

Role of Education in Health Care Decision Making in Nepal: Evidences from a Cross-Sectional Survey

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ABSTRACT

Education is increasingly put forth as a means of empowering women in developing countries, such as Nepal. Grounded on intra-household gender dynamics literature, empowerment in this paper is conceptualized as the decision-making ability of a woman regarding health care. The purpose of this study is to examine the role of education level as a means of improving women's intra-household bargaining power in the spheres of health care. A cross-sectional survey was conducted from June to July 2013 among 300 married women of three districts in Gandaki Province of Nepal. The sample was selected in three stages, first stage being the selection of districts, second, being the village development committees and third being women. Logistic regression was applied to analyze the effect of women's education on decision making on health care. The study reveals education level has a positive and significant effect on women's decision making on health care. Overall, this study highlights the need for efforts to educate Nepalese girls in terms of higher schooling and associated beneficial welfare effects.

Key words: Health care, women's education, decision making, Gandaki Province, Nepal.

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INTRODUCTION

It is a time-tested fact that health is both means and end of development. The positive association between education and health is well established; however, explanations for this association are less known¹. Despite extensive prior research, critical questions about the education-health relationship remain unanswered, in part because education and health are intertwined over the life spans within and across generations and are inextricably embedded in the broader social context². Although overall health status of the general population of almost all countries have been improved over the past decades, health disparities grew along with the socioeconomic inequalities³. For example, if women had completed secondary education, under-five mortality would fall by 49% with an annual saving of three million lives⁴. In case of Nepal, the net enrollment ratios at secondary level was only 42 and 49 respectively in province number two and five, as compared to the national average of 64, whereas, the teenage pregnancy rate in the corresponding provinces were 21% and 14%⁵. It points out the role of education and health achievements.

Empowerment or decision-making power is the most frequently used term in development agenda in recent years⁶. Women empowerment can be conceptualized as a complex and context-dependent process. Some authors use 'autonomy' or 'empowerment' or 'decision-making power'

interchangeably^{7,8}. Based on Amartya Sen's capability approach and intra-household gender dynamics literature⁹, this paper conceptualized empowerment as the decision-making ability of a woman regarding health care.

Studies in developing countries have shown that the empowerment of women does not only benefit women but also benefits the development of society as a whole¹⁰. For example, household where women have more equality, their children have a lower risk of malnutrition¹¹. Women empowerment is essential for sustainable economic growth and reduction in poverty in developing countries¹². Women empowerment is being progressively recognized as an important policy goal for improving not just the well-being of women themselves but also for its positive impact on the family¹³ and it envisages greater access to knowledge, social and economic resources and greater autonomy in economic and political decision-making process¹⁴. Furthermore, an increase in women's access to resources results in a higher investment in human capital such as education, health, and nutrition^{15,16}. The empowerment of women has become a primary concern of the sustainable development agenda¹⁷.

Gender discrimination still exists in almost all the countries¹⁸ and Nepal is no exception. In Nepal, women are found suffering from social, cultural and political biases⁵. For

example, according to World Economic Forum (2018), 72% of male are literate whereas it is only 49% among female. Similarly, men earn US \$ 3264, but women earn only US \$ 2133; 89% of men participate in the labor market, but only 83% of women do; less than only one in five senior officials or managers are women in Nepal¹⁹. Lower status of women has been observed on various dimensions of empowerment such as health access, marriage, children, education, employment, and social equality⁵.

In light of this discussion, the objective of this paper is to empirically investigate the role of education as a means of improving Nepali women's intra-household bargaining power or women empowerment. Furthermore, this study describes the socioeconomic situation of Nepali women in Gandaki Province of Nepal.

METHODS

A cross-sectional survey design was adopted and three stages random sampling method was employed in this study. At the first stage, three districts having the highest human development index in Gandaki Province of Nepal were selected. The selected districts were Kaski, Syanja, and Tanahun. At the second stage, three village development committees (VDCs) having relatively low literacy rate in each district were identified and selected. The selected sample VDCs were Rupakot, Magyam Chisapani, and Firfire from corresponding districts. At the third stage, 100 married women aged 15-49 from each VDCs were identified and interviewed yielding a total sample of 300 women. Women were selected and interviewed across the radius of VDC's office from each selected VDC. The data was collected from June to July 2013.

