Participation in BRAC's Rural Development Programme and the impact of group dynamics on individual outcomes

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FOREWORD

Empirical evidence point to a causal relationship between the socioeconomic status of individuals and communities and their health. Indeed improvement in health is expected to follow socioeconomic development. Yet this hypothesis has rarely been tested; at least it has not undergone the scrutiny of scientific inquiry. Even less understood are the processes and mechanisms by which the changes are brought about.

The Rural Development Programme (RDP) of BRAC is a multisectoral integrated programme for poverty alleviation directed at women and the landless poor. It consists of mobilization of the poor, provision of non-formal education, skill training and income generation opportunities and credit facilities. The programme is the result of 20 years of experience through trial and error. However evaluation of its impact on human well-being including health has not been convincingly undertaken.

The Matlab field station of ICDDR,B is an area with a population of 200,000, half of whom are recipients of an intensive maternal and child health and family planning services. The entire population is part of the Center's demographic surveillance system where health and occasionally socioeconomic indicators have been collected prospectively since 1966.

A unique opportunity arose when BRAC decided to extent its field operations (RDP) to Matlab. ICDDR,B and BRAC joined hands to seize this golden occasion. A joint research project was designed to study the impact of BRAC's socioeconomic interventions on the well-being of the rural poor, especially of women and children, and to study the mechanism through which this impact is mediated.

In order to share the progress of the project and its early results, a working paper series has been initiated. This paper is an important addition in this endeavour. The project staff will appreciate critical comments from the readers.

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Abstract

This study explored women's participation in Brac's rural development programme to identify some unobserved selecting factors that are believed to influence women's decision to participate or not and, the effect of group dynamics on individual outcomes of women programme participants. The data used for the study originates from Brac-ICDDR,B Joint research project in Matlab (April-Aug. '95). Ever married women aged between 15-50 years in 2,241 households of 14 villages with Brac interventions were included in the study. The results show that women's decision to participate was determined significantly by reported health status, perceived contribution to household income, household land ownership, relation with husband and unwanted pregnancy. The individual factors like age, literacy, marital status, etc. had no effect on the decision to participate. Group dynamics was captured by three indexes e.g., VO (village organization) homogeneity, VO activity and VO social awareness. Of these, VO homogeneity appeared to have the most consistent and positive effects on mobility, income-earning and modern family planning use. There were cross-cutting effects of the other two indexes on outcomes. From the findings, it is desirable to pay greater attention to group mobilisation and group formation processes in programme implementation.

Background

Rural development interventions in Bangladesh have a long history and the present programme approach of group mobilisation at the village level has emerged as the most effective and commonly used mechanism for the delivery of inputs, especially micro-credit. Evaluations of micro-credit programmes, particularly impact assessment studies, have been undertaken since long and at frequent intervals. The following general observations common to most impact assessment studies undertaken so far may be noted:

1. There is little evidence of direct impact of micro-credit programmes at the aggregate level, such as on the incidence of poverty and levels of consumption, on socio-economic institutions that determine gender and class relations, and on the common human development indicators like literacy and health status.

2. The problems of non-random programme placement and endogeneous selectivity at the individual and household levels mean that participants are self selected into programmes (or excluded from them) not only because of explicit programme factors but also because of unobservable factors operating at various levels. As a result, since participants are systematically different from non-participants, the isolation of programme effect, whether positive or negative, becomes complicated.

3. The reasons for both women's participation and non-participation are not adequately understood, and constraints to women's programme participation remain formidable as evidenced in the plateauing of programme membership in most areas with a long-standing programme.

4. The assessment of the impact of micro-credit on women's lives remains problematic not only because of methodological problems (mentioned above) but also because of the general attention to outcomes at the household level, despite the fact that individual women are programme members. Moreover, with most of the attention being placed on

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participant non-participant comparisons a large part of the variation in individual outcomes among women participants remains unexplained.

