

**RESEARCH ARTICLE :**

## Developing group dynamics index for self-help group members

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**SUMMARY :** The present study conducted at Theni district of Tamil Nadu. For developing group dynamics index twelve self-help groups have been selected and the data were collected through focus group discussion and personal interviews with the respondents. The purpose was to analyse the group dynamics among the members of rural self-help group women by developing an index called Group Dynamics Index (GDI). Group co-operation, Group communication, decision making process, group role, motivation, participation, leadership behaviour, group value and group behaviour have been selected as group dynamic components.

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**KEY WORDS:**

Group dynamics,  
Factor analysis, Self-  
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### **BACKGROUND AND OBJECTIVES**

Group dynamics is concerned with interaction and forces between group members in a social situation. Concept of group dynamics was first evolved by Kurt Lewin in 1930s who viewed the concept from the perspective of internal nature of group, why they form, how they form, the structure of group, how they function and its effect on other group members, other groups and the organization. Following concepts are relevant for the study of group dynamics. Kurt (1951) defined group dynamics as a field of enquiry dedicated to the advancing knowledge about the nature of groups, the laws of their development and their interrelations with

individuals, other groups and larger institutions. Based on the feelings and emotions members of a group form a common perception. The interactive psychological relationship in which members of a group form this common perception is actually Group Dynamics. The phrase Group Dynamics contains two words- (i) Group- a social unit of two or more individuals who have in common a set of beliefs and values, follow the same norms and works for an establishable aim common. The members of the group share a set of common purpose, task or goals. (ii) Dynamics- the flow of, coherent activities which as envisaged, will, into, lead the group towards the establishment of its set goals.

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## RESOURCES AND METHODS

The term index has been operationalized as a numerical scale used to compare variables with one another. It is a statistical indicator providing a representation of the value of the securities which constitute it. Indices often serve as barometers for a given market or industry and bench mark against which financial or economic performance is measured. Sekaran (2010) defined group dynamics as a global or comprehensive term used to describe the nuances of group's operations. members work together. Group dynamics was operationalized as an extent to which the—existence of selected indicators is perceived by the respondents at a given point of time. Keeping the objective in mind further attempts have been made to measure the existing group dynamics among self-help group women members by taking into consideration all the indicators. The indicators were identified by reviewing the literature and as suggested by various authors.

### Identification and scrutiny of indicators :

Identification of indicators affecting the group dynamics was carried over through intensive analysis of literature and then further scrutiny was done by discussion with experts from the relevant field *viz.*, Department of Agricultural Extension and Rural Sociology in Tamil Nadu Agricultural University, Coimbatore, NGO officials, and Mahalir Thittam officials. Based on the preliminary discussion, seventeen indicators were selected considering the situation existed in the group.

### Relevancy rating of the indicators :

The final inventory of indicators was subjected to relevancy rating among 30 judges. The judges were from the cadre of Professor, Associate and Assistant professor in the discipline of extension of Tamil Nadu Agricultural

University, Gandhigram Rural University and other state Agricultural Universities. The experts were requested to specify whether each of the identified indicators was found relevant and suitable for inclusion to measure group dynamics. Their responses were obtained on a three point continuum *viz.*, 'most relevant', 'relevant' and 'least relevant' frequencies and scored as 2, 1 and 0, respectively.

The responses thus, received from the judges were analysed and the relevancy weightage (RW) of  $i^{\text{th}}$  indicator (RW $_i$ ) was worked out by using the following formula :

$$\text{Relevancy weightage (RW)} = \frac{\text{Most relevant } X^2 + \text{Relevant } X^1 + \text{Not relevant } X^0}{\text{Maximum possible score}}$$

Considering the relevancy weightage scores, the components were screened. Accordingly, components having relevancy weightage score ranging more than 0.75 alone were considered. Using this process, eight components were selected.

Followed by identification of major indicators of group dynamics, sub indicators were identified for each of the major indicator.

## OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarized under following heads :

### Selection of sub indicators :

Under each major indicator, sub indicators were identified based on perusal of literature and discussion with experts. The statements were framed on each sub indicators based on discussion with experts. The statements were edited based on 14 criteria suggested by Edward (1969). These statements were then subjected

**Table 1 : List of selected group dynamics indicators with their relevancy weightage**

Sr. No.	Indicators	Relevancy weightage
1.	Group co-operation	0.90
2.	Decision making process	0.91
3.	Group role	0.86
4.	Motivation	0.87
5.	Participation	0.89
6.	Leadership behaviour	0.88
7.	Group value	0.90
8.	Group behaviour	0.90

to scrutiny by an expert panel of judges to determine the relevancy. For this purpose, the statements were given to a panel of 30 judges and requested to indicate the appropriateness (relevancy) of each statement for inclusion in the scale. The responses were obtained on three point continuum *viz.*, ‘Most relevant’, ‘Relevant’ and ‘Not relevant’, with scores of 2, 1 and 0, respectively. Based on judges responses, the relevancy weightages were worked out for the statements by using the formula stated above. Applying the criteria that the statements having relevancy weightage more than 0.75 were selected.

#### **Procedure for group dynamics index development:**

The finalised schedule with eight major and sub indicators was administered to the respondents who were asked to give their responses on a five point continuum scale *viz.*, Most prevalent (MTP), More Prevalent (MRP), Moderately Prevalent (MOP), Less Prevalent (LSP) and Least Prevalent (LTP) in their group for which the scores given were 5,4,3,2 and 1, respectively. Sub indicators were sequenced as per their weightage under major indicators.

#### **Quantification of indicators :**

Each indicator was measured by means of scoring procedure developed for the study. To evolve a composite group dynamics index and to derive meaningful conclusions, separate index was developed for each indicator. The procedure has been followed by Karpagam (2009) with necessary modification to apt for the study. The details of quantification of each indicator are furnished below.

#### **Group co-operation index :**

It has been operationalized as to what extent resultant of the all the forces acting upon group members are mutually satisfying. It was quantified by set of statements. Respondents were asked to rate the existing group co-operation against the statements and group co-operation index was worked out by using the following formula :

$$GCI_N = \frac{SGC_{xi}}{TGC_{yi}}$$

where,

GCI = Group co-operation index

SGC xi = Secured score by an individual on group

co-operation

TGC yi = Total possible score for an individual on group co-operation

Secured score was calculated by multiplying the weightage score with the respondents rating of the particular sub indicator in the continuum. For example, the statement, members meet on regular basis in group sequenced fourth in the group co-operation, therefore, its weightage score is 1 and a particular respondent rated the indicator “more prevalent” category then its rating score would be 4. Thus, the secured score is (4x1) for the i<sup>th</sup> statement. By adding the secured score of each statement the total score secured by the individual on group co-operation was obtained.

Total possible score for group co-operation is arrived by adding total possible score of each sub-indicators [(4x5) + (3x5) + (2x5) + (1x5)]. By dividing the total secured score by total possible score, group co-operation index (GCI) was arrived for the particular respondent. The same procedure was followed to obtain other index too. Thus, calculated GCI was used for further analysis.

#### **Group decision making behaviour index :**

This has been operationally defined as the degree to which rural woman makes a decision with involvement of other group member of SHG, makes decisions without topic drifting, supports other members’ decisions in consensus, feels the majority’s decisions valid in the SHG, attempts to get all members participate in decisions of SHG and feels the gains of recognition for her contribution in decision making process. It was quantified by set of statements. Responses were obtained from respondents and secured score and total possible score were calculated. The decision making behaviour index (GDI) was worked out by using the following formula :

$$GDI_N = \frac{SGD_{xi}}{TGD_{yi}}$$

where,

GDI = Group decision making behaviour index

SGD xi = Secured score by an individual on group decision making behaviour

TGD yi = Total possible score for an individual on group decision making behaviour

The calculated GDI was used for further analysis.

#### **Group role index :**

Group role is referred to as a set of expected

behaviour patterns attributed to someone occupying a given position in a social unit. It is quantified by means of sub-indicators *viz.*, role identity, role perception, role clarity, role expectation and role conflict. The group role index was worked out by using the following formula :

$$GRI = \frac{SGR_{xi}}{TGR_{yi}}$$

where,

GRI = Group role index

SGR xi = Secured score by an individual on group roles

TGR yi = Total possible score for an individual on group roles

The calculated group role index was used for further analysis.

