CHAPTER III
RESEARCH METHODOLOGY

Every research follows a systematic procedure to conduct a study in the light of the predetermined objectives. Accordingly the scope of the study and the techniques of investigation to be adopted, tools to be used and the empirical measures are to be followed are decided. As per the set objectives of the present study, the research methodology needs to adopt both qualitative and quantitative technique in research. The general typology and description of the research methods and procedure adopted in the present investigation are explained under the following major heads.

3.1 Area of investigation and sampling design.
3.1.1. Selection of Agro climatic Zone.
3.1.2. Selection of respondents
3.2. Selection of variables and their measurement
3.3. Construction of research schedule
3.4. Statistical analysis and interpretation of data
3.5. Hypothesis of the investigation.

3.1. Area of investigation and sampling design.

3.1.1. Selection of Agro climatic Zone

Assam is constituted by six agro climatic zones, namely

i) Upper Brahmaputra valley zone

ii) Lower Brahmaputra valley zone

iii) Central Brahmaputra valley zone

iv) North Bank Zone
v) Borak Valley Zone
vi) Hill Zone

Out of the six agro climatic zones upper Brahmaputra Valley zone was selected by purposive cum random selection.

In upper Brahmaputra valley zone there are five districts.

i) Golaghat
ii) Sibsagar
iii) Jorhat
iv) Dibrugarh
v) Tinsukia

Out of the five districts Golaghat, Sibsagar and Jorhat district were selected by purposive cum random selection. The three districts were selected based on criteria of higher scope for agricultural development compared to other two districts and familiarity of researcher to the area and people.

**Brief description of the study area**

The study was carried out in Jorhat, Golaghat and Sibsagar district of upper Brahmaputra Valley zone.

**In Jorhat District**

- 23nos. Zilla Parishad Constituencies (ZPC)
- 8nos Anchalik Panchayats (AP) (for each Development Block one AP)
- 111nos. Gaon Panchayats (G.P)

**In Golaghat District**

- 17nos. Zilla Parishad Constituencies (ZPC)
- 8nos. Anchalik Panchayats (A.P)
- 102nos. Gaon Panchayats (G.P.)
In Sivasagar District

- 23nos. Zilla Parishad Constituencies (ZPC)
- 9nos. Anchalik Panchayats (A.P)
- 118nos. Gaon Panchayats

3.1.2 Selection of respondents

Two types of respondent were selected for the study.

A. Respondents from elected members of Panchayati Raj Institution.

B. Respondents from beneficiaries benefitted from agriculture department within gaon panchayat territory.

A. Respondents from elected members of RPI’s

(a) From Zilla Parishad level: Here the members of the zilla parished are involved in planning and execution at district level. From each district 3 members of zilla parishad were selected randomly. So, there were total 9nos. of respondents from zilla parishad level.

(b) From Anchalik Panchayat level: Here the members are involved in planning and execution of development activities at Block level. From every district 3 Anchalik Panchayats i.e. development blocks were selected. Total 9nos. of respondents at Anchalik Panchayat level will be selected.

(c) From Gaon Panchayat level: Gaon Panchayat is responsible for planning and execution of all development works of the Gaon Panchayat area.

From every district 9nos. of Gaon Panchayat i.e. 27nos. of Gaon Panchayat were selected randomly for the study.

So from, 27nos. of Gaon Panchayat, 27nos. President of Gaon Panchayat and 27nos. Member of Anchlik Panchayat were selected randomly for the study. Again from every Gaon Panchayat 3nos. of unit member were selected for the study. So, total 81nos. of unit members randomly selected for the study.
(B) Respondents from beneficiaries of PRI’s

From each Gaon Panchayat 3nos. a total of 81nos beneficiaries were selected randomly for the study.

