CONTRACEPTIVE BEHAVIOUR, CAPACITY BUILDING AND ENVIRONMENTALISM AMONG WOMEN IN SELF HELP GROUPS: SOME POLICY CONCERNS

Introduction:

The debate between the population growth and human welfare has been seriously intense among the policy makers and scholars which have taken its recourse in every part of the world. In the 1960s and 1970s, scholars started fearing about the unprecedented population growth and environmental degradation and its impact on humanity. This fear forced the governments to think about plausible solution to the problem of environmental degradation and its relationship with human behaviour. This rise in concerns in the links between human behaviour and its interrelationship to environment has attracted the attention of the researchers around the globe. Though developed countries has gone for the changing behavioural patterns, willingness to pay for environment protection and improvement (Bratt, 1999; Guber, 2003; Nordlund and Garvill, 2002, Guha and Martinez-Alier, 1997). In a study about Kerala, Zachariah (1993) stated that land reform affected fertility through a decrease in income of the landed class who lost lands through land reforms accompanied by the decrease in income of middle class farmers, who were accustomed to having their farming done almost entirely by hired laborers, and through increasing housing problems of hutment dwellers, who found themselves unable to obtain new house sites for their grown up children. It was, therefore, expected to show a faster decline in fertility among those who lost land than those who gained as well as a tendency to postpone marriage and to control fertility within marriage. This study therefore highlights the fact decrease in the cultivated land affects fertility. However, poor people in developing countries whose capabilities to pay and to change consumption pattern is constrained by their difficult socio-economic and demographic characterisitcs and who generally have a high fertility may think of changing their fertility behaviour-contraceptive use, subsequent to transition in their socio-economic and demographic behaviour. This is a much neglected research area of the link between fertility and environmental conditions. An attempt in this paper is made to find out the interlinkage of this missing link. It is argued that women who see their environmental conditions becoming worse-off may compensate this degradation with adjusting their fertility levels through contraceptive use. The societies in the third world are trapped in a vicious circle of 'population-food security-environment trap". It was found that a great deal of ecological destruction in the form of deforestation, desertification, wetland destruction, and toxic pollution of air, water and land are the direct consequences of the struggle to feed rapidly growing population (Ehrlich, Ehrlich and Daily, 1993). Similarly, Bongaarts (1996) and Dahal (1993) finds that demand for agricultural land and inappropriate agricultural practices to meet the growing demand for food is the primary reason for the environment degradation. Also, Kumar and Kumar and Hotchkiss (1988) in a Study for Nepal suggest that deforestation in highlands is a result of low agricultural productivity. As Food production is more closely related to the number of people needing to be fed, population growth is argued to be negatively correlated with environmental conditions and hence people in high fertility countries compelled by rationalize their fertility behaviour in conjunction with their changing environment. This is further strengthened by the fact that changes towards attitudes in population and environmental problems have legitimated preferences for small or even childless families (Cosford, Neill, Grocott, Caldwell and Caldwell; 1976). Further, Preston (1976) found that no attempt was made to related individual view

on environment to preferred or intended fertility. Although some studies have started coming up towards exploring this in different parts of the world, it is a rare in case of India and further for any generic group of women like women in Self Help Groups. Self help group women are expected to change their behaviors after formation of groups because there is intense interaction among the group women and their capacities are also built by different training programmes. Based upon the above discussion the objective of the present study to explore the effects Source of drinking water, land use pattern, toilet facility and environment protection training on the fertility behaviour of self help group women .This study provides a first step on understanding environmental conditions and fertility behaviour of a generic group in an underdeveloped setting as strong linkage has been found between poor womens' environmental settings and fertility beaviour. Further, Doveri (2000) has also shown that there is a strong link lad use and utilization pattern change and subsequent fertility behaviour. It was found that standard of living through cultivated farm size, education, income; age structure affects fertility behaviour through environmental change. Further cases of such examples are found in India as India is primarily an agrarian country, though this notion of the researchers is now changing. Kulkarni (1998) on land sue pattern in two Indian states of India, through cross cultural study that land use pattern change affects fertility, IMR, and in improving health status of women if family size reduces. Verma (2001) suggested that environmental education triggers changes in subsequent fertility behaviour of women. Singh (2005) argued that capacity building about environmental health of the elected panchayati raj institutions have been helpful in increasing health awareness. Since use of water and sanitation are very much environmental issues but nevertheless their availability and access will determine the subsequent behaviour of the population who senses its usability having some implications to population change. People would like their children remain free from water and sanitation born diseases. As it is estimated that 80 percent of all diseases and more than one thirds of the deaths in the developing countries are caused by contaminated water (UNEP, News Release. World Water Day, 2 March, 1996). Mara (1996) has argued that sanitation and disease the burning issues and they should especially be tackled in cities. Therefore, it is expected that rational people will change their behaviour subsequent to contain the spread of insanitation born out of water shortages in rural areas (World Bank, 1997). This change of behaviour for bringing positive development to the society would through managing environmental concerns is called environmentalism (Martinez-Alier, 2000).

