The Marginalized Feeders: A Wholesome Study with the Help of Participatory Rural Appraisal Technique

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ABSTRACT

From the year of indedepence to till date, India has come up with a long way. This great nation is spreading it's wings of fire towards industries and business, science and technology, space and ocean. But the farmers, who are providing food to our 1.31 billion populations, are in empty stomach and bare hands. 21.7 per cent of it's people are below the poverty line. A survey of FAO reveals that nearly 75 per cent of food insecure and vulnerable people are directly or indirectly related to agriculture. Another report of FAO has revealed that about 78 per cent of the farmers are ready to quit agriculture. This is really alarming as well as distressing while we have made a call for complete digitization to create ICT driven modern India. Poverty can be measured in terms of income. In other way the other forms of poverty are educational starvation, cultural deprivation and social depletion. Silence can be perceived in terms of inability of a person to raise voices against discrimination, both social and economic atrocities as well as a decision to go silent whenever it needs to utter voices. For this wholesome growth of the vulnerable sections of the society, cognitive development of the stakeholders can be a useful tool. On this preamble the present study was conducted in Beraberi GP under Nadia district of WB. 150 respondents were selected purposively and they were interviewed thoroughly with a structured interview schedule. In this study 21 independent variables were selected against a dependent variable cognitive development(Y).here in this study it has been revealed that the most important aspects of impoverishment of the farming community are cropping intensity, risk orientation, livestock possession and stress perception.

Key words*: Cropping intensity; Cognitive development; Livestock, Risk orientation vulnerability;*

When I die, don't built a monument on me. Don't bestow me degrees from great universities. Just clothe the naked. Say that I tried to house the homeless. Let people say that I tried to feed the hungry"…Martin Luther King. India has approximately 400 million people who face absolute ($1.25/day poverty), and is home to about one-quarter of the people facing hunger globally. More than 40 per cent of Indian children experience malnutrition. These are awful facts. Yet, India is taking steps to change; small in comparison to rich-country budgets, but big for a developing country. The new law in India seeks to provide affordable food to 800 million Indians. So, it is quite obvious that India is suffering from a two faces devil that is hunger and poverty, rather the nexus of these two. The level of cognition of these people suffering from hunger and poverty is needed to be uplifted to make them actively think about their present situation and feasible remedy. Participatory Rural Appraisal (PRA) may be proven as an important and effective tool to know the problem and to find out the solution.

Martin Feldstein (1998) in his paper "Income Poverty and Inequality" argues that income inequality is not a problem in need of remedy. The common practice of interpreting a rise in the gini coefficient measure of inequality as a bad thing violates the Pareto principle and is equivalent to using a social welfare function that puts negative weight on increases in the income of high income individuals. The high end statistics used by Feldstein can be simply replaced with the PRA method

to know the socio economic conditions of the people under study as well as to identify the strength and flaws of the area under study. The similar result was also occurred in the study of *Chakraborty and Acharya(2018),* where they found that poverty and voice has certain interrelation in different socio- economic and socio-psychological parameters. The objectives of the study are as follows-

i.   To delineate the present status of poverty and hunger as prevalent amongst the target research group.

ii. To isolate the variables, dependent and independent in order to study their interactive relationship.

iii. To elucidate the contributory factors characterizing poverty and the perceived interdependence.

iv. To generate a micro level policies for making appropriate interventions which would be based on the level of cognitive development of the people under study.

METHODOLOGY

The present study was conducted in the Beraberi gram panchayat under Habra ii block in the district of Nadia, West Bengal. The village was selected purposively according to the convenience of the researcher. Then from this village 140 respondents (all women) were selected randomly and they were interviewed through a structured interview schedule. The statistical tools used in this study are correlation coefficient and step down regression. Participatory rural appraisal technique (PRA) has also been used in this study to know the advantages and flaws of this particular area under study.