### Group motivation index :

Motivation has been defined as the forces that account for the arousal, selection, direction, and continuation of behaviour. It was quantified by set of seven statements. Responses were obtained from respondents and secured score and total possible score were calculated. The motivation index was worked out by using the following formula :

$$GMI = \frac{SGM_{xi}}{TGM_{yi}}$$

where,

GMI = Group motivation index

SGM xi = Secured score by an individual on group motivation

TGM yi = Total possible score for an individual on group motivation

The calculated group motivation index was used for further analysis.

### Group participation index :

Participation was operationally defined as the degree to which the rural woman is involved in group meetings, discussions and group activities of SHG. It was quantified by set of six statements. Responses were obtained from respondents and secured score and total possible score were calculated. The participation index was worked out by using the following formula :

$$GPI = \frac{SGP_{xi}}{TGP_{yi}}$$

where,

GPI = Group participation index

SGP xi = Secured score by an individual on group participation

TGP yi = Total possible score for an individual on group participation

The calculated group participation index was used for further analysis.

### Group communication index :

It denotes the nature of interaction existing among the members of self-help groups. It was quantified through six statements. The group communication index (GCI) was calculated by using the following formula :

$$GCI = \frac{SGC_{xi}}{TGC_{yi}}$$

where,

GCI = Group communication index

SGC xi = Secured score by an individual on group communication

TGC yi = Total possible score for an individual on group communication

The calculated group communication index was used for further analysis.

### Group leadership index :

It denotes to the nature and quality of leadership existing in the society. It was assessed through nine statements with scoring pattern. The leadership behaviour index (GLI) was calculated by using the following formula :

$$GLI = \frac{SGL_{xi}}{TGL_{yi}}$$

where,

GLI = Group leadership index

SGL xi = Secured score by an individual on group leadership

TGL yi = Total possible score for an individual on group leadership

The calculated group leadership index was used for further analysis.

### Group behaviour index :

It is defined as the situations where people interact in larger or smaller groups.

It was quantified by means of sub-indicators *viz.*, required and emergent behaviour, activities, interactions and sentiments. The group behaviour index (GBI) was worked out by using the following formula :

$$GBI = \frac{\sum_{i=1}^n SGB_{xi}}{\sum_{i=1}^n TGB_{yi}}$$

where,

GBI = Group behaviour index

SGB xi = Secured score by an individual on group behaviour

TGB yi = Total possible score for an individual on group behaviour

The calculated group behaviour index was used for further analysis.

### Group value index :

It was operationalized as the extent to which the rural women feels the standards or ground rules and regulations are in operation that controls the behaviour of group members for the smooth functioning of the SHG. It was quantified by means of sub-indicators viz., extent of rules and regulations, adherence to norms, approval of accepted behavior and sanctioning system. Respondents were asked to rate the existing group value against the sub-indicators and group value index (GVI) was worked out by using the following formula :

$$GVI = \frac{\sum_{i=1}^n SGV_{xi}}{\sum_{i=1}^n TGV_{yi}}$$

where,

GVI = Group value index

SGV xi = Secured score by an individual on group value

TGV yi = Total possible score for an individual on group value

The calculated group value index was used for further analysis.

### Group dynamics index (GDI) :

Group dynamics index was arrived by adding the score of each indicator viz., group co-operation, group decision making, group role, motivation, participation, communication, leadership, group behaviour and group value. The group dynamics index was calculated by adopting the following formula :

$$GDI = \frac{(I_{1x} + I_{2x} + I_{3x} + \dots + I_{8x})}{(I_{1y} + I_{2y} + I_{3y} + \dots + I_{8y})}$$

where,

GDI - Group dynamics index

$I_{1x}$  - Total score obtained by 1<sup>st</sup> indicator

$I_{9x}$  - Total score obtained by 9<sup>th</sup> indicator

$I_{1y}$  - Total maximum possible score for 1<sup>st</sup> indicator

$I_{9y}$  - Total maximum possible score for 9<sup>th</sup> indicator

Based on calculated composite group dynamics index the respondents were classified into three categories viz., low, medium and high. Furthermore, it was used for other statistical analysis.

### Factor analysis with respect to Group dynamics index :

Factor analysis is a multivariate statistical technique used to condense and simplify a set of large number of variables called factors. This technique is helpful to identify the underlying factors that determine the relationship between the observed variables and provides an empirical classification scheme of clustering of variables into group called factors.

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