On the basis of these previous findings, it would be interesting to understand the missing link between capacity building, environmentalism fertility behaviour of women. The case of self help group is even more revealing to intrigue as they come to trigger behaviour change and affect development process of a region. In this context, this study focuses on understanding the fertility behaviour, capacity building and environmentalism of self help group women, called, triggers of behavioural change in society.

Data Methods:

The present study is based on the primary data collected during Feb-June, 2006 in Faizabad district of Uttar Pradesh from a representative sample of 340 self help group (SHG) women in the age group of 21-45. Sample of women was selected with multi-stage systematic random sampling procedures. Women from each group were selected according proportional allocation. For

proportional allocation of women from each group, it was divided into three groups of women 21-28, 29-35 and 35+. Women have been asked about their socio-economic and demographic characteristics, fertility and fertility preferences, child health and immunization, benefits of SHGs to maternal and child health, knowledge and attitudes towards HIV/AIDS and network and capacity building of SHG women through self help groups. Contraceptive Use has been chosen as dependent variable as a proxy to fertility behaviour ,independent variables are source of drinking water, land use pattern, toilet facility and environment protection training and control variables are age, women's life experiences as education ,current living child, monthly income, previous contraceptive use. Further, religion, ethnicity, standard of living and source of contraceptive use as a proxy to access to fertility behaviour have been used in this study. The control variables are literacy, number of living children, monthly income of women, previous experiences of contraceptive uses, religion, ethnicity, age, and standard of living (SLI) and source of contraceptives as a proxy to access to contraceptives. Bivariate method of analysis and logistic regression analysis has been used to understand the interlinkage of capacity building, environmentalism and SHG women contraceptive use pattern. Logistic regression analysis is applied for the development of four models from the selected dependent, independent and control variables. Model-I is developed with all the control variables and model- IV shows the joint effect of all independent and control variables taken together. Model-II to model model-IV is developed taken independently the effect of each of capacity building and environmental components selected for the study. Regression coefficients and odds ratios are presented in the table 2.

Results and Discussion:

The finding of the study is presented moving from very simple to complex one. Table 1 describes

Table 1: Descriptive Statistics of Variables Used in the Analysis

Variables	Code	N	Mean	Std. Dev.	Min.	Max.
Dependent Variable						
Contraceptive Use	No=0, Yes=1	340	.621	.4858	0	1
Independent Variables						
Source of Drinking Water	0=Within premises,1=Outside Premises	340	.414	.4934	0	1
Land Use Pattern	0=No Land,1=<5 Bigha,2= <5 Bigha	340	.879	.6381	0	2
Toilet Facility	0=No Flush Toilet, 1=Have Flush Toilet	340	.055	.2300	0	1

Capacity Building++	0=No Training , 1=Trained	340	.123	.3292	0	1
Control Variables						
Age	Years	340	3.055	1.2095	1	5
Education	0=No Education, 1=Educated	340	.4229	.232	0	1
Religion	0=Hindu, 1=Muslims, 2=Others	340	.109	.3216	0	2
Ethnicity	0=SC/ST, 1=OBC, 2=Others	340	.567	.6550	0	2
Current Living Children	0=No Children, 1=<2 and 2=>2 Children	340	1.638	.6156	0	2
Monthly Income	0= No Income, 1=<2000, 2=>2000 pm	340	.558	.6736	0	2
Previous Contraceptive Use	0=Never, 1=Ever	340	.542	.4989	0	1
Standard of Living	0=Low,1=Medium, 2=High	340	1.026	.6397	0	2
Source of Contraceptives	0=Not Using, 1=Govt,2=Pvt,3=NGO,4=Husband	340	1.397	1.5847	0	4

