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## RESEARCH ARTICLE

## Development of a Scale to Measure Group Dynamics Effectiveness (GDE) of FPO Members

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## ABSTRACT

*FPOs are non-profit groups run by the farmers who actively engage in deciding on policies and setting priorities for the organization. They do not discriminate on the basis of gender, socioeconomic class, race, political affiliation, or religion and are open to anybody who can use their services and is ready to accept the obligations of membership. To measure the group dynamics effectiveness among members of FPOs, an index was developed with Likert's summated rating technique during 2021-2022. A list of 108 items under 13 indicators regarding group dynamics effectiveness were sent to 120 experts for their relevancy using google forms and personal follow up. Based on 40 experts' responses, the Relevancy Percentage (RP), Relevancy Weightage (RW) and Mean Relevancy Scores (MRS) were estimated. Sixty-one items with  $RP > 70$ ,  $RW > 0.70$  and overall  $MRS > 2.3$  were considered for item analysis regarding group dynamics effectiveness. These items were administered to 40 farmers. Based on t-value ( $>1.75$ ) resulting from item analysis, 53 items were finally retained under 11 indicators in the group dynamics effectiveness index. The Cronbach's alpha value was found to be 0.98 which showed high reliability. The validity and reliability measures of the index indicated the precision and consistency.*

**Key words:** FPOs; Group dynamics effectiveness; Index.

A Farmer Producer Organization is a legal entity formed by the primary producers like farmers, milk producers, fishermen, rural artisans etc. A FPO's primary goal is to increase its members' income by selling their products and providing other services. In this regard, Govt. of India amended its companies act of 1956 to enable the farmers and primary producers also to form their business organizations under this act. Since group activities play a major role in improving conditions of farmers, it become imperative to understand how group activities are decided and how it can be helpful in addressing the constraints faced by the farmers. Groups are a typical organizational entity in an organizational context, making the study of groups and group dynamics a crucial topic of research in organizational behaviour. In order for a group to function effectively, group dynamics are crucial. Group dynamics is a system of behaviour

and psychological processes occurring within a social group (intra group dynamics), or between social groups (inter group dynamics). Group dynamics are important in all kinds of groups, official and informal. There are certain factors, which influence on group functioning and group effectiveness. Since group work is integral to organizations, addressing group dynamics can lead to better work outcomes, member satisfaction and an improved bottom line. Formulation of a strategy for the mobilization of effective farmer groups for participation in FPO is of paramount importance. It delineates socio-personal, economic, communicational and psychological traits of the group members which have significant relationship with group dynamics effectiveness. The group dynamics effectiveness (GDE) has been operationally defined as the sum total of forces among the members of group based on certain sub-dimensions. Lewin (1936) popularized the term

“group dynamics” to mean interaction of forces among group members in a social situation. It is the internal nature of the group as to how they are formed, what their structures and processes are, how they function and affect individual members, other groups and the organization (Lewin *et al.*, 1960). Hence, to understand the group dynamics effectiveness of FPOs members an GDE Index was developed.

## METHODOLOGY

The Summated Ratings method developed by Likert (1932) was used in the development of the measuring instrument. Based on the review of literature, 108 items under 13 indicators regarding group dynamics effectiveness were collected for developing the index. The items were sent to 120 experts in the field of extension education through mail and personal contacts for their critical evaluation of each item. The experts were requested to give their responses on a three-point continuum *viz.*, mostly relevant, relevant, and irrelevant with scores 3, 2 and 1, respectively. Out of 120 experts, only 40 experts responded in time and their relevancy score was ascertained by adding the scores on the rating scale. From this data, the relevancy percentage, relevancy weightage and mean relevancy scores were calculated for all the items. Relevancy percentage was calculated by summing up the scores of most relevant and relevant categories, which were converted into percentages whereas, Relevancy weightage (RW) was obtained by the formula-

$$RW = \frac{MR + R + IR}{MPS}$$

Mean Relevancy Score (MRS) was obtained by the following formula-

$$MRS = \frac{MR + R + IR}{N}$$

Where,

MR = Most Relevant (3),

R = Relevant (2),

IR = Irrelevant (1),

MPS = Maximum possible score (40×3=120),

N = Number of Judges (40)

Using these three criteria, the items were screened for their relevancy. Accordingly, items having relevancy percentage > 70, relevancy weightage > 0.70 and overall mean relevancy score > 2.3 for group dynamics effectiveness, were considered for final selection. Helen and Khaleel (2009) also followed the same procedure. By this process, 61 items under

11 indicators were selected. Item analysis was carried out on 40 farmers and their responses were taken on a five-point continuum *viz.*, strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1) with scores indicated in parenthesis for positive items and vice-versa for negative items.

