IGIDR Outreach Programme

VScP-2011-001

Women Empowerment and Women's Health Related Outcomes

Archana Kesarwani



Visiting Scholars Programme Indira Gandhi Institute of Development Research, Mumbai February 2011 Web link:http://www.igidr.ac.in/images/stories/stu_cv/vscp-2011-001.pdf

Women Empowerment and Women's Health Related Outcomes¹

Archana Kesarwani

Research Scholar Department of Economics, Faculty of Social Science Banaras Hindu University Varanasi, 221005 (U.P) E-mail: kesarwaniarchana16@gmail.com

Abstract

Women empowerment is recognized both as an outcome by itself and as an intermediate step to long-term health status and disparity outcomes. Using NFHS-III data across 29 states of India, this study has focused on how women health can be improve through the women empowerment.

Key words: empowerment, health, India, National Family Health Survey (NFHS), women.

JEL Codes: I14, I15.

¹ This has been prepared under IGIDR's Visiting Scholars Programme, an outreach activity. Ms Archana Kesarwani was provided facilities on campus for the purpose during her stay from 5 January 2011 to 28 February 2011. She gave her final presentation on 23 February 2011.

Women Empowerment and Women's Health Related Outcomes

February 2011

By Archana Kesarwani Visiting Scholar IGIDR, Mumbai Under the Supervision of Prof M. H. Suryanarayan Research Scholar, department of Economics

Faculty of Social Science

Banaras Hindu University

Varanasi, 221005 (U.P)

E-mail-kesarwaniarchana16@gmail.com

Women empowerment is recognized both as an outcome by itself and as an intermediate step to long-term health status and disparity outcomes. This study has focused on how women health can be improve through the women empowerment across all 29 states of India with the help of NFHS-III.

Acknowledgement

I do't have any word in my dictionary to express my love to my papa, Late. Mr B.L Kesarwani, for constructing platforms for us in all part of our life in this world.

First, I would like to thanks Indira Gandhi Institute of Development Research (IGIDR), Mumbai for honoring me to be part of "Visiting Scholar Programme – 2010", and providing me an opportunity to be exposed to the environment of research. This association with IGIDR is an important linkage between my academic career and the world of research.

I express my sincere thanks to Honorable Professor Dr. M.H Suryanarayan of IGIDR, who took time off for guidance and constant encouragement.

I would like to thanks to Dr. Srijit Mishra, Dr S. Chandrasekhar, Dr. Thomas Susan and Dr. Rupayan Pal for their valuable discussion on my topic during final seminar. And I am very thankful to Dr, Durgesh Pathak and Dr, Shyam Prasad, Post Doctoral Fellow in IGIDR for their suggestions and helps during paper writing.

I am also expressing thanks to my guide, Prof. A.K Jain, Dean of Faculty of social science, BHU, Dr. Rakesh Raman and Dr. N.K Mishra, Associate professor of department of Economic, BHU, for encouragement of my research work.

I am also expressing my especial thanks to my lovely younger sister Ranjana Kesarwani, M.phil student of IIPS, Mumbai for her efforts in analysis and suggestions. I am also very thankful to my Sweet Husband, Dr. Manoj Gupta and My elder Brother Mr. S. C. Kesarwani (IES), my mother and all Inlaws for providing me this great opportunity in IGIDR,

And now I am expressing my thanks to Mrs. Jayshree Borkar, for coordinating me in IGIDR.

Women Empowerment and Women's Health Related Outcomes

The empowerment and autonomy of women and improvement in their social, political, economic, and health status are recognized in the International Conference on Population and Development in 1994. It has recognized in this conference that discrimination based on gender starts at the earliest stage of life. The document assert that greater equality for girls in regard to health, nutrition and education is the first step in ensuring that women realize their full potential and become equal partner in development. Hence, the document has focused on empowerment of women for development dialogs. Women are primary guardian responsible for altering the quality and quantity of human resources available in the society and to promote sustainable development for the coming generation (UNFPA, 2005). The literature available on gender studies and research makes it clear that the terminologies of women's status, women's positions, women's autonomy and women's empowerment are very often used interchangeably. But Dixon and Mueller (1998) have tried to differentiate between women's status, women's autonomy and women's empowerment. They define that "The status of women refers to the positions that women occupy in the family and in society relative to those of men and of women of other classes, other countries, other times. Female autonomy refers to an individual's capacity to act independently of the authority of others. Autonomy implies freedom, such as the ability to leave the house without asking anyone's permission or to make personal decisions regarding contraceptive use. Although household decision-making is often used as a measure of autonomy (for example, having the final say over how much of the family budget to spend on food), it is not necessarily a measure of power because such decisions may be delegated to women by other household members. Female empowerment refers to the capacity of individual women or of women as a group to resist the arbitrary imposition of controls on their behavior or the denial of their rights, to challenge the power of others if it is deemed illegitimate, and to resolve a situation in their favour". Empowerment is a process, by which women gain greater control over material and intellectual resources, which increases their self reliance and enhance their rights. It also enable them to organize themselves to assert their autonomy to make decision and choices, and ultimately eliminate their own subordination in all the institutions and structures of society (Malhotra, 2002). Thus empowerment of women is essential for society and their household but

it also essential for their own health. Traditionally, the health of women has been seen as synonymous with maternal or reproductive health. But this is limited concept of women's health. The current concept of women's health should be expanded to embrace the full spectrum of health experienced by women, and preventive and remedial approaches to the major conditions that afflict women (Women's Health in Today's Developing World, 2005). A woman's health is her total well-being, not determined solely by biological factors and reproduction, but also by effects of work load, nutrition, stress, war and migration, among others" (van 1991). World Health Organization 1948, health is defined as `a state of complete physical, mental, emotional, intellectual, environmental, spiritual health, and social well-being and not merely the absence of disease or infirmity' (WHO, 2004). Research on the effectiveness of empowerment strategies has identified two major pathways (Figure 1): the processes by which it is generated and its effects in improving health and reducing health disparities. Empowerment is recognized both as an outcome by itself, and as an intermediate step to long-term health status and disparity outcomes. Within the first pathway, a range of outcomes have been identified on multiple levels and domains: psychological, organizational, and community-levels; and within household/family, economic, political, programs and services (such as health, water systems, education), and legal spheres (WHO, 2006). Hence there are several studies on women's empowerment, status of women or the health of the women. However, very few studies relate the empowerment of the women with their own health in such context. Some studies conducted in developing countries shows that women are facing different type of health problems especially reproductive health problems.



Review of Literature:

Women's empowerment has been conceptualized and defined in many ways in the literature, and different terms have been used, often interchangeably, including "autonomy", "status", and "agency". Kabeer (2001), whose definition is widely accepted, defines empowerment as, "the expansion of people's ability to make strategic life choices in a context where this ability was previously denied to them." There are two central components of empowerment are agency and resources (Kabeer 2001; Malhotra et al. 2002). While Alsop Ruth, Heinsohn Nina (2005), emphasis on outcomes of empowerment. They said that Empowerment is defined as a person's capacity to make effective choices; that is, as the capacity to transform choices into desired actions and outcomes. So the body of researcher has captured this instrumental concept of women empowerment and they started to argue that women's empowerment is closely linked to

positive outcomes for families and societies (Dixon-Mullar 1987; Kishor 2000; Woldemicael 2007; Yesudian 2009; Dyson and Moore 1983; Bloom, David and Gupta 200; Murthiand Dreze 1995; Jejeebhoy 1995; Bhatia and Cleland 1995; Schuler and Hashemi 1994; Eswaran 2002; Nirula and lawoti 1998; Mason 1987; Basu and Koolwal 2005; Qureshi and Shaikh 2007; Matthews, Brookes, Stones, and Hossain 2005). But there are lto's of controversy in present literatures. Empowerment factors such as education, exposure to media and standard of living should positive relationship towards maternal health care utilization as well as full autonomy and decision makings such as staying with siblings or parents, self health care and buying important household items had significant impact on maternal health care utilization (Yesudian, 2004), but govindaswami (1997) found that education has positively related to health care utilization but it is non significant in southern states. likewise Jejeebhoy (2000) found that, in India, decisionmaking, mobility, and access to resources were more closely related to each other than to childrelated decision making, freedom from physical threat from husbands, and control over resources while Durrant and Sathar (2000), found that mothers' decision-making autonomy on childrelated issues demonstrated a weak, statistically insignificant effect on child survival. It is clear from the literature that the relationship between different aspects of women's autonomy and reproductive behaviour has not always been consistent across or within populations. Several factors may account for inconsistent relationships between women's autonomy and health or fertility outcomes. One fundamental problem that underlies the study of women's status and reproductive behaviour is how to adequately conceptualize women's autonomy. Women's autonomy is a complex and general term with many connotations that is influenced both by women's personal attributes and by the cultural norms of different groups (Makinwa and Jensen 1995). Such problems raise concerns about the definition and measurement of autonomy and have led many researchers to use indirect women's status indicators, such as educational attainment, employment, spousal age-difference, family type, etc. for women's decision-making autonomy in the analysis of reproductive behavior (Jejeebhoy 1991). This may be due to the use of different measures of empowerment that capture differing dimensions of the construct and contextual challenge of empowerment.