The above observations suggest the need to re-think the concept of programme impact and its assessment. First, understanding the reasons for participation and non-participation is essential if programmes are to increase coverage. Second, identifying the factors responsible for differential programme impact at the individual level is important if the delivery of inputs is to be more effective. A better understanding of the factors that influence the decision to participate and of the factors that lead to differential outcomes at the individual level, thus, becomes necessary.

Objectives

This study explores women's participation in BRAC's Rural Development Programme (RDP) with the following specific objectives:

1. Identify some of the unobserved selecting factors that are believed to influence women's decisions to participate or not participate.

2. Explore the effect of group dynamics on individual outcomes of women programme participants.

Data and Methods

The data for the study comes from the BRAC-ICDDR,B joint research project in Matlab (1). This is a longitudinal study initiated in 1992 with a baseline survey in 60 villages of Matlab Thana in rural Bangladesh. The data used in this paper is taken from a 1995 survey of households in 14 villages selected randomly from those 60 villages and distributed in four research cells according to the presense of BRAC and ICDDR,B programmes.

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Table 1 presents the distribution of the surveyed households according to the four programme cells and 14 villages. The population for this study is taken from the 10 villages in the first two cells where BRAC has initiated its rural development programme. In 5 villages only target group (TG) households were interviewed. TG households are identified by programme field workers on the basis of household own land. Households owning 50 decimals or less land are categorised as TG and taken to be eligible to join RDP. All other households are designated as non-target group (NTG). In all 2241 households from both TG and NTG categories were surveyed in the RDP villages.

All ever married women between the ages of 15 and 50 years who belong to TG households are eligible to join RDP. Although the eligibility criterion is supposed to be enforced in reality women from NTG households can and do become members for a variety of reasons (2). Thus, members will include women from both TG as well as NTG households. A non-member can belong to a household which has an RDP member, and can reside either in RDP villages or in non-RDP villages. For the present analysis of participation we restrict the study population to all members and eligible non-members in RDP villages only. Table 2 presents the distribution of respondents by RDP membership status. There were 499 RDP members of whom 71% belonged to TG households and the rest to NTG households, and 1795 non-members all belonging to TG households. It may be noted that in the RDP villages only 42% of eligible women were RDP members at the time of the survey.

The data used in this analysis was taken from the household survey and from the survey of evermarried women aged 15 to 50 years. MIS information was matched for data on savings, loans and training, and for information on the Village Organisation (VO).

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Are participants different from non-participants?

The literature suggests that both household as well as individual characteristics are likely to differentiate participants from non-participants. A recent study of household level participation in BRAC's RDP found that household socio-economic status (SES), in particular land owned, varies significantly between participating and eligible non-participating households (7). It is also often reported that women who are members of programmes are different from non-members with respect to individual characteristics such as literacy and marital status, but could also be different with respect to less observable characteristics such as the opportunity cost of membership (3,5). In order to distinguish RDP participants from non-participants we, therefore, examine differences in several socio-economic characteristics of members and non-members at the individual and the household levels.

At the individual level, besides age, schooling, marital status and number of children, we have included several variables as indicators of unobservable factors that could influence a woman's decision to participate in a programme. These are the presense of a small child, whether the woman reports good health status and whether the household head perceives the respondent as contributing to household income. The first variable, which represents a positive time cost to be borne by a woman in order to participate in a programme, can be taken to proxy her opportunity cost in terms of loss of family welfare. The other two variables represent her inherrent ability, in terms of both physical and mental capacities, to engage in membership activities which includes attending VO meetings, going to the area office, making regular savings, paying weekly loan installments, etc.

The household's human and material endowment is captured by the usual variables on land ownership, head's schooling and labour selling status, family size and gender of headship. Family size may have a cross cutting effect since it incorporates both women's domestic work load as well as the availability of workers to engage in credit based

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activities. The household's credit demand is reflected in all the household variables since the effective utilisation of credit depends upon a minimum level of capital (material) and labour (human) investment.

