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RESEARCH ARTICLE

Leveraging Group Dynamics for Enhancing the Performance of Farmer Producer Organizations in West Bengal

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ABSTRACT

Exploring group dynamics and understanding when a group will remain stable or shrink over time can be important in several social domains. Although success has been tasted by many Farmer Producer Organisations (FPOs), it is the sustainability and stability of these FPOs that the development professionals are currently concerned. The state of West Bengal was selected purposively for the study. Five high performing and five low performing FPOs, which were functioning for more than five years from the four districts namely Birbhum, Murshidabad, Purba Bardhaman and Nadia were considered for this study. Data were collected from a random sample of 120 farmer members through personnel interview method. The scale developed by Vipinkumar (1998) was used for measurement of group dynamics effectiveness with necessary modification. Extension Personnel and Cosmopolite Channel Contact was found to be a significant contributor in developing better group dynamics within a high performing FPO. Attitude towards group and Age were found the reliable predictors in the variance of group dynamics effectiveness index scores of respondents in low performing FPOs.

***Key words**: Group dynamics; Performance; Farmer Producer Organisations.*

Social group is a collection of two or more individuals, whose interactions are structured based upon durable contacts, shared norms and interests, distinctive patterns of collective behaviour and structural organizations of leadership and followership (*Cartwright, 1968; Corey, 2002*). So we can say a group is a social system which involves frequent interaction among its members and a shared group identity. Groups usually exist for a reason. In groups, people solve problems, create products, create standards, communicate knowledge, have fun, perform arts, create institutions and even ensure their safety from attacks by other groups (*Triplett, 1898*). Groups tend to be influential rather than lackluster, fluid rather than static, effective rather than inactive and catalyzing rather than restricting. *Lewin (1936)* used the term group dynamics to stress the powerful impact of these complex social processes on group members. These social processes include "the interdependence of people in groups, a group's capacity to promote social interaction, create patterned interrelationships among its members, bind members together to form a single unit, and accomplish its goals" (*Forsyth, 1992, 1999*). Later, *Cartwright and Zander (1968)*, two of the most prolific researchers in the field, supplied a formal definition, calling group dynamics a "field of inquiry dedicated to advancing knowledge about the nature of groups, the laws of their development, and their interrelations with individuals, other groups, and larger institutions".

In India, eighty seven percent of agricultural household are small and marginal farmers (*Agriculture census, 2015-16*). To make small holdings economically viable there is a genuine need for collectivizing small and marginal producers for improving incomes and reducing risks (*Mukherjee et al., 2018; Venkattakumar et al., 2019; Kumar et al., 2020; Singh et al.; 2021*). In this context, the concept of Farmer Producer Organisation (FPO) was introduced in Indian agricultural sector which refers to collectivization of

producers especially small and marginal farmers to form a group of farmers to collectively address many challenges of agriculture such as small and fragmented land holding, imperfect markets of inputs or products leading to lesser value realizations, poorer access to institutional credit, technology etc. (*Alagh, 2007; Singh, 2008; Venkattakumar et al., 2012; DAC, 2013; Venkattakumar et al., 2017; Mukherjee et al., 2018; Manaswi et al., 2019; Nikam et al., 2019; Amitha et al., 2021; Gorai and Wason, 2022*). Group dynamics of Farmer Producer Organisations is a critical factor contributing to its' effectiveness. As FPOs are playing a major role in today's development context, the present study was conducted to explore group dynamics of selected FPOs and to identify the associated factors.

METHODOLOGY

The present study was conducted in the state of West Bengal. Random sampling procedure was used for sample selection in this study. Ten farmer producer organizations, which were functioning for more than five years from the four districts namely Birbhum, Murshidabad, Purba Bardhaman and Nadia were selected for the study. Among these ten FPOs, five were high performing FPOs and five were low performing FPOs as graded by officials. Those FPOs which were engaged in agriculture related activity were considered for this study. From each farmer producer organizations 2 office bearers and 10 general members were selected randomly. Thus, the total sample size of the study was 120. A detailed interview schedule containing appropriate questions for obtaining the required data was prepared. The data were collected through personal interview method.