In a recent paper *Basu and Koolwal (2005)* has argued that there can be two kinds of empowerment, with somewhat different underlying capacities and freedom involved. They termed them as altruistic (instrumental) versus selfish notions of female empowerment and their

separate implications for a range of indicators related to women's own health and the health of their children. Although both instrumental and selfish attributes and behaviours are often lumped under a single empowerment category, the authors argue that the presence of instrumental attributes and behaviours does not constitute empowerment. In this study they measures empowerment as self-indulgence and empowerment as responsibilities. Empowerment as Selfindulgence-this category measures includes, women's ability to do thing for herself. Such as exposure to media, ability to visit friends and relatives without permission, ability that women put aside some money for her own use, decision-making for her own health care. Empowerment as Responsibility- this measures includes ability to make certain kinds of decisions and the responsibility in the household. Such as contribution in family income, ability to decision making on what to cook, to go the market or to take a sick child to the hospital. But a number of literatures has explored that women are not free in these responsibilities, they have to take permission. While empowerment is a related process whereby the less powerful gain greater control over their everyday circumstances, both material and ideological. This idea fits well with the recent suggestion by Kishor and Subaiya (2008) that studies of women's empowerment need to take into account the distinction between the autonomy a woman has as part of a more empowered couple versus the autonomy she has independent of a her spouse (i.e., joint vs. alone) and they measure empowerment as evidence, sources and setting of empowerment because this way is the best to translate the empowerment indicators in different quantitative measures (Kishor and Gupta 2004). In the paper Basu and Koolwal (2005) finds that selfish behaviours and attributes correlate more closely with women's food consumption and better reproductive health, all variables that relate to women themselves, than with child health outcomes. In addition, several of the instrumental behaviour indicators are uncorrelated or negatively correlated with women's own welfare indicators in West Bengal. But again this result cannot generalize because, India has lots of Geographical, cultural, economic, social, food behaviours diversions and empowerment is a relative's term. Some states have empowered in household decision-making power and some are in education and employment (kishor and gupta 2004). Hence due to such contextual diversion it is necessary to explore the relevant pathways of women's health for each state.

The third issues of this study is that there a much of work has been done on women's empowerment and maternal health care utilization. They have found that there is close connection between women empowerment and maternal health care utilizations (Yesudiian, 2009; Qureshi and Shaikh 2007; Matthews, Brookes, Stones William and Hossain 2005; Bloom 2001; Navaneetham and Dharmalingam, 2002). Singh and Yadav (2000) stated that literacy of women is the key to improve antenatal care of pregnant women. They also mentioned that information, education and communication (IEC) activities be targeted to educate the mothers especially in rural areas. Another study by Bloom et.al (2001) as dimensions of women's autonomy and their relationship to maternal health care utilization in North Indian cities clearly indicated that the levels of ANC is higher among younger, better educated and with fewer children. High economic status, education, and perceived problems during pregnancy all have a positive relationship to the antenatal care score. Hence, if we focused very deeply, we will found that the main purpose was of these studies is that to find out indirect relationship between women empowerment and reduction of pregnancy complication for safe motherhood. Only one study by Mistry and Galal (2009) has focused on direct relationship between women's autonomy and pregnancy care in rural India: a contextual analysis". But women autonomy is a subset of women empowerment. Empowerment is more extended concept then autonomy. It is a package of abilities to destroy the all barriers for improvement their own well-being.

NEED FOR THE STUDY

Empowerment has different meanings in different contexts, a behaviour that signifies empowerment in one setting may indicate something else in another. For example, going to the market may signify empowerment in Bangladesh, but not in Bolivia (Narayan 2006). Hence any particular model of empowerment and demographics cannot generalize for any particular place, region, religion, states or country. It is necessary to identify the pathway for empowerment and women's health outcomes in particular context, particular place, and particular states and in particular nations. It means which indicator of empowerment in relevant for women's health in which states.

As indicated by many studies, proper utilization of maternal care depends on the knowledge as well as on decision making power of women. Educated, employed women are more empowered and they are more concerned about their health. But non study has tried to identify the direct relationship between women's empowerment and pregnancy complications.

This study helps in filling the gap of the empirical literature, by measuring empowerment in terms of evidence, sources and setting of empowerment.

Objective of the study:

- > To explore the pathway of women's empowerment to women's health related outcomes.
- To identify the direct effect of women's empowerment in reduction of pregnancy complications.

Hypothesis:

- Women's level of anaemia and food consumption is negatively related to evidence, sources and settings of empowerment.
- Women's pregnancy complication is negatively related to evidence, sources and setting of empowerment.

Data

The National Family Health Surveys (NFHS) provides national and state level estimates of fertility, family planning, infant and child mortality, reproductive and child health, nutrition of women and children, the quality of health and family welfare services, and socioeconomic conditions. Present study is based on NFH-III 2005-06. The third National Family Health Survey (NFHS-3) was conducted in 2005-06. In third NFH 1, 24,385 ever and never married women were interviewed in age group of 15-49 and from all 29 states of India. NFHS-3 collected data on a large number of indicators of women's empowerment for both women and men.

Methodology and variables:

The study uses bivariate and multivariate techniques to examine the relationship between three aspects of women's empowerment and women's health outcomes. In order to empirically estimate the individual effects of household and respondent characteristics on women's food consumption and her health related outcomes logistic regression is used for all states data set.

Variables

Independent variable:

Kishor's and Gupta (2004), conceptual framework, have lot of common thing with those proposed by Kabeer (1999). For example, Kabeer's conceptualization of empowerment in terms of agency, resources, and achievements, are similar to the concepts of sources and evidence of empowerment. Thus this study will use Kishor's and gupta's framework, because it is the best facilitates the translation of 'empowerment' as a concept into meaningful quantitative measures available from of cross-sectional data. So, in present study independent variables related to women's empowerment has divided into three categories, Evidences, Sources and Setting of empowerment.

Evidences of Women Empowerment: Two sets of indicators of evidence of empowerment are available in NFHS-III. The first set purports to measure women's degree of control over their environment by measuring their participation in household decision-making and their freedom of movement. The second set addresses women's attitudes with regard to gender equality. This set includes women's justification for wife beating and their different reason for not having sex with the partner.

Sources of Women Empowerment: These indicators measure women's access to education, the media and meaningful employment.

Setting of Women Empowerment: These indicators focus on the circumstances of women's lives, which reflect the opportunities available to women. Hence in this category living slandered of women and type of residence has been taken in present study.

The dependent variables include:

Women's health outcome variables like nutrition's level, anemia level. Anemia is important from the women's empowerment perspective because we know that anemia is a major accomplice in poor reproductive health outcomes and a women's ability to prevent it depends more on her knowledge of anemia prevention and on how much of the iron-rich food she can consume than her ability to consume high status food. For measuring nutrition's level food consumption have been taken in present study. Reproductive health problem such as pregnancy complications such as during pregnancy daylight vision, night blindness, convulsions not from fever, leg, body or face swelling, excessive fatigue, during pregnancy: vaginal bleeding.

<u>Result</u>

To understand the table in a better way we divide the whole India in six regions like north (Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan and Uttaranchal), Central (Chhattisgarh, Madhya Pradesh and Uttar Pradesh), East (Bihar, Jharkhand, Orissa and West Bengal), Northeast (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura), West (Goa, Gujarat and Maharashtra), South (Andhra Pradesh, Karnataka, Kerala, Tamil Nadu). There are large numbers of indicators of women empowerment in NFHS-III data. Hence for easier, only dimension of empowerment has been taken.