In addition, the relative status of women within the household and the degree to which the husband-wife relationship is egaltiarian is believed by some to be a strong selecting factor for women's participation (4). Hence, we have examined a number of variables that should indicate the relative status of women within the household. These are: the woman's report about her relationship with her husband during the last four months, whether she had any unwanted pregnancy during her lifetime, whether she was prevented from visiting her natal home in the last four months and the age difference with the household head. It was assumed that a reported bad relationship with husband, an unwanted pregnancy, prevention from visiting the natal home and a large age difference indicated a lower status of the woman relative to her husband or a less egalitarian husband-wife relationship.

It is also suggested that women belonging to households that have a less conservative attitude are more likely to participate in programmes. In this paper we have assumed that approval and discussion of family planning indicated a less conservative or more modern attitude. Hence, we have included husband's approval of family planning and women discussing family planning with their husbands and neighbours as indicative of the degree of conservatism of the household.

Differences in all these variables by TG and NTG category for members and by programme placement in villages for non-members are shown in Table 3. The comparisons reveal that there are observable differences between TG and NTG members, between members and non-members in both RDP villages and non-RDP villages, and between non-members in RDP and non-RDP villages. The differences among members indicate that NTG members belong to households owning much more land, have a household head with more schooling and who is less likely to be a manual labourer, and

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have a larger homestead. This is hardly surprising given that NTG households do not fulfil the eligibility criterion. With respect to individual characteristics TG and NTG members are more or less similar, except for schooling and literacy which are actually proxies for household SES.

NTG members are more likely to report good health and to be perceived as contributors than TG members, suggesting that women belonging to NTG households have a relatively greater functional ability to engage in membership activities. All members appear to be similar with regard to the relative status and attitude indicators. In other words, TG members are similar to NTG members except that they belong to poorer households and appear to be less equipped to engage in membership activities.

The comparison between members and non-members in RDP villages indicate that differences are more visible at all levels. Non-members report bad health more often and are perceived as contributing to family income less frequently. They also have more years of schooling and are more likely to be literate than members, especially compared to TG members. Non-members belong to households owning less land compared to all members but more land compared to TG members. They come from labour selling households and own a larger homestead more frequently compared to TG members. Members have a bad relation with their husbands and unwanted pregnancy more frequently than non-members but are less likely to be prevented from going to their natal home. Their husbands are more likely to approve family planning. Differences between TG members and non-members are more accentuated than the differences between all members and non-members for some of the household and the schooling variables.

Finally, non-members in RDP and non-RDP villages are seen to be different in terms of many of the variables, particularly schooling, literacy, perceived contributor, female household head and the attitude variables. These observed differences could be evidence of non-random programme placement which means that RDP villages are systematically different from non-RDP villages in the village level factors that effect participation. We

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have not explored this proposition further in this paper.

Who participates in BRAC's RDP and why

Most studies that model participation in a programme try to predict the participation of households rather than the participation of individual women who are the actual members of the programme (7,4). The fundamental assumption, ofcourse, is that the decision to participate is a household decision. By implication factors at the individual level that may affect a woman's decision to join the programme are not included in their models or addressed only by inference from household effects. Just as there are demand and supply factors that affect the households' cost-benefit calculations for participation there are also personal trade-offs experienced by women which could significantly influence their choice to join a programme or not.

The observed mean differences suggest that the participation of women in RDP could depend upon a number of variables at the individual and household levels. Participation could also vary according to the woman's relative status and possibly the attitudes of the woman and her husband. Hence, we shall model participation using a multivariate logistic regression where the dependent variable, whether the respondent is a member of RDP, is dichotomous.

In modelling women's participation in RDP we recognise that household effects, including the effect of its credit demand, will be relatively more important than village effects because the household is the most significant locus of decision making for women. Since the household's credit demand is, no doubt, shaped by village characteristics the inclusion of household variables that capture the household's credit demand should partly take care of unobserved village effects on women's participation, if any. Moreover, by restricting the study population to only RDP villages any effect of non-random programme placement on women's participation will also be accounted for on the assumption that all RDP villages are similar in those village level factors that select participants. Hence, in the

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absense of multilevel modelling village characteristics will not be introduced since this may lead to the over-attribution of effects to village factors.