Selection of zilla parishad constituency (ZPC)

A. From Jorhat District: (i) Charigaon
   (ii) Charaibahi
   (iii) Baghchung

B. From Golaghat District: (i) Morongi
   (ii) Dergaon
   (iii) Sarupathar

C. From Sivasagar District: (i) Charaideo
   (ii) Sivasagar
   (iii) Morabazar

Selection of Anchalik Panchayat (A.P)

A. From Jorhat District
   (i) Kalia Pani Anchalik Panchayat
   (ii) North West Anchalik Panchayat
   (iii) Central Jorhat Anchalik Panchayat

B. From Golaghat District
   (i) Kakodonga Anchalik Panchayat
   (ii) Dergaon Anchalik Panchayat
   (iii) Morongi Anchalik Panchayat

C. From Sivasagar District
   (i) Amguri Anchalik Panchayat
Selection of Gaon Panchayat (G.P)

A. Jorhat District

i. No. 2 Bhogamukh. G.P.

ii. No. 7 Pachim Teok G.P.

iii. No. 9 Balama G.P.

iv. No. 33 Uttar Pub Charigaon G.P.

v. No. 34 Pachim Charigaon G.P.

vi. No. 43 Dhekorgora G.P.

vii. No. 24 Madhya Rajoi Baduli Pukhuri G.P.

viii. No. 26 Kakojan G.P.

ix. No. 28 Meleng Balichapari G.P.

(B) Golaghat District

i. Boruah Bamun Gaon G.P.

ii. Nagheriting G.P.

iii. Baduli Par G.P.

iv. Behora G.P.

v. Numaligarh G.P.

vi. Morongi G.P.

vii. Rongajan G.P.

viii. Rongdoi G.P.
(C) Sivasagar District

i. Amguir G.P.

ii. Bhuyanhat G.P.

iii. Borbam G.P.

iv. Charing G.P.

v. Morabazar G.P.

vi. Sologuri G.P.

vii. Cherakapar G.P.

viii. Gargaon G.P.

ix. Panbecha G.P.

Selection of Unit members

From each Gaon Panchayat 3nos. unit members were selected for the study. Out of 10 unit members from each Panchayat 3nos.of unit members were selected randomly. Total 81nos.of unit members were selected for the study.

Selection of Beneficiaries

From each Panchayat 3nos. of beneficiaries were selected randomly and total 81nos. of beneficiaries were selected for the study.

3.2. Selection of variables and their measurement

Available literatures on the theme of the research were reviewed and discussion with extension scientists were undertaken for selecting variables for the study. The variables selected for the study were categorised into 2 sets viz., dependent and independent variables. The study included 12 independents variables and 2 dependent variables.
3.2.1. Independent Variables

Independent variables that were supposed to be related with the dependent variables. The variables selected for the study and their empirical measurement procedure adopted are as follows.

(i) Age: It is referred to the chronological age of the respondents in completed years at the time of investigation. The respondents were further grouped into three categories, viz. young, middle and old as found in Government of India census report (1981).

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young</td>
<td>18-30 years</td>
</tr>
<tr>
<td>Middle</td>
<td>31-50 years</td>
</tr>
<tr>
<td>Old</td>
<td>Above 50 years</td>
</tr>
</tbody>
</table>

(ii) Education: It is the process of producing desirable changes in the behaviour of an individual. In this study, this variable referred to the level of formal schooling undergone by elected members of Panchayat Raj Institutions in terms of years which they successfully completed as indicated by the formal standards attained.

The respondents were asked to indicate the level of education they had from among the following five types and corresponding scores were given as under. The classification was based on procedure followed by Manshing (1993).

<table>
<thead>
<tr>
<th>Education level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>1</td>
</tr>
<tr>
<td>Primary education</td>
<td>2</td>
</tr>
<tr>
<td>Middle school education</td>
<td>3</td>
</tr>
<tr>
<td>High school education</td>
<td>4</td>
</tr>
<tr>
<td>Graduate</td>
<td>5</td>
</tr>
</tbody>
</table>
(iii) Social Participation: This refers to the degree of participation or involvement of the respondents in formal and informal organization either as a member or as an office bearer. The social participation score of the respondents was calculated on the basis of the nature of their participation and the number of organization, they had participated in. The scoring procedure followed by Patil (1999) was adopted for measuring social participation.

Accordingly, a score of 1 was assigned to an individual when he/she was a member of an organization, a score of ‘O’ (zero) was given to the respondent who was not a member of any organization and a score of 2 was given to the respondent who was an office bearer of an organization.