Table 1.1: In NFHS-III, there are number of variable of evidence of empowerment for selected states. But in present study only dimensions of evidence of empowerment has been taken. Such as women have power for refusing sex if her husband has STD or her husband have sex with other women or she feels tired or not in mood. Second dimension is women's decision making power for use of contraceptives or spend of money in households or decision for own health or large purchasing for households or daily needs purchasing for households. Third dimension is women's support for wife beating by partner if she burn foods or if she goes without telling him or if she neglects children or if she argue with him or if she refuse sex with him. Fourth dimension of evidence of empowerment is freedom of movement of women to go to visit relatives and friends or to go to the outside of the village and community or to go to the market or to go to the health facilities. Table 1.1 presents percentage these dimensions of evidence of empowerment for all 29 states of India. Table shows that women Sikkim have highest percentage in refusing for different reasons; hence these women have control on her own body, while women of Mizoram have highest percentage for freedom of movement. But For decision making women of all states have less for power and nearly more than fifty percent women supports for wife beating in all selected 29 states of India.

Table 1.2: Table 1.2 presents dimension of sources of empowerment such as women are educated or not, women's have exposure to media (reading news paper magajizens or listening radio or watching television), women's work type (paid or not paid). According to this table percentage of educated women is higher in Kerala and lowest in Rajasthan while media exposure

is highest in Northeast (Manipur, Nagaland) and south (Tamil Nadu and Kerala). In Delhi, Kerala, Tamil Nadu, West Bengal, Assam more than ninety percent women are getting paid in Cash or kinds or both. But in Uttaranchal 60 percent women get nothing for their work, which reflects their low status to empowerment.

Table 1.3: Table 1.3 shows percentage of dimension's setting of empowerment. There four dimension in this table. First related to women's age at first marriage, is it 18-30 or not. Because An early age at marriage can cut short women's access to education and the time needed to develop and mature unhampered by the responsibilities of marriage and children. In addition, a very young bride tends to be among the youngest members of her husband's family and, by virtue of her age and relationship, is unlikely to be accorded much power or independence. It is, thus, usually assumed that low ages at marriage are negatively associated with women's empowerment. Percentage of such women, who get marry in particular this within age is highest in Kerala and percentage of such women not get marry within this year is highest in Mizoram. Second dimension is age gap with partner. A person's relative age is a resource which can affect the perception of strength when power and entitlements are negotiated within the cooperative conflict context of the family (Sen, 1990). In present study it can assume that women, whose age gap with partner is less than five year is more empowered compare to whose age gap is more than five year. Third and fourth dimension is wealth index and type of residence. Poverty is huge net for entire development, including human development also. In present wealth index and type of residence has been divide in two groups: rich or poor and urban or rural respectively. Table shows that percentage of poor and rural women highest among all 29 states compare to rich and urban women.

Table 1.4: Table 1.4 presents existence of anemia in women, women food consumption and percentage of pregnancy complications. If women are suffering any anemia such as severer anemia or moderate anamia or mild anemia, has been include for the analysis. If we focus in this table 1.4 we found that more that 50 of all Indian women suffering from anemia. Table shows that existence of anemia in women is highest in Bihar (67.85%), Kerala (66.97) and Goa (62.97) while in Manipur and Punjab existence of anemia in women is low among 29 states. NFHS-III asked to women if she consumed: milk or curd or she consumed: pulses or beans or she consumed: dark green leafy veggies or she consumed: fruits or mother consumed: eggs or she

consumed: fish or she consumed: chicken or meat, daily or weekly or occasionally or never. But in present women's who consumed such items at least once in a week has been presents in table 1.4. If they are consuming these at least once in week (Yes) or never (No). Against the anemia level, picture of food consumption is good for all selected states, more than ninety five percent women consuming such items at least one in week. But again figure of pregnancy complications is poor. Indian government has introduce a number of policies for safe motherhood but unfortunate a large percentage of women suffering from daylight vision, night blindness, convulsions not from fever, leg, body or face swelling, excessive fatigue, vaginal bleeding during pregnancy. Table 1.4 shows that in Bihar 32.95 percent women had suffered from these complications during her pregnancy and in Mizoram, Tripura, Uttar Pradesh, Jharkhand nearly one third women had suffered from pregnancy complications.

Table 1.5: Table 1.5 presents the odds associated with existence of anemia among women with respect to evidence of empowerment in India and its 29 states. Table considers the four models based on the evidence of empowerment. Model 1 assumes women have power to refuse the sex with partner. It's denotes women control on her body and it is assumed as very important reason for domestic violence and it indirectly related to women health outcoms.Model 2 assumes women agreements for wife beating, Model 3 decision making power and Model 4 consider the freedom of movement. Model1 is inversely related to existence of anemia in Indian women while Model2, is positively related to existence of anemia, while model 3 and 4 shows mixed result. In northern states of India, except Delhi, freedom of movement is most significant for reducing anemia level. Whereas in central east, west and south states women supports for wife beating are most relevant elements. In Jammu & Kashmir and Nagaland, women who have control on their own body, are 38 percent and 24 percent less likely to face anemia problem than the other one respectively. In Orissa and Kerala, women who have decision making power, are 13 and 15 percent and 24 percent less likely to face anemia problem than the other one who have not respectively. In northeast model1 model2 model3 and model4 show mixed result. In present models existence of anemia and evidence of empowerment model 2 (women supports for wife beating) is more relevant model for existence of anemia with evidence of empowerment in India women. It means that women who supports wife beating by their husband have higher chance to become anemic.

Table 1.6: Table 1.6 presents odds ratio for existence of anemia and source of women empowerment. In this table Model 1 associate with education and existence of anemia. Odds ratio describe that all states have negative and significant relationship between existence of anemia and education. In North states only Himanchal Pradesh and Haryana have positive relationship and in Uttaranchal and Haryana exposure to media is positive related but non significant, while other states has negative relationship. It shows that women if exposure to media wills high then existence of anemia will low. In Haryana women who are educated have 28 percent less chance to become anemic as compared to no education women. In central, east and west states all dimension of source of empowerment is negatively related and significant. In northeast women education has negative and significant relationship. Model2 show that exposure to be positive and less significant in Manipur, Assam and Meghalaya. This table shows that in south education and women's paid work is highly related to existence of anemia. In states like Kerala and Tamil Nadu women who are paid workers have about 19 percent less chance to get anemic. But when we see the table for all India we found that at national level both work type and education is not showing the significant effect on women's health condition in terms of anemia, whereas media exposure helps to reduce it.

Table 1.7: Table 1.7 presents odds ratio for existence of anemia and setting of empowerment. In Model 1 odds ratio for existence of anemia and wealth index is always negative related with highly significant for all regions of India except Himachal Pradesh, Punjab and Nagaland. If this figure shows that poverty is one of the main components for existence of anemia level for all Indian women. Model 2 describes odds ratio for existence of anemia and type of residence. This model shows a mixed result. Urban area is positively related in some states like while it negatively related in few states.

Table 1.8: Table 1.8 presents the odds associated with the food consumption of women with respect to *e*vidence of empowerment in India and all selected 29 states. Table considers the four models based on the evidence of empowerment. Model 1 assumes women have power to refuse the sex with partner. It's denotes women control on her body. Model 2 assumes women agreements for wife beating, Model 3 decision making power and Model 4 consider the freedom of movement. In northern region of India we observed that the women with higher freedom of

movement are more likely to increase the nutritional food consumption Analysis shows that in Punjab women, who had more control on their own body in terms of refusing sex, are two times more aware about to consume the nutritional food than the women who had not any control on their body. Results also indicate that the wife beating and food consumption is negatively related, it means that the women who are beaten by their husband have low nutritional status in all northern states except Delhi in India. As we all know nutritional status of women is reflection of social as well as economic causes, and in Delhi it may be because of social problem not from economic reason. In the central region of India, in Chhattisgarh nutritional food consumption is 84 percent higher among females with control on their own body than the women who had no control. Results indicates that freedom of movement is not much affecting the nutritional food consumption by women in Chhattisgarh and UP, whereas in Madhya Pradesh women with freedom of moment, nutritional food consumption is two times higher than the women with no freedom. In Eastern region of India women supports for wife beating reduces the consumption of nutritional food and decision making power is positively associated with nutritional food consumption in all eastern region except Jharkhand. In Orissa and Bihar women who have control on their body are two times more likely to consume nutritional food as compared to women who had not any control. Results reveal that women with freedom of movement are four times more likely to consume nutritional food than the women with low level of freedom in Tripura, whereas in Assam, Arunachal Pradesh, Sikkim and Meghalaya the freedom of movement does not affect the level consumption of nutritional food and also negatively correlated, while decision making power is significant. Assam women, who have power of decision making, are four times more likely to consume nutritional food than the women have no power. In south states women's control on her own body is strongly related to food consumptions. In Kerala, Karnataka women, who have control on her own body in context of refusing sex, are two times more likely to consume nutritional food than the women have no control.