The sample size was calculated considering 50% as the proportion of success of key indicator (i.e. health care decision making), 95% desired level of confidence, and precision as 5.7%. The required sample size was 295; however, this figure was rounded to 300.

To collect data, a standardized questionnaire was developed and pretested that included questions on household demographics, education, and decision-making power. The instrument was pre-tested among 20 women in one of the wards of Kaski district. A face-to-face interview was conducted to the respondents by making an arrangement of an interview schedule. Three trained local enumerators were involved to collect data under the direct supervision of the author. Enumerators were school teachers in the concerned area. Enumerators also had previous experience of collecting data in similar surveys.

Ethical Considerations and Approvals

The purpose and the importance of the research was clearly explained to the respondents. Respondents were interviewed in favorable environment after their written consent. Women were assured about the confidentiality of their responses. To ensure confidentiality, they were requested not to mention their names, addresses or any such things which could identify them. Each respondent was free to skip any question if she does not want to answer and drop interview at any time. Data obtained from field study were not misinterpreted and misused. Socio-cultural norms, values, and rites of the study area have been respected in all phases of research. The study was financially supported and approved by University Grants Commission (UGC) of Nepal.

Dependent Variable: Health Care Decision Making

For capturing health care decision making power, women were asked six questions related to family planning matters, visiting health facility when fell sick, own health checkup, frequency of talking to husband on family planning matters, and family's medical treatment. Women who were involved for each of health care decision making were assigned as 1 otherwise 0. A summary index was developed by assigning a score of 1 for each positive response and 0 for each negative response yielding a total score ranging from 0 to 6. A higher score indicates the higher level of health care decision making power of a woman. The index was further divided into two categories, involvement in all types of health care decisions or not involved at least one of them. In this study, out of 300 studied women, 92 (31%) reported involvement in all six types of health care decision making whereas 208 (69%) reported not involvement of at least one of those decisions.

Independent and Control Variables: Education and Socio-Economic Factors

The variable education was measured using ordinal scale. In the survey, women were asked regarding their completed level of education. The education was categorized into four levels: no formal education, primary level, secondary level, and tertiary level. Socio-economic and demographic factors such as land ownership, age, religion, family size, family type, community norms, health unit distance, bank account are used as control variables in this study.

Data Analysis

Data were analyzed and statistically interpreted with the help of tables. Frequency and percentage distribution were carried out to describe the general features of socio-demographic characteristics, economic factors, and health

care decision making. Logistic regression analysis was employed to examine the effect of education on health care decision making while controlling for several plausible confounding variables. This section highlights the effects of several determinants of women's empowerment. The raw data collected through questionnaire was categorized, processed and analyzed using statistical software SPSS version 20.

The Model:The binary logistic regression model was used in this study. The model is;

$$h\left(\frac{p}{1-p}\right) = \vec{X}\vec{\beta} + \varepsilon$$

p is the likelihood of involvement of women in all health care decision makings in the i^{th} sample taken into consideration in this study.

X is a vector of independent variables education being the key one,

β is the corresponding vector of coefficients of independent variables

ε is the stochastic disturbance term.

The binary logistic regression analysis was used to examine the odds of women involvement in health care decision making. Binary logistic regression is a form of regression used when the dependent variable is dichotomous and independent variables are of any types (i.e. nominal, ordinal, interval, and ratio level). To control the confounding

influence of the several factors, two models were fitted for the outcome variable, health care decision making. The first model includes only the education related variable, whereas the second model includes all potential factors that may have influence on health care decision making. The multicollinearity was assessed using variance inflationary factor, and there was not a problem of multicollinearity.

RESULTS

Respondents Characteristics: Socio-demographic and Economic Background

The socio-demographic of the respondent is presented in table 1. With regard to level of education, 29% of women had secondary level of schooling. The percentage of women with higher level of schooling (SLC/SEE or higher) was 23% and it was 21% in primary level of schooling (Table 1). The mean year of schooling of women was only 6 years indicating that Nepalese women still have a low level of schooling.

Relatively higher proportions of the women were in the younger age groups, with more than half (53%) of them were 25-39 aged. The mean age woman was 33.27 years whereas median was 32 years. Most of the women had larger family size with mean number of persons in the household was equal to 6.2. Slightly less than one third (29%) of the respondents had less than 4 members in their household. More than half (52%) of the women were from joint family structure.

