim	15.06	24.7	10.8	48.6	19.2
Tamil Nadu	21.12	21.9	35.2	27.8	58.8
Uttar Pradesh	31.15	15.5	39.1	37.9	23.1
West Bengal	27.02	17.8	49.8	49.6	30.4

Source: NFHS-II, India (IIPS and ORC Macro 2000).

[a] Bpl has been taken from Statistical Year Book 1998–99.

Bpl = % of population below poverty line; Msanei: = % of women with moderate and severe anemia (rural); BMI = % of women with low body mass index, RHP = % of women with any reproductive health problem; Currwor = % of women currently working.

Table A3. India, NFHS-II rural

States	Hindu	Muslim	Christ	SC	ST	OBC	Others	Lit
Andhra Pradesh	90.2	3.3	6.4	22.3	6.3	44.9	26.3	28.4
Assam	61.7	34.4	2.4	9.9	21.5	11.6	54.6	43.3
Bihar	84.4	14.1	0.7	21.1	9	52.1	17.7	19.9
Goa	62.5	3.7	33.4	5.9	0.4	8.9	84.7	67.3
Gujarat	95.8	3.4	0.5	15.9	26.5	24.3	33.3	36
Haryana	88.9	4.9	0	23.3	0.1	25.4	51.2	34.4
Himachal Pradesh	93.8	3.1	0	22.3	0.5	19.6	57.6	61.7
Jammu & Kashmir	43.5	55.7	0.2	13.7	3.1	11.8	71.4	24.3
Karnataka	90.2	8.3	0.9	18	6.9	44.3	29.4	32.3
Kerala	48.3	36.1	15.5	9.5	1.2	41.4	47.9	86.1
Madhya Pradesh	95.5	2.3	1.4	15	28.4	41.2	15.4	22.2
Maharashtra	89.6	3.5	0.3	10.6	13.3	22.9	52.4	44.4
Orissa	97.3	1.2	1.4	21.7	21	30.8	26.4	37.8
Punjab	30.9	1.2	1.5	33	0.1	15.6	51.2	51.5
Rajasthan	93	5.8	0	19.5	15.5	23.4	41.6	15
Sikkim	59.2	0.6	5.6	7.5	28.1	34.9	29.4	47.2
Tamil Nadu	93.4	3	3.6	26.4	1.2	72	0.4	42.1
Uttar Pradesh	86.7	12.4	0.1	21.3	2.3	30.5	41	22.9
West Bengal	68.9	28	0.2	25.1	9.3	3.9	61.1	42.6

Source: NFHS-II, India (IIPS and ORC Macro 2000).
Hindu = % of rural Hindu women; Muslim = % of rural Muslim women; Christ = % of rural Christian women; SC = % of scheduled caste women; ST = % of scheduled tribe women; OBC = % other backward classes women; Others = % of rural women of other category; Lit = % of rural women who are literate.