Therefore the table summarizes that in India and its all states where the women are empowered, nutritional food consumption is high. Freedom of movement is most important affecting the consumption level.

Table 1.9: Table presents the odds associated with the food consumption habit of women with respect to source of empowerment like educational status, media exposure and type of work in India and states. Table considers the three models based on the source of empowerment. In north India women's exposure to media and education is more significant variable source of empowerment, while in East (Bihar, Jharkhand, and West Bangle) and central (Madhya Pradesh and Uttar Pradesh) media exposure is more relevant element for food consumption. Orissa is only one state, where women's paid work is highly significant with women's food consumption. In Orissa women's food consumption if four times more likely higher then such women, whose work is not paid. One important finding indicates that paid females in Maharashtra. In southern states like Kerala, Tamil Nadu and Karnataka all the sources of empowerment are positively associated with nutritional food consumption level but both media exposure and education level are much affecting.

Therefore from above we can conclude that in northern states of India nutritional food consumption level is much affected by media exposure than the other sources of empowerment whereas in southern region.

Table 1.10: Table 1.10 presents odds ratio for food consumption and setting of empowerment. In this table model1 is associated with wealth index (rich or poor) and model 2 is associated with type of residence. All north states show a good result. In Haryana women who are rich 14 times more likely consume nutrition food than poor women, while in Rajasthan, Punjab, and Himanchal Pradesh women who are rich 3 times more likely consume nutrition food than poor women but type of residence show mixed result. It is negative in J & K, Punjab and Himanchal Pradesh. Central states have also good relations. Women of Madhya Pradesh 12 times more like nutritional food compare to poor women and 4 times compare to rural women. In central only Uttar Pradesh has negative relationship between type of residence and food consumption. In East and west setting of women 32 times more likely consume nutritional food compare to poor women and a times compare nutritional food compare to poor women and a present to rural women. In central only Uttar Pradesh has negative relationship between type of residence and food consumption. In East and west setting of women 32 times more likely consume nutritional food compare to poor women 32 times more likely consume nutritional food compare to poor women and present is always has positive relationship with food consumption. In Goa rich women 32 times more likely consume nutritional food consumption.

Table 1.11: Table 1.11 presents the odds ratio for any pregnancy complication on the basis of evidence of empowerment. Table clearly points out that in northern states like Jammu & Kashmir, Uttaranchal, Haryana, Delhi, Rajasthan source of empowerment are negatively associated with any pregnancy

complications. In states like Punjab, Uttaranchal and Haryana women, who have decision making power are less likely to face any pregnancy complications than the women who have no decision making power. When we move through central region of India, we found that women who have decision making power, or not supports for wife beating or who have control on their body have less any type pregnancy complication than the other one. In Bihar who has not decision making power are two times less likely to face pregnancy complication. Almost same type of results we are getting for all states in India. In West Bengal women, have control on their body, are 76 percent less likely to face any pregnancy complication. Also in Nagaland women, have control on their body, are three times less likely to face any pregnancy complication. At national level women who have decision making power are about 37 percent more likely to face pregnancy complication as compared to those who have not. Also women who are exposed of media are 72 percent less likely to face pregnancy complication than the non exposed females in India.

Thus the table concludes that empowered women are less likely to face pregnancy complication in India and states.

Table 1.12: Table 1.12 presents the odds ratio for any pregnancy complication on the basis of Source of empowerment like education, type of earning and media exposure. Table clearly points out that in northern states like Jammu & Kashmir, Uttaranchal, Haryana, Delhi, Rajasthan source of empowerment are negatively associated with any pregnancy complications. In states like Punjab women, who are educated, are 69 percent less likely to face any pregnancy complications than the uneducated women. Also in Rajasthan and Punjab media exposure not reduces the pregnancy complications. When we move through central region of India, we found that women who are paid workers have high pregnancy complication than the non-paid workers. It may be due to the fact that society being patriarchal in nature, and wide spread poverty women have to look after their family responsibilities and other related issues other all related conditions including pregnancy. Same thing is also happening in case of Bihar. But in other eastern region like West Bengal, Jharkhand and Orissa pregnancy complication is negatively correlated with any pregnancy complications. Results show that women who are exposed to media are 67 percent less likely to face pregnancy complication in Jharkhand. But for southern region results are contradicting the fact that education level reduces the pregnancy complication. Results clearly indicating that in Karnataka and Kerala women are who are educated face two times more pregnancy complications as compared to uneducated. Northeast zone also indicates towards the negative association between pregnancy complications and education, media exposure

and work type of the women. In northeast media exposure plays the significant role in reducing the pregnancy complications than the other sources of empowerment.

Therefore from the above table we can summarize that media exposure is the most important factor in order to decline the level of pregnancy complications in India.

Table 1.13: presents the odds ratio for any pregnancy complication on the basis of setting of empowerment in terms of wealth index and place of residence. Table points out that in northern region of India both wealth index and place of residence play important role in order to reducing the pregnancy complications. In Himachal Pradesh women and Punjab women, who are non poor, are 90 percent less likely to face pregnancy complication. When we see the results for central zone of India, we noticed that in Madhya Pradesh and Chhattisgarh urban women have about 95 percent less likely to face pregnancy complication. The main reason behind this result work status of urban women. In eastern region both wealth index and place of residence are inversely related to pregnancy complication. In eastern states like Bihar, West Bengal and Jharkhand women's economic status and urban place of residence help to reduce about 50 percent pregnancy complication. Also in northeast zone of India if women are living in urban region and also economically strong then they faces less pregnancy complication.

At national level women who are non poor have 67 percent and who are living in urban region have 86 percent less pregnancy complication. Thus the table concludes that both wealth index and place of residence play very important role to empower the women in India and states.

Conclusion: This entire analysis show a mixed result as other literatures has found. Any particular model for determination of women's health cannot generalize. The main issue of behind this problem is lots of challenges for measuring empowerment and conceptualization of empowerment. Some states have empowered in context of some while some in others. Hence, we can follow only a most significant element of empowerment in determination on women health and reducing pregnancy complications for particular states of India. In north states for reducing anemia, freedom of movement, women supports for wife beating, type of residence and wealth index is more important components. In east states women all variable of source and settings of empowerment are significant in existence of anemia. In both south and west states women

supports for wife beating, education and paid work, wealth index and type of residence are more significant in reducing anemia. In northeast education of women and paid work is main determinates for reducing anemia in women. For nutritional food consumption women freedom of movement, exposure to media and wealth index is most important in north states. In central east and west states exposure to media, wealth index and type of residence are important components for consuming nutritional food, while in south states women's exposure to media one of the best for nutritional food intake by women. In north states education, women support for wife beating and wealth index has negative and significant relationship with pregnancy complications. In central states decision making power, exposure to media are highly significant. In east states all variable for important for reducing pregnancy complications while in south states freedom of movement, exposure to media and women's paid work is important components for reducing pregnancy complications. In these entire analysis wealth index is an important for determinants of women's health. For the policy implementation, suggestion of the study is follow up the relevant pathway for improving women health conditions through women empowerment for particular state. Such as If exposure to media of women is significant in east states then government of east states should focused on media exposure like radio television and news papers for improving women health. If freedom of movement is significant for north states then government of these states should focused on women freedom of movement for improvements in women health.