Considering the objective of the study and based on the review of literature, effectiveness of group dynamics was considered as dependent variable. Group dynamics was operationally defined as the member's perceived feelings of belongingness, sharing common thread of norms for operation, maintenance, and management function, involving in group activities and decision making, understanding other member's feeling, and thoughts and experiencing favourable group atmosphere that bind group members together. The scale developed by *Vipinkumar (1998)* was used for measurement of group dynamics effectiveness with necessary modification. Five dimensions i.e. Participation and decision making, Norms for operation, maintenance and management function, Group atmosphere and interpersonal trust, Feelings of social inclusion and Empathy were selected as indicators for analyzing group dynamics. Group Dynamics Effectiveness Index for any individual was calculated by dividing the total obtained scores on all indicators of group dynamics with the maximum possible scores on all indicators of group dynamics and multiplying it by 100.

$$GDEI = \frac{\text{Total obtained score (TS)}}{\text{Maximum possible score(MS)}} \times 100$$

Where,

GDEI= Group Dynamics Effectiveness Index

TS=Total obtained score on all indicators of group dynamics

MS=Maximum possible score on all indicators of group dynamics

Appropriate independent variables for the present study are identified based on the objective of the study and review of literature. For studying the farmer-members of FPOs, the following variables i.e. Socio-personal variables (Age, Educational status, Family size, Farming experience), Socio-economic variables (Occupational status, Total land size, Annual income), Socio-psychological Variables (Attitude towards FPO, Attitude towards group), Social process variables (Social interactions with people, Cooperation, Competition, Conflict, Accommodation, Assimilation) and Communication Variables (Extension personnel and cosmopolite channels contact, Mass media exposure, Personal localite channels contact) were selected. Simple correlation analysis and multiple regression analysis were done to identify the associated factors of group dynamics of Farmer Producer Organizations.

RESULTS AND DISCUSSION

Components of group dynamics effectiveness index : It can be concluded from the Table 1 that the respondents of both samples were found to be similar on two components of group dynamics, i.e., norms of operation, maintenance and management functions and participation and decision making. This can be seen as a routine affair as the members of FPOs were adhering to all norms and actively participating in group meetings and taking part in decision making by consensus. These two components may not be discerning parameters of group dynamics. But the two samples of farmer respondents were quite different from each other on the three discerning components of group dynamics: feelings of social inclusion, empathy, and group atmosphere.

Moreover, from Table 2 it can be seen that the

Table 1. Distribution of respondents of FPOs based on different dimensions of Group Dynamics Effectiveness

Feelings of social inclusion	High Performing FPOs (n=60)	Low Performing FPOs (n=60)
Mean	12.10	7.85
t value	11.553**	
Norms for operation, maintenance and management function	High performing FPOs (n=60)	Low performing FPOs (n=60)
Mean	15.70	15.85
t value	-0.473^{NS}	
Participation and Decision making	High performing FPOs (n=60)	Low performing FPOs (n=60)
Mean	18.33	18.53
t value	-0.605^{NS}	
Empathy	High performing FPOs (n=60)	Low performing FPOs (n=60)
Mean	14.03	10.46
t value	15.280**	
Group atmosphere and interpersonal trust	High performing FPOs (n=60)	Low performing FPOs (n=60)
Mean	15.70	11.48
t value	11.385**	

Table 2. Distribution of respondents of FPOs based on Group Dynamics Effectiveness Index (GDEI)

Group Dynamics Effectiveness Index	High Performing FPOs (n=60)		Low Performing FPOs (n=60)	
Mean	87.37		73.29	
Standard Deviation	4.31		6.95	
Range (Min - Max)	79.31 – 93.10		58.62 – 89.66	
t value	13.321**			
Category	No.	%	No.	%
Low (< 71.21)	0	0	23	38.3
Medium (71.21-89.45)	41	68.3	36	60.0
High (>89.45)	19	31.7	1	1.7
Total	60	100	60	100

two samples of farmers were significantly different on their group dynamics effectiveness index as evidenced from the t value being statistically significant at 0.01 level of probability. While farmers of high performing FPOs had shown higher group dynamics effectiveness index in the group, leading to mutual faith and high performance, the farmers of low performing FPOs did not show such group dynamics effectiveness index in the group leading to alienation and low performance. *Dewangan et al. (2019)* in their study found that majority (65 per cent) of the Self-Help Group (SHG) members were in medium category of group dynamics effectiveness, whereas 20 per cent were found in high category, followed by 15 per cent were in the low

Table 3. Simple correlation analysis of Group Dynamics Effectiveness Index with characteristics of members in high performing FPOs

Characteristics	'r'
Age	0.052
Education	0.515**
Occupation	-0.292*
Family size	-0.057
Farming experience	0.160
Land holding	0.309*
Annual income	0.289*
Extension personnel and cosmopolite channel contact	0.722**
Mass media exposure	0.046
Personal localite channel	0.677**
Social interactions with people	0.649**
Attitude towards FPO	0.373**
Attitude towards group	0.496**
Cooperation	0.299*
Competition	-0.603**
Conflict	-0.604**
Accommodation	0.569**
Assimilation	0.336**

category of group dynamics effectiveness. *Garai and Maiti (2020)* also reported similar kind of result in their study in West Bengal.