The model for predicting women's participation is given below:

$p = f$ { age, literacy, marital status, small child, health, contribution, schooling, labourer head, household size, sex of head, homestead, household land, relation with husband, unwanted pregnancy, prevented going to natal home, age difference with head, husband approves fp, discussed fp with neighbours}

All the individual variables are exogeneous to participation, i.e. they are not influenced by women's membership in RDP, since they describe the respondent's socio-demographic profile as determined by her life-cycle events and initial family socio-economic status. The perceived contributor variable is taken from the household questionnaire where the head was asked about whether each family member contributed to household income or not. Since the proportion of women perceived as contributing to household income is fairly high across membership categories, including among non-members in non-RDP villages, it seems reasonable to assume that this variable is not unduly influenced by participation in RDP.

The household variables all describe the household's initial capital and labour endowment situation and are, therefore, not influenced by women's membership in RDP.

The indicators of women's relative status all describe the pre-existing gender relationship within the household. The husband-wife relation variable is based on questions on disruption of the respondent's mental peace in the last four months and the reasons for such mental worries. The relationship is designated as bad if the respondent's mental worry is caused by her husband's behaviour (no economic support, second marriage, dowry, negligence, abandonment, violence, gambling, etc.) and not bad otherwise. It is unlikely that RDP membership will affect the reasons, especially the husband's

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misbehaviour, that cause women's mental worries. The attitude variables are also unlikely to be influenced by RDP membership given that family planning is widely practised and has become a common aspect of most people's lives.

We have used two models for participation of women in RDP villages. The first (sample size 1011) models participation among all members and TG non-members, while the second (sample size 869) models participation among TG members and TG non-members only. In a logistic regression the coefficient of each predictor or independent variable is presented as the ratio of the probability of participation relative to the probability of non-participation. These ratios give the odds for participation associated with each independent variable.

The estimated models for both the samples are shown in Table 4. The variables having a significant effect on the odds for participation are a good health status, perceived contributor to household income, household land ownership, manual labourer head (for the TG sample only), bad relation with husband and unwanted pregnancy (for the larger sample). The variables with no effect are age, literacy, schooling, small child, marital status, female head and attitude.

Thus, women are more likely to participate in households with some land compared to landless households and very large landowning households. The family size has a significant positive influence on the decision to participate. When only women from TG households are considered a labour selling head becomes a significant predictor of participation. This appears quite plausible since the demand for the type of credit provided by RDP is likely to be relatively less in small families (fewer workers) and in labour selling households (less assets) because of the need for a minimum investment of labour and capital. Credit demand is also likely to be weak in large landowning households since the amount of credit provided is not large enough to be worth the effort of investment for them. In households that sell labour, however, credit may be quite useful because the male head is able to adjust his labour use pattern more readily than business,

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service or agricultural households.

Women in less egalitarian husband-wife relationships, those who are seen as contributing to family income and those who report good health are more likely to participate. When members from NTG households are included an unwanted pregnancy also becomes a significant predictor of participation, suggesting that women's low status has a relatively greater influence on the decision to participate in NTG households compared to TG households.

The variables which are seen to have no effect on the decision to participate are women's individual characteristics, in particular those factors that determine women's labour time in domestic work, namely the woman's age, the presense of a small child and her marital status. In other words, women's domestic work load is not important in the decision to join. The woman's literacy level and schooling and the degree of conservative attitude of the head or the woman also do not appear to influence the decision to participate.

Measuring group dynamics

It is the common experience of most rural development programmes that individual outcomes, especially those that the programme aims to influence, varies among participants. However, the variation in outcomes among members are not commonly addressed by impact assessments. Even when addressed attention is placed on the effects of measurable programme inputs such as credit, training and membership length or some combination of these on behavioural outcomes. The role of the group, which is used as the mechanism for input delivery, has not received as much research attention although it is recognised by most programme implementers and grassroots workers as an important influence on individual outcomes. Group cohesion and strength was found to be one of the major factors explaining variation in the performance of women's informal groups engaged in operating and managing irrigation pumps (6). In fact, once a woman joins a programme the informal group unit becomes an important aspect of her daily life

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regardless of the initial reason for joining. It is not unlikely, therefore, that the dynamism and nature of the group can have an independent effect on individual behavioural *outcomes* that the programme wishes to influence.