Table 1: Distribution of women by their socio-demographic characteristics, n=300

Variable name	Categories	Number	Percent
Education level	No schooling	82	27.3
	Primary	63	21.0
	Secondary	87	29.0
	Tertiary	68	22.7
Age	15-24	49	16.3
	25-39	158	52.7
	40-49	93	31.0
Family size	Less than 4	86	28.7
	5 or more	214	71.3
Family structure	Nuclear	144	48.0
	Joint	156	52.0
Caste/Ethnicity	Brahamin/Chhetri	52	17.3
	Gurung	114	38.0
	Magar/Gharti/Newar	49	16.3
	Muslim	37	12.3
	Scheduled (Kami/Damai/Sarki)	48	16.0
Media access	No	24	8.0
	Yes	276	92.0

Out going	Never	23	7.7
	Occasionally	277	92.3
Perception of community norms	Does not follow ancient norms	23	7.7
	Follows ancient norms	277	92.3
Perceived health accessibility	No access	41	13.7
	Have access	259	86.3
Health unit timing	Less than 20	103	34.3
	20-39	99	33.0
	40-59	36	12.0
	60 or more	62	20.7
Member in mother's group	No	103	34.3
	Yes	197	65.7
Participation in mother's group	Never	92	30.7
	Occasionally	161	53.7
	Generally	47	15.7
Land ownership	No	230	76.7
	Yes	70	23.3
Number of earners	None	41	13.7
	One	164	54.7
	Two	70	23.3
	Three or more	25	8.3
Work type	Household work	235	78.3
	Paid work	65	21.7
Bank account	Do not have	177	59.0
	Have	123	41.0

Higher percentages of women were Gurung followed by Brahmin/Chhetri. Ethnic groups such as Gurung, Magar, Newar, and Gharti constitute more than half (54.3%). Scheduled caste (Kami/ Damai/Sarki) and Muslism constitute 16% and 12% in the sampled study. Nearly one in four women had never been to school whereas 29% of women had secondary level of schooling. A large proportion (92%) of women were exposed to any type of media. Most of the respondents (92%) occasionally go for outing for their entertainment. Most of the women (92%) perceived that they had outdated traditional community norms in their society.

Nearly 90% of the women stated that they have health accessibility. Nearly one-third of the women could reach health center within 20 minutes period, whereas 21% of women need more than one hour to reach the nearest health center from their household. The mean time to reach the nearest health center from the respondents' household was approximately half an hour. Nearly two-thirds of women were currently involved in mother's group, whereas only 16% of women actively participated in the activities launched by mother's group.

More than three in every four women did not own land. In other words, only 23% of women owned land (alone or jointly) and 77% of the women did not own land but her household members own land. With regard to economic factors, majority (55%) of respondents' household had only one earner in their household. Approximately one in four (23%) women had two earners in their household. Most of the respondents (78%) did household work against (22%) paid work. Nearly three-fifths of women did not have bank account at the time of interview.

Results from Logistic Regression Analysis

The regression results based on a sample of 300 cases are reported in table 2 and suggest that both regression models I and II were significant ($p < 0.01$ for each model). The slope estimates of all variables have the anticipated signs except mother's group involvement.

The results in table 2 indicate that women's education level is statistically and strongly significant with health care decision making in both the model I and II ($p < 0.05$). The selected socio demographic and economic factor such as women's age, ethnicity, outgoing for entrainment, involvement in mother's group, and frequency of active participation in mother's

group activities are statistically significant and have impact on health care decision making power of women. Age of women is positively associated with health care decision making. This indicates that aged women were more likely to be empowered as compared to younger women. Community norms showed a positive impact on health care decision making. Women who perceived that their community follows outdated traditional beliefs are more empowered as compared to those who do not have such beliefs; however, the relationship was insignificant.

Women who generally went for outing were more likely to make health care decision making as compared to those women who did not go for outing. The variables women's

involvement in mother group activities and women's active participation in mother's group were statistically significant with the health care decision making. Women's involvement in mother's group decreased the women empowerment in terms of health care decision making whereas women's active participation in mother's group activities increased in health care decision making.

None of the economic factors such as land ownership, number of earners in the household, work type and bank account status were significant to health care decision making power of women while controlling the potential confounders. However, the relationship was significant at the bivariate level.