References:

- Alsop Ruth, Mette Frost Bertelsen and Jeremy Holland (2005): "Empowerment in Practice: from Analysis to Implementation", World Bank. www.econ.upd.edu.ph/opac/list.php?year=2006&month=05 - 82k
- Bloom, Shelah,S.,Wypij, David.,s Gupta, Monica., (2001)" Dimensions of women's Autonomy and the Influence on Maternal Health Care Utilization in A North Indian City", Demography- vol 38, number 1,67-78.
- Basu A. M. and Koolwal G. B (2005):"Two Concepts of Female Empowerment: Some leads from DHS Data on women's status and reproductive health". A Focus on Gender, Collected Papers on Gender using DHS Data. <u>www.measuredhs.com</u>
- 4) Bhatia J. C. and Cleland J (1995): "Health-care seeking and expenditure by young Indian mothers in the public and private sectors". Health Policy and Planning; 16(1): 55-61.
- 5) Dixon & Mueller, (1998): Female *Empowerment and Demographic Processes: Moving Beyond Cairo* Policy and Research Paper N°13.
- 6) Durrant V.L., Sathar Z.A (2000): "Greater investments in children through women's empowerment: the key to demographic change in Pakistan?" Paper presented at the Annual Meeting of the Population Association of America, Los Angeles, USA
- 7) Dyson, T. and Moore, M (1983): "On Kinship Structure, Female Autonomy, and Demographic Behavior in India". *Population and Development Review* 9(1): 35-90.
- 8) Dreze, Jean and Murthi, Mamta, (2000): "*Fertility Education and Development*", Discussion Paper No. DEDPS 20.
- Eswaran, Mukesh (2002): "The empowerment of women, fertility, and child mortality: Towards a theoretical analysis", *Journal of Population Economics*, Vol. 15, No. 3 (Aug), 433-454.
- 10) Govindasamy, Pavalavalli and Ramesh B.M. (1997): "Maternal Education and the Utilization of Maternal and Child Health Services in India", National Family Health Survey Subject Reports. .
- 11) Hadley Craig, Brewis Alexandra and Pike Ivy. (2010), "Does Less Autonomy Erode Women's Health? Yes. No. Maybe", *American Journal of Human Biology* 22:103–110.
- 12) Hope Ruth.(2007). "Women's empowerment and HIV prevention donor experience", Unedited Draft by OECD <u>www.oecd.org</u>
- 13) ICPD, 1994: <u>www.un.org</u>.
- 14) Jeheebhoy J. Shrieen (1995): "Women's Education, Autonomy, and Reproductive Behaviour: Experience From Developing Countries"

- 15) Jejeebhoy, Shireen and Zeba Sathar 2001 "Women's autonomy in India and Pakistan: The influence of Religion and Region" *Population and Development Review*, Volume 27, 687-712.
- 16) Kishore, Sunita and Gupta, Kamala, (Feb. 2004), "Women's Empowerment in India and Its States: Evidence from the NFHS", *Economic & Political Weekly*, Vol. 39 (Feb), 694-712.
- 17) Kishor S, Subaiya L. 2008. Understanding women's empowerment: a comparative analysis of demographic and health surveys (DHS) data. DHS comparative reports no. 20. Calverton, MD: Macro International. <u>www.measuredhs.com</u>
- 18) Kabeer, Naila. 2001. "Reflections on the measurement of women's empowerment." In Discussing Women's Empowerment-Theory and Practice. Sida Studies No. 3. Novum Grafiska AB: Stockholm.
- 19) Kamiya, Yusuke (2010): "Endogenous Women's Autonomy and the Use of Reproductive Health Services: Empirical Evidence from Tajikistan", OSIPP Discussion Paper : DP-2010-E-010.
- 20) Malhotra. Anju, Sidney Ruth Schuler & Carol Boender(2002), "Measuring Women's Empowerment as a Variable in International Development", <u>www.letkidslead.org/</u> Leadershipand Democracy/upload/MeasuringWomen.pdf.
- 21) Mason,K aren, and Herbert Smith,(1 999)," Female Autonomy and Fertility in Five Asian Countries" Paper presented at the Annual Meeting of the Population Association of America, New York, (March) 25 -27.
- 22) Matthews Zoë, Brookes Martyn, Stones William R., and Hossain Bazle Mian (2005):
 "Village in the city: autonomy and maternal health-Seeking among slum population in Mumbai" A Focus on Gender, Collected Papers on Gender using DHS Data.
 www.measuredhs.com
- 23) Mistry & Galal (2009): "Women's autonomy and pregnancy care in rural India: a contextual analysis" *Social Science & Medicine* Volume 69, Issue 6, (Sept.) 926-933
- 24) Mason Oppenheim Karen, (1987): "The Impact of Women's Social Position on Fertility in Developing Countries" *Sociological Forum*, Vol. 2, No. 4, 718-745
- 25) Navaneetham K. and Dharmalingam A.(2002): "Utilization of Maternal Health Care in South States of India. <u>www.cds.edu</u>
- 26) Narayan, Deepa(2002), " *Empowerment and Poverty Reduction: A source Book*", <u>www.worldbank.com</u>
- 27) National Family and Health Survey- III, 2005-06, International Institute for Population Sciences, Mumbai, Department of family Welfare, Government of India.
- 28) Ndunge Kiiti, Mara Pillinger, Monique Hennink, Mick Smith and Ravi Jayakaran, (2009): "The Intersection between Religion, Health and Empowerment", A Research Study Conducted among International Development Organizations. <u>www.arhap.uct.ac.za</u>
- 29) Niraula B. Bhanu and Lawoti Dovan, (1998): "Women Autonomy and Reproductive Behavior in Two Urban Areas of Nepal" <u>www.thenepaldigest.org</u>

- 30) Qureshi and Shaikh (2007): "Women Empowerment and health: the role of institution of power in Pakistan" *Eastern Mediterranean Health Journal*, Volume 13 No. 6 Pp6-23.
 www.emro.who.int
- 31) Roushdy, Rania (2004): "Intrahousehold Resource Allocation in Egypt: Does Women's Empowerment Lead to Greater Investments in Children?" Working Paper 0410, <u>www.erf.org.eg</u>
- 32) Sathar, Ayesha, Zeba and Kazi Shahnaz, (2000): "Women's Autonomy in the Context of Rural Pakistan", *The Pakistan Development Review* 39: 2 (Summer 2000) Pp. 89–110.
- 33) Singh, P. and Yadav, R.J, (2000)," Antenatal Care for Pregnant Women in India" *Indian Journal* of Community Medicine, 25(3): 112-7
- 34) Upadhyay D. Ushma,(2009): "Women's empowerment and Achievement of Desired Fertility in Sub-saharan Africa", PAA Extended Abstract Submission (Sept) 21
- 35) UNFPA, 2005: State of world Population 2005, the promise of equality: gender equity, reproductive health and the Millennium Development goals, UNFPA. (http://www.un.org/millennium/declaration/ares552e.htm.s
- 36) Van der Kwaak A, (1991): Women and health. *Vena Journal* 3(1):2-33. http://www.globalhealth.org/womens_health.
- 37) Woldemicael, Gebremariam (2007): "Do women with higher autonomy seek more maternal and child health-care? Evidence from Ethiopia and Eritrea", MPIDR working paper WP 2007-035.
- 38) Wang, Guang-zhen and Pillai K. Vijayan (2001): "Women's Reproductive Health: A Gender- Sensitive Human Rights Approach", Acta Sociologica, Vol. 44, No. 3 (2001), pp. 231-242.
- 39) WHO (2006): "What is the evidence on effectiveness of empowerment to improve health? Regional Office for Europe's Health Evidence Network (HEN) February. www.who.int/2006
- 40) WHO (2004): "The world health report 2004 changing history" http://www.who.int/whr/2004
- 41) Yesudian, P.Princy. (2009): "Synergy between Women's Empowerment and Maternal and Peri-natal Care Utilization", Sessiion 168,, IUSSP 2009.

Table 1.1 Evidence of Empowerment

	Differen	t reason	Decision making		Support for Wife		Freedom of		
	for refu	sing sex	power		Bea	Beating		Movement	
States	Yes	No	Yes	No	Yes	No	Yes	No	
J & K	85.7	14.3	22.37	77.63	58.16	41.48	73.18	26.82	
НР	93.19	6.81	37.44	62.56	20.27	79.73	84.18	14.46	
Punjab	91.65	8.35	42.8	57.2	42.05	57.95	58.94	41.06	
Uttaranchal	93.17	6.83	32.01	67.99	41.37	5863	63.87	36.13	
Haryana	90.04	9.06	39.69	60.31	41.8	58.2	57.13	42.87	
Delhi	86.88	13.12	42.58	57.42	25.19	74.81	80.73	19.27	
Rajasthan	95.86	4.14	33.27	66.73	49.19	50.81	56.51	43.49	
UP	91.17	8.83	34.35	65.65	36.22	63.78	51.77	48.23	
Bihar	94.19	5.81	31.94	68.06	45.18	54.82	51.08	48.92	
Sikkim	98.35	1.65	40.07	59.93	59.93	40.07	88.97	11.03	
Aru. P	88.47	11.53	48.96	51.04	61.27	38.73	74.94	25.06	
Nagaland	91.84	8.16	38.75	61.25	70.54	29.46	66.68	33.32	
Manipur	93.55	6.45	36.69	63.31	79.88	20.21	78.61	21.39	
Mizoram	93.93	6.07	40.42	59.58	71.79	28.21	96.61	3.39	
Tripura	74.54	25.46	33.91	66.09	45.33	54.67	65.25	34.75	
Meghalaya	79.26	20.74	25.92	74.08	47.46	52.54	70.92	29.08	
Assam	87.06	12.94	19.53	80.47	35.92	64.08	71.97	28.03	
West Bengal	85.99	14.01	37.78	62.22	27.59	72.41	61.94	38.06	