The concept of group dynamics is a complex one since it incorporates such diverse aspects of group functionality as member homogeneity, group activity, social and political consciousness, group solidarity and identity, etc. No doubt these aspects are best examined and measured using qualitative indicators and methods of assessment. However, in this paper we try to capture group dynamics from survey data on women members. We develop quantitative indicators to capture group qualities that may influence members' behaviours. Moreover, due to lack of direct information on the group itself (such as cohesion, leadership, meetings, joint activities, etc.) we have to resort to indirect measures based on an aggregation of information on all available individual members for each group.

The BRAC group mobilisation process consists initially of organising the poor, primarily women, into village organisations (VO), usually one VO per village. The VO is seen as creating the context within which the mobilisation, conscientisation and empowerment of the poor can take place (2). It also provides the platform for interaction between BRAC staff and the group members and between the group members themselves. VO membership requires weekly savings and attending the social awareness classes.

In this paper "group dynamics" is captured by creating indexes for three specific VO characteristics. These are the homogeneity of VO membership (HMO), the level of VO activity (LS1) and the level of VO social awareness (SA). The elements that have constituted each of the indexes are as follows:

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VO homogeneity index

> % members within mean age +5 years
>
> % members with 6+ yrs schooling
>
> % members with labour selling head

VO activity index

> average loan amount
>
> average savings
>
> average days training received
>
> proportion who can sign
>
> VO age in months

VO social awareness index

> members' participation in protest
>
> % knowing legal age for girl's marriage
>
> % knowing legal way to divorce

Index construction consisted of aggregating the information for all members of each VO and then giving scores for the different elements. The index was created by summing the scores for all elements in that index. For example, in creating the homogeneity index the variation in members' age was scored as follows:

50% or more members aged within mean age +5 years = 2

30%-49% members aged within mean age +5 years = 1

less than 30% members aged within mean age +5 years = 0

The index construction exercise yielded the following results:

	N	Min	Max	Mean
VO homogeneity index	477	3.0	7.0	4.66
VO activity index	477	5.0	13.0	8.75
VO social awareness index	477	0	7.0	3.01

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The correlations between the indexes and between individual programme inputs and the indexes are shown in Table 5. VO homogeneity and activity are highly positively correlated but the social awareness index appears uncorrelated to both of them. Both the homogeneity and activity indexes are positively correlated with whether the member received training but not with whether she has taken a loan. The social awareness index is negatively correlated with both whether the member received any training and loan.

The above methodology is crude and will only be used for exploratory purposes. The major weaknesses of this method of index construction are the following:
-since index construction is by aggregation it is an indirect method
-the index may be biased if some members are excluded from the survey
-there is no information for assigning relative weights to individual indexes for creating an aggregate VO index
-indexes may have cross-cutting effects on outcomes

Do "group dynamics" matter ?

Table 6 presents some behaviour outcomes at the individual level that are likely to be influenced by VO membership. To assess the impact of group dynamics on individual outcomes we select three outcomes that are relatively common for VO members. These are mobility to the BRAC area office, income earning activity in the last 7 days and current use of family planning methods.

The effect of group dynamics on these individual outcomes is estimated using a multivariate regression analysis. The estimation results, which are presented in Table 7, must be taken as only indicative and are certainly not conclusive in any way.

In the model individual, household, relative status, attitude and programme input effects are controlled. Group dynamics are represented by the three VO indexes. Village dummies are introduced into the model because the structural factors determining

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women's income earning opportunities and needs and the social constraints to women's mobility and control over asset may vary systematically according to village.

Household and individual effects are not observed on member's income earning behaviour. Members with a bad relationship with their husbands are more likely to be earning an income. Programme credit has a positive effect on income earning behaviour, but other RDP inputs do not seem to influence this outcome. Given all these effects the VO social awareness index has a significant posituve effect on the probability of income earning by members. The other two VO indexes also have positive effects but these are not significant.