Note: ++ Women in the study area have been given training about environmental issues and its impact on socio, economic and heath conditions

the mean and standard deviation of the study variables for primary understanding into the nature of the data. Bivariate analysis shows that 76 percent illiterate and 65 percent SHG women with more than 2 living child has started using contraceptives. Though Hindu women are using contraceptives at the highest percentage, SC women are becoming the highest users of contraceptives after the self help groups. Table 2 shows that estimate of the effects of selected components on the contraceptive use of women from multivariate logistic regression, both the regression coefficients and odds ratios are presented. In Model I of table 2, effects of the control variables describing age, life experiences, religion, ethnicity, Standard of living and access to contraceptive from a source is described. The estimates of most the effects are in expected direction bit it is striking to note that self help group women (SHG) with more than two child and high income has high probability of using contraceptives. SHG women in age group 26-30 are using contraceptive which decreases for 31-35 group, it is quite possible because SHG women being activist may want to complete their desired family size nearing upper limit of reproductive span. With the increase in SLI, contraceptive use increases. Further, Govt. sources for obtaining contraceptives are more reliable among women while a very small husbands' involvement is found in providing contraceptives to women.

In model 2 of table 2, environmental effects of toilet facilities on the contraceptive use of SHG women are presented. The model predicated high association of availability of toilet facility on the contraceptive uses. It was found that women having toilet facilities inside home are more likely to use contraceptives because of SLI effects of women. Further, a consistent result of the contraceptive use is found with age of women, number of living children and previous contraceptive

use. Sudden decrease of contraceptive use among women with high SLI and toilet facility is good predictor of the fact that with increasing standard of living, SHG women start enjoying other facets of life rather than bearing child and sex as the only source of enjoyment. Therefore, the strong association of toilet facility and contraceptive use predicts the Govt to make available such facilities Model IV in table 2 shows the effects of land use among women on contraceptive use which is in the expected direction and shows that as the availability of land use for agriculture purposes increases, and so the contraceptive use decreases showing the positive effect of rural SLI of women which is more prevalent behaviour in North India, Haryana (Kulkarni, 1998). It is very interesting to learn that with the end of prime age of child bearing, SHG women decreases contraceptive use.

Table 2: Multivariate Logistic Model Estimates of the Effects of Environmental Conditions on Contraceptive Use among Women in Self Help Groups, Faizabad, 2006

Variables	Dependent Variable-Contraceptive Use Among Self Help Group Women											
Independent Variables	Model-I		Model-II		Model-III		Model-IV		Model-V		Model-VI	
	β	Exp(β)	β	Exp (β)	β	Exp(β)	β	Exp(β)	β	Exp(β)	β	Exp(β)
Source of Drinking Water					-.20	.81					.99	.574
Land Use Pattern							-.48	.61			-.20	.800
Toilet Facility			.91*	2.49							-.43	.574
Capacity Building									.68	1.98	.68	.138
Control Variables												
Age												
21-25 ®												
26-30	.489	1.63	.41	1.51	.40	1.50	.44	1.55	.47	1.601	.47*	1.60
31-35	-.28	.75	-.35	.70	-.34	.70	-.30	.73	-.26	.769	-.26*	.76
36-40	.49	1.63	.43	1.55	.44	1.56	.47	1.60	.49	1.645	.49	1.64
41-45	-.51	.60	-.62	.53	-.62	.53	-.58	.55	-.53	.583	-.53*	.58
Literacy												
Illiterate®												
Literate	1.06*	2.89	.94*	2.56	.96	2.63	.96*	2.63	.96*	2.61	.96*	2.61
Religion												
Hindu®												
Muslims	-.51	.59	-.22*	.76	-.19	.82	-.18*	.82	-.04*	.96	-.04*	.96
Ethnicity												
SC/ST®												
OBC	-.08	.918	-.11*	.894	-.169	.845	-.14	.86	-.21	.807	-.21*	.80
Others	.43	1.53	.32	1.385	.283	1.327	.31	1.37	.13	1.14	.13	1.14
Current Living Child												
No Child®												
< =2 child	3.22	25.1	3.36*	28.88	3.43*	30.88	3.43*	30.96	3.32	27.90	3.32*	27.90
> 2 child	3.53	34.220	3.57	35.53	3.64*	36.76	3.59	36.3	3.44	31.28	3.44*	31.28
Monthly Income												
No Income ®												
<= 2000	-.061	.940	-.04	.95	-.03	.96	-.05	.950	-.10	.90	-.10	.905
> 2000	.287	1.33	.23	1.26	.25	1.28	.22	1.24	.18	1.19	.18	1.19
Previous Contraceptive Use												