RESULTS AND DISCUSSION

Table 1 presents the coefficient of correlation between voice (Y3) and 21 independent variables. It has been found that following variables viz. age (X1), family size (X3), risk orientation (X5), livestock count (X12), pond and fish (X14), and cost of cultivation (X16) have recorded significant correlation with the dependent variable. Age indicates both chronological progress and physiological maturity as well. In a given social ecology it is expected that higher age echelon involves diverts movements, vertical learning and experimental proficiency. So the variation in age amount the respondents is reflected on the cognitive development as well. The relation between family size and cognitive development indicates that smaller family size has got

higher cognitive development. So a family having less number of family members has got lesser intensity of cosmopolite interaction, hence the higher would be the cognitive development. Lesser the risk orientation higher would be the cognitive development. Risk orientation drives us towards cosmopolite interactions and a kind of heterophile cognitive pursuits is going to be the expected outcome of such communication. Fishery as an enterprise is more agile than agriculture. So it imbibes more heterophilic interaction and hence higher cognitive development. So also it operates for livestock count and cost of cultivation. Cost indicates the magnum of investments and spectrum of interactions. So it records a relationship with cognitive development.

Table 1. Linear co-relation between dependent variable and the independent variables

Variables	(r)
Age	0.099**
Education	-0.018
Family size	-0.135**
Economic motivation	0.026
Risk orientation	-0.057*
Management orientation	0.275
Stress perception on hunger	0.059
Stress perception on poverty	0.206
Stress perception on voice	0.109
Size of holding	0.315
Cropping intensity	0.171
Livestock count	0.289**
Livestock yield	0.028
Pond and fish	0.055**
Total crop yield	0.086
Cost of cultivation	0.223*
No. of fragments	-0.176
Communication variables	0.193
Marketed surplus	-0.068
Energy consumption	0.040
BMI	

*Significant at 5% and **Significant at 1% level

Note: The variables having star marks are significantly co related with the dependent variable cognitive development)

Table 2 presents the multiple regression analysis between exogenous variable cognitive developments (Y) vs. 21 causal variables. It has been found that the variables stress perception on hunger (X7), stress perception on poverty (X8), cropping intensity (X11) and livestock yield (X13) have contributed to the substantive variance embedded with the consequent variable Y4.

The R^2 value being 0.587, it is to infer that 58.70 per cent of variants in the consequent variable has been explained by the combination of these 21 causal variables.

Table 2. Step down Regression Analysis, cognitive development (Y) vs. all Causal variables to find out the independent variables which are retained at last of this data reduction process.

Variables	Beta value	B value	Std. error	t-value
Age	0.304	0.021	0.012	1.667
Education	0.273	0.046	0.030	1.512
Family size	-0.129	-0.077	0.096	-0.804
Economic motivation	0.203	0.269	0.245	1.094
Risk orientation	0.038	0.123	0.485	0.254
Management orientation	-0.139	-0.035	0.039	-0.884
Stress perception on hunger	0.339	0.111	0.048	2.289
Stress perception on poverty	0.057	0.015	0.039	0.382
Stress perception on voice	0.245	0.133	0.079	1.691
Size of holding	0.125	0.026	0.080	0.319
Cropping intensity	0.208	0.002	0.002	1.152
Livestock count	0.047	0.033	0.107	0.303
Livestock yield	0.238	0.078	0.046	1.710
Pond and fish	-0.114	-0.422	0.613	-0.689
Total crop yield	-0.174	-7.503	0.001	-0.307
Cost of cultivation	0.110	6.716	0.001	0.189
No. of fragments	-0.002	0.001	0.040	-0.008
Communication variables	-0.036	-0.017	0.064	-0.265
Marketed surplus	-0.015	0.001	0.004	-0.075
Energy consumption	-0.238	-0.063	0.043	-1.478
BMI	0.055	0.008	0.021	0.358

R^2 value 58.70% ; SE 0.32

Table 3. Regression Analysis, cognitive development vs stress perception on hunger, stress perception on poverty ,cropping intensity, and livestock yield.