Jharkhand	94.96	5.04	26.92	73.08	40.54	59.46	57.6	42.4
Orissa	83.22	16.76	37.15	62.85	49.93	50.07	35.88	64.12
Chhattisgarh	95.72	4.28	33.43	66.57	24.47	75.53	53.61	46.39
MP	96.71	3.29	36.6	63.4	31.45	68.55	61.66	38.34
Gujarat	86.61	13.39	50.6	49.3	51.46	48.54	69.19	30.81
Maharashtra	80.67	19.33	43.7	56.3	39.51	60.49	74.46	25.54
AP	76.75	23.25	33.73	66.27	54.95	45.05	61.54	38.46
Karnataka	83.73	16.37	32.26	67.74	59.79	40.66	52.97	47.03
Goa	86.73	13.27	37.57	62.43	34.62	65.38	81.61	18.39
Kerala	80.86	19.14	35.86	64.14	56.79	43.21	64.89	35.11
Tamil Nadu	83.31	16.69	49.52	50.48	65.01	35.99	88.36	11.64
ALL	87.97	12.3	36.62	63.38	45.7	54.3	65.33	34.67

	Education level		Media e	exposure	Type of work		
States	Educated	Not Educated	Yes	No	Paid	Not Paid	
J & K	59.88	40.12	87.87	12.13	67.59	32.41	
НР	84.1	15.9	92.08	7.92	52.86	47.14	
Punjab	71.6	28.4	90.87	9.13	88.04	11.96	
Uttaranchal	67.92	32.08	81.25	18.75	39.51	60.49	
Haryana	61.57	38.43	76.21	23.79	75.6	24.4	
Delhi	74.1	25.9	95.19	4.81	96.42	3.58	
Rajasthan	41.33	58.67	58.02	41.98	74.5	25.5	
UP	51.86	48.14	76.18	23.82	81.85	18.15	
Bihar	44.82	55.18	64.52	35.48	81.2	18.8	
Sikkim	76.53	23.47	89.37	10.63	81.83	18.17	
Aru. P	58.87	41.13	82.51	17.49	61.45	38.55	
Nagaland	80.89	19.11	87.05	12.95	61.16	35.84	
Manipur	79.88	20.12	98.87	1.13	87.28	12.71	
Mizoram	91.11	5.89	96.19	3.81	65.44	34.56	
Tripura	78.34	21.66	84.11	15.89	87.17	12.83	
Meghalaya	74.59	25.41	82.22	17.78	63.64	36.36	
Assam	71.91	28.09	82.11	17.89	90.19	9.81	
West Bengal	69.04	30.96	85.52	17.48	90.61	9.39	
Jharkhand	46.96	53.04	59.92	40.08	63.01	36.99	
Orissa	63.46	36.54	79.61	20.39	86.12	13.88	

Table 1.2 Sources of Empowerment

Chhattisgarh	54.2	45.8	80.18	19.82	55.13	44.87
MP	60.61	39.39	75.4	24.6	73.92	26.08
Gujarat	67.25	32.75	81.01	18.99	66.63	33.37
Maharashtra	81.97	18.03	89.01	10.99	82.08	17.92
AP	65.81	34.19	88.51	11.49	90.06	9.94
Karnataka	65.81	34.19	83.17	16.83	76.22	23.78
Goa	86.97	13.03	94.98	5.02	87.52	12.48
Kerala	96.17	3.83	97.16	2.84	93.78	6.22
Tamil Nadu	80.01	19.99	96.34	3.66	92.3	7.7
ALL	68.08	31.92	83.58	16.42	77.55	22.45

	Age at First Marriage		Age Gap		Wealth Index		Type of Residence	
States	Yes (18-	No (less or	Yes	No	Rich	Poor	Urban	Rural
	30)	more than 18- 30)	(5>)	(5<)	(yes)	(No)	(yes)	(yes)
J & K	62.6	37.4	36.5	63.5	17.3	82.7	32.9	67.1
НР	69.6	30.4	40.6	59.4	13.5	86.5	28.8	71.2
Punjab	66.9	33.1	40.6	59.4	15.6	84.4	35.4	64.6
Uttaranchal	65.2	34.8	35.8	64.2	25.3	74.7	30.1	69.9
Haryana	67.7	32.3	32.3	67.7	22.7	77.3	26.6	73.4
Delhi	64.1	35.9	33.8	66.2	5.4	94.6	92.7	7.3
Rajasthan	65.4	34.6	28	72	54.6	45.4	35	65
UP	70.8	29.2	36.3	63.7	47.6	52.4	42.3	57.7
Bihar	72.3	27.7	36.5	63.5	47	53	39.3	60.7
Sikkim	60.8	39.2	47.1	52.9	12.9	78.1	39.5	60.5
Aru. P	58.3	41.7	40.9	69.1	40.7	59.3	31.9	68.2
Nagaland	57.4	42.6	36.8	63.2	23.8	76.2	51.1	48.9
Manipur	52.4	47.6	45.7	54.3	12.6	87.4	45.1	54.9
Mizoram	46.3	53.7	41.2	58.8	28.3	71.7	54.3	45.7
Tripura	67.5	32.5	43.8	56.2	26.8	73.2	24.4	75.6
Meghalaya	59.6	40.4	40.4	59.6	34.3	65.7	44.4	55.6
Assam	72.5	27.5	33.1	66.9	34.9	65.1	32.1	67.9
West Bengal	69.7	30.3	31.1	68.9	47.6	52.4	53.6	46.4
Jharkhand	68.4	32.6	33	67	74.3	25.7	38.5	61.5

Table 1.3 Setting of Empowerment

Orissa	78.4	21.6	31.6	68.4	62.9	37.1	30.5	69.5
Chhattisgarh	70.5	29.5	35.3	64.7	57	43	33.7	66.3
MP	75.7	24.3	31.4	68.6	57.8	42.2	52.5	47.4
Gujarat	64.3	35.7	39.7	60.3	30.7	69.3	42.7	57.3
Maharashtra	67.7	32.3	37.5	62.5	39.1	60.9	70.8	29.2
АР	69	31	31.5	68.5	36.3	63.7	64.6	35.4
Karnataka	63.7	36.3	34.5	65.5	29.5	70.5	38.1	61.9
Goa	59.5	40.5	42.6	57.4	24.7	75.3	49.8	50.2
Kerala	73.1	29.6	34.6	65.4	17.1	82.9	35.1	64.9
Tamil Nadu	74	26	34.5	65.5	37.7	62.3	54	46
ALL	66.5	33.5	36	64	44.4	55.6	45.8	54.2

	Existence of		Pre	gnancy	Food		
	Anemia	a	com	plication	Cons	sumption	
States	Yes	No	Yes	No	Yes	No	
J & K	51.74	48.26	15.51	84.49	97.17	2.83	
HP	42.37	57.63	12.16	87.84	92.32	7.68	
Punjab	38.05	61.95	15.24	84.76	93.54	6.46	
Uttaranchal	55.12	44.88	21.06	78.94	95.63	4.37	
Haryana	56.27	43.73	11.09	88.91	96.37	3.63	
Delhi	44.81	55.19	13.85	86.15	98.22	1.78	
Rajasthan	53.1	46.9	18.61	81.39	95.64	4.36	
UP	48.85	51.15	21.04	78.96	97.44	2.56	
Bihar	67.85	32.68	32.19	67.81	98.88	1.12	
Sikkim	58.14	41.86	16.15	83.85	98.9	1.1	
Aru. P	50.46	49.45	25	75	98.38	1.62	
Nagaland	na	na	17.88	82.12	94.61	5.39	
Manipur	35.94	64.06	13.61	86.38	99.46	0.54	
Mizoram	38.97	61.03	22.92	77.08	94.35	5.65	
Tripura	65.49	34.51	24.01	75.99	99.55	0.45	
Meghalaya	46.2	53.8	21.9	78.1	93.17	6.83	
Assam	31.1	31.1	18.36	81.61	99.14	0.86	
West Bengal	39.56	60.44	17.65	82.35	99.61	0.39	
Jharkhand	32.26	67.72	28.67	71.33	90.88	9.12	
Orissa	39.28	60.72	16.85	83.15	98.59	1.41	
Chhattisgarh	43.56	56.44	17.02	82.98	96.81	3.19	
MP	49.07	50.93	19.88	80.12	94.85	5.15	
Gujarat	44.58	55.42	19.22	80.78	99.23	0.77	
Maharashtra	51.09	48.91	11.34	88.66	97.08	2.92	
АР	41.66	58.34	7.89	92.11	99.66	0.34	
Karnataka	48.24	51.76	10.56	89.44	99.27	0.73	
Goa	62.97	37.89	14.38	85.62	99.08	0.92	
Kerala	66.97	33.03	18.18	81.82	98.74	1.26	
Tamil Nadu	47.31	52.69	11.93	88.07	99.08	0.92	
ALL	46.32	50.33	10.89	83.11	97.37	2.63	