Table 2: Odds ratio and 95% confidence interval showing the effect of education and selected socioeconomic factors on health care decision making: Results from Logistic regression analysis, n=300

Predictor Variables	Model I			Model II		
	Odds ratio	95% CI Lower Upper		Odds ratio	95% CI Lower Upper	
Women's education [No education=®]	1.00			1.00		
Primary education	2.50**	1.1	5.47	3.11**	1.19	8.15
Secondary education	2.94***	1.4	6.12	2.95**	1.10	7.93
Tertiary education	3.72***	1.7	7.98	3.43**	1.14	10.29
Age				1.03*	0.99	1.07
Family size				0.97	0.84	1.12
Family structure [Nuclear=®]				1.00		
Joint				1.29	0.66	2.51
Caste/Ethnicity [Scheduled =®]				1.00		
Brahamin/Chhetri				1.68	0.59	4.77
Gurung				2.04*	0.81	5.14
Magar/Gharti/Newar				1.18	0.41	3.39
Muslimism				0.41	0.10	1.69
Media accessibility [No access =®]				1.00		
Have access				0.51	0.15	1.79
Outgoing for entrainment [Never=®]				1.00		
Occasionally				3.05*	0.62	15.06
Outdated community norms [Does not follow=®]				1.00		
Follows				2.20	0.62	7.76
Perceived health accessibility [No access=®]				1.00		
Have access				0.75	0.27	2.08
Health unit time				1.00	0.99	1.02
Involvement in mother's group [No=®]				1.00		
Yes				0.34*	0.10	1.16
Frequency of participation in mother's group activities [Never=®]				1.00		
Occasionally				2.59*	0.71	9.43
Generally				6.01***	1.36	26.55

Land ownership [Do not own =®]	1.00		
Own land	0.95	0.42	2.12
Number of earners	1.32	0.84	2.10
Work type [Household work =®]	1.00		
Paid work	1.42	0.71	2.86
Bank account status [Do not have account =®]	1.00		
Have account	1.09	0.55	2.17
Model significance (p value)	0.000		0.000

* p< 0.10. **p< 0.05. ***p< 0.01. ® = Reference category.

DISCUSSION

This paper empirically examined the impact of education level on health care decision making power from the survey of three districts of Gandaki Province of Nepal. By employing logistic regression analysis and robustness checks, it was found that women's education level significantly increased their empowerment, as defined by health care decision making. This study found that women's education is one of the most important predictors of health care decision making. The findings of this study are consistent with a number of previous studies^{6,20,21}. This may be because education provides a wide range of favorable behaviors to women^{22,23}. Furthermore, women's education is generally linked to family socioeconomic situation, which in itself is a determinant of autonomy and utilization of health services²². Furuta and Sarah (2006) suggest that education provides a wide range of favorable behaviors to women²⁴. It has been observed from numerous past researches that the fundamental contribution of maternal education is to enhance female decision making so that women develop greater confidence and capabilities to make decisions regarding their own health, as well as that of their children²³.

The findings of this study add new insights into this complex relationship between health care decision making and other factors. Like previous studies, demographic characteristics such as women's age is important to health care decision making. The study showed that being older was associated with higher levels of health care decision-making. This may be due to the reason that aged women are the seniors and may have decision making power.

It was hypothesized that social characteristics are associated with health care decision making power. Women having active role in mother's group activities are associated with higher level of women's health care decision making power. Women simply involvement of mother's group tend to be associated with decreased likelihood of empowerment. The social factor such as community norms has also a significant

influence on health care decision making. It was expected that economic factors have a significant influence on health care decision making, however, such factors were insignificant to health care decision making.

CONCLUSIONS

This study has discovered that many factors influence health care decision making either positively or negatively. Women's education is one of the most important factors that influence health care decision making. Demographic factors such age is positively associated with health care decision making power of women. Being older is associated with higher levels of health care decision making. Social factors such as women having active role in mother's group activities, having higher level of schooling are associated with a higher level of health care decision making. Women having traditional beliefs and women's being simply involvement of mother's group tends to be associated with a decreased likelihood of health care decision making power. This study reveals that being simply a member in mother's group actually lowers health care decision making power, however; active role in mother's group activities increases in health care decision making.

The results of this study have important policy implications. The positive effect of women's education on health care decision making power highlights the need for efforts to educate Nepalese girls in terms of higher schooling. Being simply a member in mother's group actually lower's health care decision making power and having active role in mother's group activities increases the health care decision making power, thus program should be focused to make women active participation in many social activities.

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