Never Use®												
Used	*1.55	4.72	1.48*	4.42	1.50*	4.50	1.50*	4.48	1.38	4.00	1.38*	4.01
Standard of Living												
Low®												
Medium	-.61*	.53	-.91	.402	-.95*	.38	-.96*	.38	-.95	.386	-.95	.38
High	-1.20*	.29	-1.53*	.215	-1.64*	.19	-1.67*	.18	-1.67	.187	-1.67	.18
Source of Contraceptives												
No Use®												
Government	2.71*	15.02	2.84*	17.27	2.835	17.03	2.84	17.25	3.00	2.52	3.00	20.20
Private	1.85*	6.38	1.98*	7.25	1.946	7.00	1.98	7.26	2.15	1.33	2.15	8.66
NGO	1.12	3.07	1.26*	3.54	1.236	3.44	1.26	3.53	1.47	.63	1.47	4.36
Husband	.365	1.44	.49	4.32	.478	1.61	.512	1.66	.685	.37	.68	1.98
χ2	131.15		133.61		133.93		134.30		136.06		136.06	
Degree of Freedom	19		21		22		23		24		24	
Cox & Snell R Square	.381		.386		.387		.387		.391		.392	

Note: *p<0.05, All probabilities are two- tailed.

All the predictors in control group show a strong consistency of farm size availability with contraceptive sue of women. Further, Husbands of SHG women who come from families with larger farm sizes are motivating their wives to use contraceptives which is oozing through the socio-economic and demographics of such families. Model 5 in table 2 shows that a strong link capacity building on environmental issues and contraceptive use of SHG women exists. The findings suggest that group and issue specific capacity building programmes help in achieving programme impact and it was found that women with the previous use experience of contraceptives become users with high predictability as is clear from the odds ratio of effects of Capacity building on the on number of living child and monthly income of women. It appears that SHG women are able to communicate their training issues of environment and its related population impact to their husbands which is consistent with strong advocacy of their husbands for contraceptives.

Further, model IV in table 2 describes the joint effects of all environmental factors affecting contraceptive use. It shows that the land use pattern of SHG women is strong predictors of the contraceptives and environmental effects of availability of drinking water and toilet facility are approximately exhibiting the same effect contraceptive use. It may be women have not been trained in all the interlinkage of environment with impact on family size. Therefore, joint effect of environment is a strong predictor of contraceptive use and gives the idea of improving their environment for better adjustments with future population scenario. Younger SHG women are more encouraging environmentalism and contraceptive use pattern. It appears that women SHG women undergone training on interlinkage of environment and RCH, are spreading their training benefits to the society at large which is explained by the consistent estimates of its odds ratios of selected models.

Conclusion and Policy Implications:

The findings suggest that there is a strong relationship among various components of environmental effects, capacity building and on contraceptive use of women. Though drinking water and toilet facility presents the contraceptive behaviour of women with nearly same predictability, farm size changes and capacity building of women about environment and RCH are significant predictors of contraceptive use of SHG women. Literacy has emerged to out to be the most important predictor affecting fertility behaviour through environmentalism (Arokiaswamy, 2002) and capacity building of women .Scheduled caste women is highly adopting contraceptives through environmentalism, which is interesting to note that many a time marginalized communities can be accessed through group approach to upscale their health conditions. Other life experiences of monthly income, previous contraceptive use and availability and access to contraceptive through a reliable source is emerging among important group of predictors for change in fertility behaviour through environmentalism. The study suggests that NGOs have been active in imparting training to SHG women on linkage of RCH with environment and through capacity building, which has significantly affected the contraceptive use by increasing and furthering use of contraceptives among high parity women. Strikingly, contraceptive use among muslim women has increased manifold by activities of SHGs and NGOs. Again, husbands of these SHG women are also advocating the contraceptive use to these women shows that there is trickling and diffusing effect of capacity building of women on interlinkage of environment and RCH on men. This can further be utilized for increasing male involvement in RCH of women for enhancing the health status of