The effectiveness score of the respondent was obtained by adding up the scores of all items in the index. Based on the total summated scores, respondents were arranged in descending order. Respondents with highest total scores (top 25%) and lowest total scores (bottom 25%) were made into two groups. The two groups provided the criterion groups in terms of which item analysis was carried out. Thus, out of 40 respondents, 10 respondents with high scores and 10 respondents with low scores were selected. The critical ratio was calculated by t-test. Ghosh *et al.*, (2010) also followed the same procedure.

## RESULTS AND DISCUSSION

Based on the t test values, items with t-value >1.75 were selected and retained in the final scale for measuring group dynamics effectiveness. Finally, 53 items under 11 indicators were selected for the index. For standardization of the index, reliability and validity were estimated. For testing reliability, Cronbach alpha ( $\alpha$ ) was used. The  $\alpha$  value was found to be 0.98. Kumar *et al.*, (2021); Priyadarshni *et al.*, (2021) also used  $\alpha$  for testing reliability.

*Validity* : Content validity was ensured while selecting group dynamics effectiveness items. Due care was exercised in selecting and wording the items to cover all the relevant aspects of FPO members group dynamics effectiveness. Thus, ensuring a fair degree of content validity. Kumar and Ratnakar (2016); Saravanan and Gowda (1999) used content validity for testing the validity.

The final GDE Index consisted of 53 items under 11 indicators is presented in the Table 1. Ghosh *et al.*, (2010) finally selected 10 indicators for the index. The responses had to be taken on a five-point continuum *viz.*, strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1) with scores indicated in parenthesis for positive items and vice-versa for negative items.

Each respondent's GDE score must be computed by adding the scores of he or she obtained on all the indicators. The higher the score, the more group dynamics effectiveness is exerted by the respondent.