Identification of associated factors of group dynamics High performing FPOs: The results in Table 3 present the relationship between Group Dynamics Effectiveness Index and the socio-personal, socio-economic, social process, communication and socio-psychological characteristics of members in high and low performing FPOs. It says that variables such as education, extension personnel and cosmopolite channel contact, personal localite channel contact, social interaction with people, attitude towards FPO, attitude towards group, accommodation and assimilation had positive association with group dynamics effectiveness index of members in high performing FPOs and is significant at 0.01 per cent level of probability. Variables such as land holding, annual income and cooperation also had positive association with group dynamics effectiveness index of members in high performing FPOs, however they are significant at 0.05 per cent level of probability. Competition and conflict were negatively associated with group dynamics effectiveness index of members in high performing FPOs. Occupation is negatively correlated with group dynamics effectiveness index of members in high performing FPOs suggesting

that members who took only agriculture and allied activities as occupation had higher group dynamics effectiveness index. Whereas, variables such as age, family size, farming experience, mass media exposure had no significant association with group dynamics effectiveness index of members in high performing FPOs. *Vipinkumar (2000)* found that characteristics like education, farm size, socio-economic status, extension orientation, scientific orientation, cosmopoliteness, knowledge, attitude to other farmers and information source use pattern were positively related to group dynamics effectiveness of SHG members of Kerala. *Ghosh et al. (2009)* reported that education, caste, farm size, income, social participation, scientific orientation and attitude of the group members had significant association with group dynamics effectiveness of the members of water user groups. *Garai and Maiti (2020)* in their study had observed that family size and operational land holding had negative and significant correlation with group dynamics effectiveness and variables like age, education, number of trainings attended, total training duration, extension contact, mass media exposure, cosmopoliteness-localiteness, economic motivation and innovation proneness had significant and positive association with group dynamics effectiveness of self-help group members.

Multiple linear regression analysis : The method of multiple linear regression was used for predicting the relative contribution of independent variables to the dependent variable, group dynamics effectiveness. For this a regression equation was fitted keeping group dynamics effectiveness index scores as dependent variable with eighteen independent variables. The results of multiple regression analysis for the high performing FPOs are presented in Table 4. The results showed that about 72.4 percent of variance in dependent variable group dynamics effectiveness index of respondents of high performing FPOs could be explained by the variables included in the regression equation as can be seen from R^2 being 0.724, which is significant at 0.01 level of probability.

Among all the independent variables, only one variable was found to be significant, i.e., extension personnel and cosmopolite channel contact, which was significant at 0.01 level of probability. Contact with extension personnel and other cosmopolite channels was found to be a significant contributor in developing better group dynamics within a FPO. As the contact with cosmopolite channels opens up one's world

Table 4. Multiple linear regression analysis of socio-personal, socio-economic, socio-psychological, social process and communication characteristics of members with GDEI in high performing FPOs

Independent variables	Unstandardized coefficients		Standardized coefficients	t	P value
	B	Std. Error	Beta		
(Constant)	70.249	9.614		7.307	.000
Age	-.014	.029	-.048	-.480	.633
Education	.021	.127	.020	.167	.868
Occupation	.119	.970	.015	.123	.903
Family size	-.433	.293	-.146	-1.475	.148
Farming experience	.048	.048	.093	1.003	.322
Land holding	-.072	.094	-.082	-.762	.451
Income	-1.827E-5	.000	-.124	-1.161	.252
Attitude towards FPO	-.054	.030	-.263	-1.784	.082
Attitude towards group	.008	.056	.023	.136	.893
Social interaction with people	.123	.179	.099	.686	.497
Cooperation	-.037	.071	-.061	-.521	.605
Competition	-.087	.114	-.156	-.765	.448
Conflict	-.142	.073	-.268	-1.947	.058
Accommodation	.074	.135	.096	.551	.585
Assimilation	.003	.093	.003	.028	.978
Mass media exposure	-.055	.096	-.052	-.574	.569
Extension personnel and cosmopolite channel contact	.791	.252	.717	3.136**	.003
Personal localite channel	-.069	.445	-.040	-.156	.877

R^2=0.724; F= 5.989; **significant at 0.01 level

Table 5. Simple correlation analysis of Group Dynamics Effectiveness Index with the characteristics of members in low performing FPOs

Characteristics	'r'
Age	-0.267*
Education	0.132
Occupation	-0.019
Family size	-0.138
Farming experience	0.046
Land holding	0.189
Annual income	0.203
Extension personnel and cosmopolite channel contact	0.535**
Mass media exposure	0.088
Personal localite channel	0.327*
Social interactions with people	0.420**
Attitude towards FPO	0.279*
Attitude towards group	0.641**
Cooperation	0.183
Competition	-0.297*
Conflict	-0.282*
Accommodation	0.064
Assimilation	0.392**

view, group members could see that there is worth in maintaining better and positive group dynamics within the FPO. Farmers could get adequate information from the extension personnel not only on better agricultural practices, but also on better ways of maintaining good relations, good atmosphere and interpersonal trust in the group. Hence contact with extension personnel and cosmopolite channels of communication was found to be a reliable predictor for the variance in group dynamics of the high performing FPOs.