Members' mobility behaviour is subject to some household effects but these are not very clearcut. Programme loan has a highly significant positive effect but membership length has a negative effect on mobility to BRAC office. It could be that new members are required to visit BRAC office more frequently than older members. VO homogeneity has a significant positive effect while VO activity index has a surprisingly significant negative effect on members' mobility. Since an active VO is more likely to consist of older members this may expalin why the VO activity index has a negative effect on mobility.

Lastly, members' use of modern family planning methods is seen to be largely determined by the woman's age and the presense of a child under one, both of which have significant negative effects, and household size which has a significant positive effect. All of these influences have the expected signs. Not surprisingly, husband's approval of family planning has a large and significant positive effect on modern family planning use by members. The VO social awareness index has a positive effect although none of the RDP inputs show any effect on modern family planning use.

In summary, VO homogeneity appears to have the most consistent and positive effect on all three individual outcomes. Again, group effect is more visible on member's income earning behaviour than on behaviour outcomes. There are cross-cutting effects of the VO

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activity and social awareness indexes on outcomes. And there are significant "group effects" on individual outcomes even when specific programme inputs do not appear to have any influence on member's behaviour.

Conclusions

The results of the participation modelling exercise suggest that the decision to participate is not an individual decision based on women's personal cost-benefit calculations, but largely a household decision based upon the household's net utility to be derived from women's RDP membership. The household's net utility is determined by the trade-off between the household's credit demand (which depends upon the household's capital and human endowments) and the welfare lost due to time and effort spent by women in membership activities. Apparently the welfare lost at the household level is negligible (although for the woman it may be considerable) because participation appears unaffected by the magnitude of women's domestic work load.

Thus, the household's credit demand, reflected in such objective conditions as family size and the size of household land, emerges as the overriding factor in women's decision to participate. Once the household's credit need is established participation is contingent upon the availability of a female household member both able and willing to bear the "cost of participation" in terms of time and effort. In households with an established credit demand the functional ability to participate, which is enhanced by physical good health and the capacity to contribute to family income, also emerges as an important factor in the decision to participate. The willingness of a woman to participate in the context of possible loss of own welfare, although not directly observed, is implied by a spousal relationship that is less than egalitarian. This is particularly so in relatively better-off NTG households where women may have little to gain personally from RDP membership. In other words, women's capacity to function as an RDP member and the nature of the spousal relationship are factors that select women for programme membership from all women belonging to household's with an apparent credit demand.

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The very tentative results from the estimation of group effects indicate is that it is possible to estimate group effects if group characteristics can be adequately captured. In particular, group homogeneity appears to have the greatest potential for influencing outcomes at the individual level regardless of the reasons for joining programmes. To that extent it seems desirable to pay greater attention to group mobilisation and group formation processes in programme implementation. Moreover, the need to pay greater research attention on measuring "group dynamics" and on assessing the role of the group in bringing about favourable change in women's behaviours is also indicated.

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TABLE 1. SURVEY VILLAGES BY PROGRAMME PLACEMENT STATUS
AND NUMBER OF HOUSEHOLDS INTERVIEWED

Name of programme	Name of village	No. of households interviewed	Sampling
RDP only	Uddomdi (S)	313	All hh
	Char Nilokhi	118	Only TG hh
	Nilokhi	98	Only TG hh
	Fatehpur	413	All hh
	Enayet Nagar	149	Only TG hh
RDP+MCH-FP	Dhakirgaon	300	All hh
	Shilmondi	164	All hh
	Munsobdi	140	Only TG hh
	Shabazkandi	428	All hh
	Sonatar Kandi	118	Only TG hh
MCH-FP only	2 villages	1023	All hh
No programme	2 villages	833	All hh
Households in RDP villages	10 villages	2241	
Total households		4097	