women. The study recommends that self help groups should be made to better understand the linkage of capacity building and environmentalism and fertility change behavioural pattern, increasing male participation in contraceptive uses, promoting contraceptive use among women at high parity and with fewer resources to use contraceptives through community efforts. The study finds further that rural women still largely depend on government health facilities for their contraceptive needs and strengthens the findings that rural family planning clinics should be established (Srinivasan, 2004). Thus capacity building and environmentalism among self help group women is the need of the hour to obtain the goals of NPP-2000, NHP-2002 and NRHM-2005. Further, this environmentalism of the women can be tested for the general women through specific programmes or/and trickling effects of population management programmes which would be helpful for states at least weak on demographic indicators.

References:

- Arokiaswamy, P. (2002): Gender Preference, Contraceptive Use and Fertility in India: Regional and Development Influences, International Journal of Geography, Vol.8

- Bongaarts, J. (1996): Population Pressure and Food Supply System in the Developing Countries; Population and Development Review, Vol. 22(3)
- Bratt, C. (1999): Consumer's Environmental Behaviour: Generalized, Sector Based, or Compensatory? Environment and Behaviour, Vol.31
- Cosford, W., Neill, M., Grocott, J., Caldwell, P. and Caldwell, J (1976): Semi-Structured Interviews of Individuals: The Canberra Survey and Supplementary Interviews. In J.Caldwell Family Formation Project, Monograph No.4, ANU
- Dahal, D.R. (1993): Rethinking Fertility Transition: Some observations in Nepal, In K.C. Bal kumar (editions); Population Dynamics in Nepal, Vol.2
- Doveri, A. (2000):Land, Fertility and Family: A Selected Review of Literature in Historical Demography, Genus
- Ehrlich,P.R., Ehrlich, A.H. and Daily, G.C. (1993): Food Security, Population and Problem, Population and Development Review, 19(1)
- Guha, R. and Martinez-Alier, J. (1997): Varieties of Environmentalism: Essay North and South, London, Earthscan
- Ghimire, D.J. and Mohai, P. (2005): Environmentalism and Contraceptive Behaviour: How People in Less Developed Settings Approach Environmental Issues, Population and Environment, Vol.27(1)
- Guber, D.L. (2003): The Grassroots of Green Revolutions: Polling America on the Environment, Cambridge, MA; MIT Press
- Kulkarni, S. (1998): Land Use Pattern in Kerala and Haryana, Project Report, International Institute for Population Sciences
- Kumar, S. and Hotchkiss, D. (1988): Consequences of Deforestation for Women's Time Allocation, Agricultural Production and Nutrition in Hill Areas of Nepal. Washington, D.C., International Food Policy Research Institute, Research Report No.69
- Mara, D. (1996): Low-Cost Urban Sanitation; Wiley Eastern, Chichester
- Martinez-Alier, J.(2000): Environmental Justice as a Force of Sustainability in Global Futures-Shaping Globalisation edited by Jan Nederveen Pieterse; Zed Books, London
- Nordlund, A.M and Garvill,J.(2002):Value Structures behind Environmental Behaviour, Environment and Behaviour , 34(6)

- Preston, S. (1986): The Social Sciences and Population Problem. In J.M. Stycos (Eds.) Demography as an Interdiscipline, New Brunswick, (USA) and Oxford (U.K.): Transaction Publishers
- Srinivasan, K. (2004): Population Policies in India: Emerging Issues; Paper Presented at IIPS as Chandrasekhran Memorial Lecture ;2004 at IIPS, Mumbai
- Singh, K. (2005): Capacity Building of Elected Representatives of Panchayati Raj Institutions, Man and Development, Vol. 27 (2)
- United Nations Environment Programme (UNEP) (1996): Action in Ozone, United Nations Environment Programme (UNEP), Nairobi
- Verma, S.S. (2001): Environmental Education in the New Millennium: A Vision, Environment and People, Vol. 7(12)
- World Bank (1997): The Demand for Water in Rural Areas: Determinants and Policy Implications; World Bank Research Observer; Vol.8 (1)
- Zacharia, K.C. (1993): Land Reforms and Fertility Decline in Kerala: Demography India, Vol.12 (2)