Low performing FPOs: It was found from the results in Table 5 that extension personnel and cosmopolite channel contact, social interaction with people, attitude towards group and assimilation had positive association with group dynamics effectiveness index of members in low performing FPOs and is significant at 0.01 level of probability. Variables such as personal localite channel contact and attitude towards FPO also had positive association with group dynamics effectiveness index of members in low performing FPOs, however they are significant at 0.05 level of probability.

Competition and conflict were negatively associated with group dynamics effectiveness index of members in low performing FPOs. Competition and conflict being disjunctive forces have found to reduce group dynamics effectiveness within the low performing FPOs. Age is negatively correlated with group dynamics effectiveness index of members in low performing FPOs suggesting that young members had higher group dynamics effectiveness index scores.

Multiple linear regression analysis: The results showed that about 65.5 percent of variance in dependent variable of group dynamics effectiveness index of respondents of low performing FPOs could be explained by the variables included in the regression equation as can be seen from R^2 being 0.65 (Table 6).

Among all the independent variables, only two variables were found to be significant, i.e., attitude towards group and age, which was significant at 0.01 level of probability. Indeed, this two variable is most significant in running and managing the FPO, especially among respondents of low performing FPOs. Attitude towards group of the members, especially of low performing FPOs assumes great importance as a positive attitude of some members would provide for better group dynamics and a negative attitude of some members would pull down the group dynamics of the group. Age of the members in low performing FPOs is negatively affecting group dynamics effectiveness index suggesting that young members had higher group dynamics effectiveness index scores. Thus attitude towards group and age of members would become a reliable predictor in the variance of group dynamics effectiveness index scores of respondents in low performing FPOs. *Garai and Maiti (2020)* in their study observed that extension contact had highest contribution in predicting the GDEI. *Patil et al. (2021)* reported that attitude towards group was the key variable influencing the group dynamics effectiveness of women self help groups in Gujarat. *Mahapatra et al. (2023)* found that better prices for agricultural produce compared to local traders and adequate infrastructure for marketing and value addition were the most important success factors of the FPOs.

CONCLUSION

Group dynamics is very important for successful performance of farmer producer organizations and the success of FPOs is critical for ensuring the success of small and marginal farmers in India. Therefore, the present study was intended to explore the group dynamics scenario of high performing and low performing FPOs of West Bengal and to identify the factors responsible for their higher group dynamics. The outcome of the study will help in improving the

Table 6. Multiple linear regression analysis of socio-personal, socio-economic, socio-psychological, social process and communication characteristics of members with GDEI in low performing FPOs

Independent variables	Unstandardized Coefficients		Standardized Coefficients	t	P value
	B	Std. Error	Beta		
(Constant)	56.293	10.437		5.393	.000
Age	-.349	.113	-.397	-3.086**	.004
Education	-.042	.287	-.019	-.145	.885
Occupation	2.318	1.685	.177	1.376	.176
Family size	.016	.575	.003	.028	.978
Farming experience	.129	.121	.143	1.070	.291
Land holding	.047	.205	.027	.229	.820
Annual income	-6.150E-5	.000	-.173	-1.126	.267
Attitude towards FPO	.012	.039	.036	.308	.760
Attitude towards Group	.301	.091	.446	3.298**	.002
Social interaction with people	.536	.313	.214	1.712	.095
Cooperation	.006	.090	.008	.069	.945
Competition	.036	.156	.026	.232	.818
Conflict	-.124	.134	-.108	-.931	.357
Accommodation	-.104	.096	-.128	-1.087	.284
Assimilation	.188	.106	.244	1.771	.084
Mass media exposure	.049	.184	.030	.266	.791
Extension personnel and cosmopolite channel contact	.090	.189	.077	.479	.635
Personal localite channel	.319	.429	.090	.743	.462

R^2=0.655; F= 4.326; **significant at 0.01 level

functioning of different farmer producer organizations through analysis of factors affecting group dynamics which may help in ensuring success of such organizations. The study is expected to be very relevant for the civil society organizations, policy makers and researchers who work solely for mobilizing farmers to form groups and thus, the study would facilitate replication of similar initiatives in other parts of the country also.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

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