Variables	Beta value	B value	Std. error	t-value
Stress perception on hunger	0.278	0.091	0.035	2.611
Stress perception on voice	0.213	0.115	0.057	2.022
Cropping intensity	0.301	0.003	0.001	2.802
Livestock yield	0.213	0.070	0.035	1.984

R^2 value 47.70% ;   SE 0.27

Table 3 presents the step wise regression and it has been depicted that the 4 causal variables that are stress perception on hunger (X7), stress perception on poverty (X8), cropping intensity (X11) and livestock yield (X13) variables have been retained at the last step.

The R^2 value being 0.477, it is to infer that 47.70 per cent of variants in the consequent variable has been explained by the combination of these 4 causal variables.

The cognitive development or knowledge variance among the respondents can well be predicted by two clusters of independent variable which again are attuned to each other and these are motivational factors and agro managerial factors. When the respondents are exposed to agro managerial factors, their cognitive changes are discernible in terms of package of practices, ecological functions and techno managerial pursuits. Given these are properly done; they can generate a higher level of confidence to manage both stress and stressors. So these are the marker variables and collectively have contributed to 47.70 per cent of variance in cognitive development.

Concept of PRA: The philosophical roots of participatory rural appraisal techniques can be traced to activist adult education methods such as those of Paulo Freire and the study clubs of the Antagonist Movement. In this view, an actively involved and empowered local population is essential to successful rural community development. Robert Chambers, a key exponent of PRA, argued that the approach owes much to "the Freirian theme, that poor and exploited people can and should be enabled to analyze their own reality."

Migration mapping of occupational migration : Here the length of the arrows is showing the distance of the migration. As the arrow becomes longer it shows that the respondents are moving away from the village .The black circle represents the state. The arrows within the black circle shows that the respondents migrate within the state, the white circle represents the country and the arrows show that the respondents migrate elsewhere in the country. Lastly the orange line is the border between inside and outside the country and the arrow shows that the respondent migrates outside India.

Project Access and Empowerment ranking : Access to project and empowerment have gone co genital by nature. So in ranking project access, the empowerment level also elucidated isochronously. The access to project had been calculated by following 10 point scale subsequently the mean score was calculated.

Projects	Scoring by the key informants						MS	Rank
	A	B	C	D	E	F		
Mid day meal	9	7	8	7	9	8	8	II
ICDS	9	10	9	10	10	10	9.66	I
IAY	5	4	7	6	5	5	5.33	III

Enterprise preference ranking : For organizing the enterprise preference ranking we have selected five key informants. Those key informants were asked to score the following attributes like income, risk orientation, dependence of livelihood and ease of doing business for the four enterprises like shop keeping, toto or van rickshaw pulling, vendor and tailoring. The total score given by the key informants to the each enterprise and each attributes was summed up then mean score was brought out and this mean score is used in the following ranking matrix.

Attributes	E1	E2	E3	E4	Rank
Income	7.33	7.6	8.54	6.55	I
Risk orientation	8.40	5.55	7.56	7.65	III
Dependence of livelihood	5.45	6.15	4.45	6.33	II
Ease of doing business	8	8.33	7.86	5.65	IV
Total score	29.18	27.63	28.41	26.18	
Mean score	7.30	6.90	7.10	6.55	

E1- shop keeping;   E2- toto or van rickshaw pulling;
E3-vendor;   E4-tailoring

CONCLUSION

PRA in this study has clearly indicated that the farming community under the research locale cannot depend fully on agriculture for their sustainability and livelihood. They have to rely on other occupational options like shop keeping, tailoring, van rickshaw pulling etc. The PRA also reveals a very important and alarming fact that the youth are being extrapolated or migrated from rural area which establishes the FAO analysis where they said that near about 70 per cent of the farmers are ready to quit agriculture at present. So, in a nutshell we can conclude that the cognitive development or in other words the thinking and analysing ability of the farming community about their current status is mostly dependent on their level of experience, stress perception, alternative source of income possibilities and resource availability. The farmers who are lagging behind in this context are either quitting agriculture as their occupation for livelihood or migrating to the urban areas in search of better quality of living.

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