Table 1.4 Existence of Anemia, pregnancy complication and Food Consumption

Table 1.5 Odds Ratio Between for Existence of Anemia and Evidence of

Empowerment

	Odds ratio For Existence of Anemia and evidence of								
		emp	owerment						
States	Model 1	Model 2	Model 3	Model 4					
J & K	1.385541	1.041742	1.282747	0.683543					
HP	0.785112	0.969588	1.190427	0.98331					
Punjab	0.970107	1.175615	1.083076	0.864413					
Uttaranchal	0.830935	1.100447	0.927529	0.915797					
Haryana	0.782946	1.034784	1.100455	0.876522					
Delhi	1.178279	1.055441	0.8948	1.178279					
Rajasthan	1.239569	1.293301	0.978484	0.962686					
UP	0.999765	1.162921	1.035201	0.930553					
Bihar	0.774779	1.081005	1.201477	0.92898					
Sikkim	0.346029	1.127496	0.907163	0.89056					
Aru. P	0.733063	0.87096	0.988999	0.998917					
Nagaland	na	na	na	na					
Manipur	1.213587	0.876446	1.197212	1.19148					
Mizoram	1.007391	0.917139	1.214903	0.823266					
Tripura	0.87907	1.00069	0.938313	1.353613					
Meghalaya	0.859937	1.454857	0.774062	0.930803					
Assam	0.727693	1.089776	1.007893	1.104478					
West Bengal	0.977409	1.180749	1.069584	0.891549					
Jharkhand	0.623489	1.112239	0.958046	1.058538					
Orissa	1.013841	1.30201	1.137077	1.007514					
Chhattisgarh	0.823537	1.071978	0.868425	1.023777					
MP	1.2644	1.383798	1.052169	0.752094					
Gujarat	0.794534	1.19949	0.997474	0.859534					
Maharashtra	0.910599	1.146681	1.019194	0.929271					
AP	0.895805	1.243132	0.93164	0.824818					
Karnataka	0.939417	1.141269	0.987541	1.032577					
Goa	1.106289	1.091549	0.999408	0.766758					
Kerala	1.042475	1.340283	1.135295	0.767424					
Tamil Nadu	0.935041	1.169652	1.032924	0.979367					
ALL	0.966501	1.66132	1.013788	0.866942					

	Odds ratio for Existence of							
	Aner	nia and sou	rce of					
	e	mpowerme	nt					
States	Model 1	Model 2	Model 3					
J & K	0.909827	0.909702	0.977314					
HP	1.646044	0.82351	1.646044					
Punjab	0.925802	0.875774	1.002603					
Uttaranchal	0.894114	1.105908	1.086806					
Haryana	1.113863	1.281549	0.990387					
Delhi	0.767358	0.991423	1.020105					
Rajasthan	0.853524	0.77042	0.899634					
UP	0.947479	0.910612	0.897109					
Bihar	0.917213	0.963922	0.716835					
Sikkim	0.848534	0.705474	0.714114					
Aru. P	0.872818	0.840218	1.246265					
Nagaland	na	na	na					
Manipur	0.866791	1.371517	0.765571					
Mizoram	0.775169	0.641467	0.160529					
Tripura	0.924593	0.86517	0.645116					
Meghalaya	0.901804	1.16439	0.959528					
Assam	0.438363	1.196541	1.041653					
West Bengal	0.72892	0.909331	0.891894					
Jharkhand	0.981931	0.629772	0.601779					
Orissa	0.568545	0.905945	0.833189					
Chhattisgarh	0.867215	0.956529	0.771939					
MP	0.717355	0.953253	0.689612					
Gujarat	0.875971	0.992011	0.697134					
Maharashtra	0.934213	0.89865	0.877734					
AP	0.928088	0.968403	0.889754					
Karnataka	0.94965	1.076575	0.899881					
Goa	0.6038	0.924465	0.589853					
Kerala	0.420219	1.188053	0.581812					
Tamil Nadu	0.873296	1.201204	0.591841					
ALL	0.815216	0.910527	0.737374					

	Odds ratio of anemia level and						
States	Model 1	Model 2					
J&K	0.66136	1.006904					
HP	1.104005	0.836684					
Punjab	1.138430	0.75742					
Uttaranchal	0.818461	0.875109					
Haryana	0.833454	0.819647					
Delhi	0.832647	0.9868					
Rajasthan	0.800938	1.027132					
UP	0.941431	0.784176					
Bihar	0.802731	0.968781					
Sikkim	0.729876	1.102012					
Aru. P	0.973171	0.71977					
Nagaland	1.210167	1.056813					
Manipur	na	na					
Mizoram	0.921218	1.258261					
Tripura	0.450094	0.673452					
Meghalaya	0.79331	1.426575					
Assam	0.765196	0.945977					
West Bengal	0.869606	0.881753					
Jharkhand	0.662669	0.946741					
Orissa	0.629367	0.719685					
Chhattisgarh	0.557942	1.018387					
MP	0.576471	0.931347					
Gujarat	0.610993	0.739939					
Maharashtra	0.687182	0.856224					
AP	0.731457	1.096579					
Karnataka	0.733645	0.782708					
Goa	0.756299	0.935941					
Kerala	0.683588	1.15943					
Tamil Nadu	0.705192	1.121985					
ALL	0.763993	1.01753					

Table 1.7 Odds ratio For Existence of Anemia and Settings of empowerment

Table 1.8	Odds R	Ratio for	Food	Consum	ption	and	Evidence	of Em	powerme	nt

	Odds ratio of Food consumption and evidence								
		of empov	verment						
States	Model 1	Model 2	Model 3	Model 4					
J & K	8.746643	0.3981734	0.8444471	0.825938					
HP	1.938663	0.5537812	0.8858849	2.679975					
Punjab	2.557994	0.7406005	1.164241	1.171461					
Uttaranchal	0.8787127	0.6771331	0.927373	1.429357					
Haryana	1.288523	0.4971427	1.339081	1.483205					
Delhi	0.8405913	1.7112	0.6449658	2.997116					
Rajasthan	1.606589	0.8081339	1.068978	0.919003					
UP	1.083847	1.019133	0.8176234	0.970413					
Bihar	2.732659	0.6903221	1.285578	1.110717					
Sikkim	na	0.144365	1.477206	0.308421					
Aru. P	0.7729318	0.5860867	1.075875	0.393833					
Nagaland	0.911956	0.5843945	0.9615479	2.644211					
Manipur	0.6368982	0.5919452	1.614352	1.166193					
Mizoram	3.134143	1.16177	2.025534	3.492085					
Tripura	0.9588096	0.1156438	0.3560734	4.535959					
Meghalaya	1.282965	0.3597142	3.000564	0.58166					
Assam	1.983707	1.200098	3.635395	0.66901					
West Bengal	0.6909486	0.5227482	1.325156	2.1714					
Jharkhand	0.5739258	0.3424483	0.3849427	0.986936					
Orissa	2.446574	0.195797	1.271191	0.581621					
Chhattisgarh	1.846576	2.889092	1.305173	0.967551					
MP	1.187384	0.5006641	0.8269676	2.130008					
Gujarat	1.452433	0.5622429	1.607748	2.71479					
Maharashtra	0.5918869	0.8132627	0.7430235	0.851404					
AP	1.83725	0.5941674	1.56793	0.483066					
Karnataka	2.382394	0.965171	0.8242428	1.342225					
Goa	2.227307	0.5313098	0.8209771	2.85684					
Kerala	2.054395	0.387297	1.83146	1.134885					
Tamil Nadu	1.021093	0.1817856	1.295848	1.687766					
ALL	1.033396	0.7473155	0.9877439	1.27479					