Note: TG implies ownership of less than 50 decimals of land by households

TABLE 2.   DISTRIBUTION OF RESPONDENTS[1] BY RDP MEMBERSHIP STATUS

RDP membership status	No. of respondents (%)
All Non-members	1795 (100)
Non-members in RDP participant hh	173(9.6)
Non-members in RDP villages	513 (28.6)
Non-members in non-RDP villages	1109(61.8)
All Members	499 (100)
Members in TG hh	356 (71.3)
Members in NTG hh	143 (28.7)
All Members	499 (100)
Members with loan	433 (86.8)
Members with training	148 (29.6)
Total no. of respondents in RDP villages	1185
% members	42.1

Note: [1] All members and only non members in TG (eligible) households aged 15-50 years.

TABLE 3.   SOCIO-DEMOGRAPHIC, HOUSEHOLD AND RELATIVE STATUS
            AND ATTITUDE CHARACTERISTICS BY PROGRAMME
            PARTICIPATION STATUS OF RESPONDENTS

Name of variable	Members		Non-members	
	All	TG	RDP villages	Non-RDP villages
A. Socio-demographic var.				
Mean age (years)	35.5	34.8	34.6	34.5
Mean schooling (years)	1.1	0.7	1.2	0.9
% can read and write	23	16	26	20
% currently married	89	89	89	89
Mean living children (number)	3.1	3.0	2.7	2.9
% child under one	10	12	11	14
% reporting good health	67	63	56	57
% perceived contributor	68	64	58	34
B. Household variables				
Mean household size	5.4	5.2	4.9	5.2
Mean head's schooling (years)	2.1	1.6	1.9	1.2
% head labour selling	40	51	42	38
% landless	6	7	11	11
Mean own land (dec.)	35.2	13.1	16.9	19.9
% homestead over 4 dec.	53	44	50	51
% female head	15	13	16	20
C. Relative status indicators				
% bad relation husband	8	9	6	7
% prevented going natal home	5	6	8	5
% unwanted pregnancy	20	18	13	10
Mean age difference head (years)	9.1	8.5	9.0	10.7
D. Attitude indicators				
% husband approves fp	68	67	63	57
% discussed fp husband	15	16	16	9
% discussed fp neighbours	11	10	7	5
Number of respondents	499	356	513	1109

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TABLE 4.   MODELLING PARTICIPATION IN RDP VILLAGES

Dependent Variable >		Member of RDP (Yes, No)			
		Model 1		Model 2	
Independent Variables	Variable Labels	All members and TG non-members		TG members and non- members	
		Exp.(B)	Sig.	Exp(B)	Sig.
Age in years	age_n	1.0012	.91	.9986	.90
Read and write	educ_n	.6573	.23	.7796	.54
Currently married	msts_1	.8484	.62	.9013	.77
Child under one year	schld	.9947	.98	1.0917	.71
Reported good health	hgbad_n	1.5698***	.00	1.3085*	.06
Perceived contributor	chin	1.3853**	.02	1.1686	.30
Schooling (Years)	lcps_n	.9957	.95	.9198	.32
Labourer head	hhlab	1.0296	.84	1.3033*	.08
Household size	hhsize	1.1171***	.01	1.0926*	.09
Head's schooling (years)	lcpsh_n	1.0291	.25	1.0002	.99
Female head	sxhh	.9502	.82	.9960	.99
Homestead over 4 dec.	hlqudl_n	.8969	.45	.8653	.35
HH own land 1-49 dec.	tland_n	1.8713***	.01	1.9462***	.01
HH own land 50-249 dec.	"	4.9091***	.00	.9142	.84
HH own land 250+dec	"	1020.176	.37	-	-
Bad relation husband	spbm_n	1.6964**	.04	1.6514*	.07
Prevented going natal home	wnsh_n	.6204	.10	.7253	.28
Unwanted pregnancy	wwsh_n	1.4130*	.08	1.3406	.17
Age difference husband	age_dif	.9922	.24	.9952	.52
Husband approves fp	whap_n	1.1505	.38	1.1239	.50
Discussed fp neighbours	wfpn_n	1.2688	.32	1.3834	.21
Constant		-1.7122***	.00	-1.5390**	.02
Members correctly predicted		62.05%		33.71%	
Non-members correctly predicted		67.25%		83.43%	
-2 log Likelihood		1305.433		1121.950	
Model chi-square (significance)		95.888 (.000)		54.218 (.000)	
N		1011		869	