**Table 1. Final statements for measuring Group Dynamics Effectiveness**

Statements	R (%)	RW	MRS	t-value
<i>Participation</i>				
Are all the group members involved in the group activities?	87.5	0.88	2.65	2.63
Do you participate actively in group meeting and other activities?	92.5	0.92	2.77	3.66
Do you feel that the members are verbally and physically active in all group undertakings?	76.6	0.79	2.37	3.66
Do the members make it for another to participate actively in group meetings and other activities?	76.6	0.8	2.4	4.36
Did your group achieve better with active participation by all the members in various group activities?	74.1	0.79	2.37	2.77
<i>Team work</i>				
Do the members try to pressure group unity while achieving their objectives?	77.5	0.8	2.42	3.07
Do you feel that the combined effort of the group brought much success?	93.3	0.93	2.8	2.63
Are all the members responsible enough to keep the group on target?	79.1	0.81	2.45	3.12
Do all the members willing to give major credit of the group success to the combined team?	85	0.85	2.57	3.12
Does the leader guide the members and lead them as a team?	83.3	0.85	2.55	3.07
Are the returns equally distributed among all the members?	75.8	0.8	2.42	3.25
<i>Group atmosphere</i>				
Do you prefer a friendly and congenial atmosphere in your FPO?	75.8	0.78	2.35	3.09
Is everyone given freedom to express his/her ideas, to agree and disagree?	91.6	0.91	2.75	3.21
Is every member given a feeling of warm and friendly acceptance by the others?	86.6	0.87	2.62	3.12
Is the groups open minded in accepting new point of view and encourage novel ideas?	85.8	0.86	2.6	3.47
<i>Decision making procedure</i>				
I usually take decision concerning group with the involvement of other members of the FPO.	77.5	0.8	2.42	2.63
Usually any group decision is taken jointly by all members in a participative manner.	81.6	0.84	2.52	1.84
The leader attempt to get full participation of the members while taking decisions.	76.6	0.8	2.4	1.95
Every member is recognized for his/her contributions to the group decision.	85	0.85	2.55	2.00
I feel that the group takes high quality decisions all the time.	72.5	0.76	2.3	2.04
<i>Group cohesiveness</i>				
I feel that the group worked well because the members are attached to one another.	85	0.86	2.6	3.06
Members run to support each other during hardships.	75	0.79	2.37	2.63
Do the members work towards achieving the common goals first and not for their personal interests?	81.6	0.81	2.45	2.99
Do you feel that there are members, who consistently agree and support each other in FPO?	74.1	0.8	2.42	2.91
<i>Group leadership</i>				
The group organizer is efficient at group work.	85.8	0.85	2.57	3.14
The group organizer is systematic and helpful to other members in solving the problems.	78.3	0.81	2.45	2.63
The leader maintains good relation with members as well as other groups.	76.6	0.83	2.5	2.23
The group leader works much for the group's success.	85.8	0.89	2.67	2.70
Group leader maintains good contacts with all the organizations that benefit the group	87.5	0.89	2.67	2.83
<i>Achievement of FPO</i>				
The group members are empowered socially and economically after becoming a member of FPO.	81.6	0.85	2.55	2.63
The group members are able to repay their loan after becoming a member of FPO.	72.5	0.8	2.42	3.26
The FPO has adopted new technology and novel designs to produce better quality product.	82.5	0.85	2.57	3.64
The group also takes interest to solve personal problems of members.	72.5	0.77	2.32	4.25
The group has participated in workshops, exhibitions, fairs, emporium, etc, held nationally.	79.1	0.82	2.47	4.58
The FPO is also captured good national and international market for its product.	82.5	0.84	2.52	2.41
I try to obtain all relevant information with regard to production and marketing from different sources.	71.6	0.78	2.35	4.00
I have participated in the training organized under the programme to upgrade my skills.	79.1	0.84	2.52	1.80
I actively participated in exhibitions and other market linkages to represent my group products.	70	0.78	2.35	2.15
<i>Fund generation</i>				
Do the farmers participate in the collection of revenues?	70.8	0.77	2.32	1.90
Does the FPO maintain the collected fund for future use or meeting the necessary expenditure?	68.3	0.78	2.35	2.70
Is there any financial support to manage and maintain the resources by the farmers group?	76.6	0.8	2.4	2.63
<i>Norms</i>				
Do the members follow certain rules in FPO?	78.3	0.81	2.45	2.82

Do all members of FPO co-operate and help each other?	83.3	0.85	2.55	3.17
Is there any rule/norm for participation in FPO?	74.1	0.79	2.37	3.60
Are there rules and regulations that control the behaviour of FPO members?	78.3	0.81	2.45	3.04
Do members act in the FPO as per the rule/norms for any activity?	70	0.76	2.3	3.09
<i>Empathy</i>				
When you interact with others in your FPO, do you imagine that “you were in his/her position?	72.5	0.79	2.37	2.87
When you interact with another member of your FPO, if he/she mentions his/her problems that are coming in the way of adopting the FPO decisions:				
a) You get angry and irritated.	64.1	0.77	2.32	3.06
b) You try to understand his/her problems and make necessary alternative solutions.	66.6	0.78	2.35	2.87
<i>Social support</i>				
FPO identifies various problems relating to resource management and communicates to officials/development personnel and receives various technical messages from them.	86.6	0.86	2.6	3.64
All member farmers grow crops as per planning of FPO.	81.6	0.81	2.45	2.93
FPO members attend training sessions by resource persons.	81.6	0.83	2.5	2.27
Project implementing institute/department officials act as a facilitator and supportive to FPO in performing its activities.	80	0.83	2.5	2.23
R= Relevancy; RW= Relevancy weightage; MRS= Mean relevancy score.				

## CONCLUSION

Index to measure group dynamics effectiveness among members of FPOs was developed. The precision and consistency of the index were ascertained through standard procedures and their reliability and validity were established. The index can also be used to measure the group dynamics effectiveness among members of SHGs and other organizations with suitable modifications in the items and indicators. The present study has tried an approach to measure group dynamics effectiveness of FPOs members, identifying different dimensions and their relative importance in it. It delineates socio-personal, economic, communication and psychological traits of the group members, which have a significant relationship with group dynamics effectiveness. The present study could be a precursor in formulating a strategy to mobilize effective farmer groups for FPO.

## CONFLICTS OF INTEREST

The authors have no conflicts of interest.

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