	odds ratio for Food Consumption		
States	Model 1 Model 2 Model 3		Model 3
J & K	1.727946	3.660447	0.9454718
НР	2.666213	0.827488	0.941097
Punjab	1.602733	1.388	0.255376
Uttaranchal	0.981965	2.30216	0.695415
Haryana	0.83411	5.588494	0.387843
Delhi	1.979978	1.677555	1.350822
Rajasthan	1.550739	2.480443	1.380948
UP	1.74745	1.657123	1.527367
Bihar	3.108464	2.670992	0.525166
Sikkim	10.81877	0.531965	4.166593
Aru. P	1.826038	0.763855	0.695494
Nagaland	0.409553	12.78708	0.630175
Manipur	0.889241	na	1.90967
Mizoram	1.688938	5.635844	0.273243
Tripura	na	3.180328	na
Meghalaya	3.100521	0.912745	2.653581
Assam	1.725063	1.675807	2.840509
West Bengal	0.490327	4.774019	1.98804
Jharkhand	1.209006	2.302378	2.103039
Orissa	na	3.878598	7.072942
Chhattisgarh	0.792331	1.186978	0.647514
MP	0.749376	3.179962	1.142971
Gujarat	0.3384	1.396254	1.017049
Maharashtra	1.057236	1.40761	0.865142
AP	2.682897	4.585529	1.913261
Karnataka	0.667813	5.719655	1.742865
Goa	1.794784	7.456678	0.453063
Kerala	1.674846	4.844247	na
Tamil Nadu	2.099602	2.272903	0.796861
ALL	1.188831	2.93401	1.444072

Table 1.9 Odds Ratio of Food Consumption and Source of Empowerment

Table 1.10 Odds Ratio for Food Consumption and Setting of Empowerment

	Odds ratio for Food Consumption and		
Ctotoo	Setting of Empowerment		
States			
J&K	2.365438	0.589583	
HP	3.981864	1.973723	
Punjab	3.864273	0.875109	
Uttaranchal	3.045982	0.811986	
Haryana	14.66678	2.337728	
Delhi	1.379891	na	
Rajasthan	3.21876	1.398674	
UP	2.353791	0.69093	
Bihar	na	3.555936	
Sikkim	1.643805	na	
Aru. P	9.697276	0.402913	
Nagaland	3.220034	0.845376	
Manipur	1.055394	1.616012	
Mizoram	1.423802	1.530136	
Tripura	na	0.166367	
Meghalaya	6.592348	2.186412	
Assam	4.104435	1.255878	
West Bengal	3.933955	5.443575	
Jharkhand	2.222011	18.06828	
Orissa	6.73106	3.448009	
Chhattisgarh	2.988282	3.419017	
MP	12.1819	4.644866	
Gujarat	na	0.779954	
Maharashtra	2.213506	2.141638	
AP	4.334347	0.684368	
Karnataka	0.595979	4.791947	
Goa	32.45379	5.2705	
Kerala	5.389503	0.964468	
Tamil Nadu	4.504129	7.958267	
ALL	2.582888	1.833937	

<u>T able 1.11 Odds Ratio for Pregnancy Complication and Evidence of</u> <u>Empowerment</u>

	Odda notio fon Dragnar au agreen lighting and			
	Odds ratio for Pregnancy complications and evidence of empowerment			
States	Model 1	Model 2	Model 3	Model 4
J & K	1.411039	1.50003	1.290008	1.62928
НР	0.999037	1.07247	1.547756	0.983818
Punjab	1.342491	1.043969	1.813246	0.589737
Uttaranchal	1.354949	1.209844	2.039384	0.665248
Haryana	1.599468	1.178619	1.308321	0.889464
Delhi	0.685197	1.251546	1.791039	0.643494
Rajasthan	2.63996	0.953724	1.673949	0.772819
UP	1.66086	1.32745	1.717502	0.684244
Bihar	2.239896	1.439188	1.482782	0.918436
Sikkim	1.306482	1.533474	1.749468	0.842021
Aru. P	0.856482	1.026925	2.268214	2.358011
Nagaland	1.104136	1.212772	3.17966	1.140651
Manipur	0.719686	1.127551	2.797164	1.161008
Mizoram	1.004309	1.148714	2.831546	6.611413
Tripura	1.26328	1.120379	1.292038	1.009875
Meghalaya	0.895041	1.831284	2.46632	1.093583
Assam	1.208992	1.320457	1.208992	0.823952
West Bengal	1.105139	1.243206	1.765685	0.673581
Jharkhand	1.489109	1.444627	1.273532	0.659656
Orissa	1.473355	1.217327	1.919308	0.708563
Chhattisgarh	1.706132	0.851991	1.452637	0.62214
MP	1.35234	1.099879	1.635981	0.576695
Gujarat	0.914295	0.965573	1.643024	0.757033
Maharashtra	1.273434	1.005601	1.909595	0.596054
AP	1.33388	2.117896	1.158025	0.697389
Karnataka	1.298728	1.244376	1.223409	0.763898
Goa	1.374453	0.972209	2.406961	0.715732
Kerala	1.122417	1.040211	2.25963	1.161858
Tamil Nadu	0.943605	1.031604	1.540175	0.817783
ALL	1.374321	1.137258	1.66656	0.72556

Table 1.12 Odds Ratio for Pregnancy Complication and Source of Empowerment

	Odds ratio for pregnancy		
	complications and Source of		
Chataa	empowerment		
States			
J&K	0.640097	0.755169	0.644914
HP	2.342085	1.013/8/	0.922642
Punjab	0.696284	0.863829	1.451321
Uttaranchal	0.622522	0.917756	0.888241
Haryana	0.961586	0.940119	1.490448
Delhi	0.835173	0.408911	0.245838
Rajasthan	0.846871	0.900374	1.055151
UP	0.599448	1.308032	0.755724
Bihar	0.571469	1.189997	1.152242
Sikkim	1.164522	0.658447	0.540392
Aru. P	0.987147	1.161204	0.873811
Nagaland	0.744952	0.780767	0.958016
Manipur	0.9837	1.152417	0.932974
Mizoram	0.699777	1.037419	6.80527
Tripura	1.06546	0.798943	0.556688
Meghalaya	0.693103	0.637046	0.812548
Assam	0.539499	0.660311	0.785721
West Bengal	0.792139	0.869369	0.535542
Jharkhand	0.834779	0.771189	0.675208
Orissa	0.86895	0.794992	0.926947
Chhattisgarh	1.190806	0.777924	1.141644
MP	1.011465	0.747012	0.75628
Gujarat	1.16502	1.038001	0.538414
Maharashtra	1.280567	0.765124	0.809079
AP	1.031321	0.575032	0.837557
Karnataka	2.033141	0.825782	0.655129
Goa	0.911017	0.569462	0.847051
Kerala	2.771469	0.822086	0.934457
Tamil Nadu	1.469154	0.8986	1.137975
ALL	0.846327	0.762211	0.685812

	Odds ratio For Pregnancy		
	Complication		
States	Model 1	Model 2	
J & K	0.752502	0.709712	
HP	0.901854	1.088922	
Punjab	0.905142	1.183471	
Uttaranchal	0.757319	0.850496	
Haryana	1.054104	0.944029	
Delhi	0.552486	1.068074	
Rajasthan	0.842493	1.108869	
UP	0.62372	0.836851	
Bihar	0.529709	0.809915	
Sikkim	0.51141	0.802437	
Aru. P	0.433402	1.646341	
Nagaland	0.635241	0.91027	
Manipur	0.788156	0.817676	
Mizoram	0.418253	1.115066	
Tripura	0.769532	0.985524	
Meghalaya	0.374471	0.937683	
Assam	0.496773	0.686912	
West Bengal	0.571817	0.789941	
Jharkhand	0.478084	0.712432	
Orissa	0.696669	0.79766	
Chhattisgarh	0.787657	0.967588	
MP	0.649808	0.952394	
Gujarat	0.603314	1.209022	
Maharashtra	0.897665	1.208219	
AP	0.626447	0.893411	
Karnataka	1.38594	0.78963	
Goa	1.124411	0.864053	
Kerala	1.178897	0.854173	
Tamil Nadu	0.978426	1.086047	
ALL	0.669795	0.863191	

Table 1.13 Odds Ratio for Pregnancy Complications and Setting of Empowerment