TABLE 5.   CORRELATION COEFFICIENTS FOR NDICATORS OF VO
CHARACTERISTICS AND INDIVIDUAL RDP INPUTS

	HM0	LS1	SA	LNO-N	TN-N
HM0	1.00				
LS1	.69	1.00			
SA	.04	.04	1.00		
LNO-N	.01	.00	-.11	1.00	
TN-N	.14	.23	-.12	.13	1.00

Note:
HM0: VO index for homogeneity of membership
LS1:   VO index for level of activity
SA: VO index for level of social awareness
LNO-N: Members with loan
TN-N: Members with training

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TABLE 6. INDIVIDUAL BEHAVIORIAL OUTCOMES IN RDP AND NON-RDP VILLAGES BY MEMBERSHIP IN VILLAGE ORGANIZATION (VO)

Behaviour indicators	VO member		VO non-member	
	NTG	TG	RDP village	Non-RDP village
A. Mobility (% went)				
Natal home	57	61	59	62
Health centre	10	10	6	3
BRAC office	27	31	1	1
B. Income earning (% earning income during last 7 days)	27	28	15	11
C. Ownership of assets (% owning)				
Poultry	77	65	58	49
Cash	72	67	12	8
Jewellery	58	46	50	32
D. Control over assets (% able to sell asset and keep money)				
Poultry	62	42	38	33
Cash	42	27	5	4
Jewellery	29	15	13	10
E. Small decisions (% able to do herself)				
Children's treatment	1	3	2	2
Buy saree	10	7	4	5
Buy rice/dal	4	4	2	2
F. Family planning (% current user)				
Any method	59	53	48	38
Modern method	53	49	44	37

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TABLE 7. EFFECTS OF HOUSEHOLD, INDIVIDUAL AND GROUP FACTORS ON INDIVIDUAL OUTCOMES

Factors		Individual outcomes		
		Income earning	Mobility	Modern family planning use
		Exp (B)	Exp (B)	Exp (B)
Household	Labour head	.74	.78	.58**
	Size	.88	1.00	.57***
	Homestaed land	.98	.61*	1.71**
	Homestaed land 1-49 dec.	.82	2.75*	1.00
	Homestaed land 50+ dec.	.99	2.48	1.48
Individual	Can read + write	1.42	1.18	1.82**
	Good health	1.05	.88	.97
	Currently married	.54	4692.29	24.53***
	Small child	.62	1.00	.94
Realtive status	Bad relation with husband	1.92*	.88	.91
	Unwanted pregnancy	.63	.95	1.83**
Attitude	Husband approves fp	1.63	1.14	1.76**
	Discuss fp neighbours	1.07	1.06	1.41
RDP input	Loan	2.74**	6.93***	.79
	Training	1.28	1.42	1.22
	Membership length	1.02	.95***	1.03**
Group Charac.	Member homogeneity index	.94	1.45	1.50
	VO activity index	1.51	.73	.65*
	VO social awareness index	1.42*	.98	1.24
Village dummies		+—·	+·	+·
% correctly predicted	29.23		31.21	70.18
Overall correct prediction %	75.84		73.95	73.11

TABLE 8.   RELATIONSHIP BETWEEN VO CHARACTERISTICS AND INDIVIDUAL OUTCOMES, AND RDP INPUTS AND INDIVIDUAL OUTCOMES

	Individual Outcomes		
	Income earning	Mobility	Control over asset
Group Characteristics			
VO Homogeneity index	+	+*	+
VO activity index	+	—*	—
VO social awareness index	+	~	+
Individual RDP inputs			
Loan	+*	+*	—
Training	+	+	+
Length	~	—*	+

Note: *   indicates a significant relationship
        ~   indicates no observed relationship