Further a score of 3, 2 and 1 was given for ‘Regular’ ‘Occasional’ and ‘Never’ participated in the organization activities respectively. After calculating the cumulative score the respondents were categorized into three groups by using mean and standard deviation.

<table>
<thead>
<tr>
<th>Nature of participation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office bearer</td>
<td>2</td>
</tr>
<tr>
<td>Member</td>
<td>1</td>
</tr>
<tr>
<td>Not member</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Extent of participation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>3</td>
</tr>
<tr>
<td>Occasional</td>
<td>2</td>
</tr>
<tr>
<td>Never</td>
<td>1</td>
</tr>
</tbody>
</table>

(IV) Caste: Caste in an aggregate of persons whose share of obligation and privileges fixed by birth, sanctioned and supported by religion. Quantification of the variable was done as by adopting the procedure followed by Madhik (1995) with slight modification.
The categorization of caste was done as per division made by government of Assam i.e. General, O.B.C and M.O.B.C and S.C. and S.T.

The scoring of these categories was done as follows,

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>3</td>
</tr>
<tr>
<td>OBC/MOBC</td>
<td>2</td>
</tr>
<tr>
<td>SC/ST</td>
<td>1</td>
</tr>
</tbody>
</table>

(V) **Family type:** Taking into consideration the relationship of the families of the family members, the families of the respondents were grouped into two categories, namely, ‘nuclear family’ and ‘joint family’.

(a) Nuclear/individual family: It means the family which consisted of

   i. A married couple with one or more unmarried children,

   ii. A married couple without children

   iii. Parent with one or more unmarried children

(b) A family was considered as a joint family, if it consisted of two or several related individual families in one household, living together under one roof and had a common kitchen and who held priority in common.

The procedure adopted by Manshing (1993) was used for scoring for family type.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Joint family</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>Nuclear family</td>
<td>1</td>
</tr>
</tbody>
</table>
Leadership behaviour of members of Panchayati Raj Institution

It is the degree to which an individual initiate or motivate the action of followers. Leadership was regarded as the process of initiating, directing, organizing and controlling the behaviour of members of the community by those which hold position of prestige, power or authority. In the present study the variable was measured by using the scale developed by Belli B.R. (2008) with slight modification.

There were 35 statements covering different aspect about leadership behaviour of members of PRIs. A five point continuum representing ‘always’, ‘usually’ ‘sometimes’, ‘rarely’ and ‘never bother’ with the scores 5, 4, 3, 2, 1. respectively was specifically spelt out for the items.

The summation of scores for all the items in each dimension yielded one’s leadership behaviour score for that particular dimension. The sum of all the dimension’s scores yielded the overall leadership behaviour score. With the help of mean and standard deviation the respondents were categorized into three levels.

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>&lt; (\bar{X} - SD)</td>
</tr>
<tr>
<td>Medium</td>
<td>(\bar{X} - SD) to (\bar{X} + SD)</td>
</tr>
<tr>
<td>High</td>
<td>&gt; (\bar{X} + SD)</td>
</tr>
</tbody>
</table>

Extension Participation

Extension participation refers to the awareness of the respondents about various extension activities and their extent of participation in them. In this study, extension participation referred to the degree of involvement of members of panchayati Raj Institutions in extension activities like demonstration, discussion, field days exhibitions, campaigns, training programme, participation in meeting organized for various agricultural development programmes.
Quantification of variable was done as per the procedure followed by Biradar (1995). The respondents were sought for all the ten statements. A score of ‘one’ was given for ‘yes’ response and ‘zero’ score for ‘no’ response. On the basis of score obtained with the help of mean and S.D., the respondents were classified into three levels as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>( \bar{X} - \text{SD} )</td>
</tr>
<tr>
<td>Medium</td>
<td>( \bar{X} - \text{SD} ) to ( \bar{X} + \text{SD} )</td>
</tr>
<tr>
<td>High</td>
<td>( \bar{X} + \text{SD} )</td>
</tr>
</tbody>
</table>

(VIII) Decision Making Ability

It is the degree to which an individual shows his ability for selection of most efficient means after consideration of some factors in order to perform some acts. In this study, this has been operationalised as the degree to which a member of PRI’s participate in the decision making which involve the following factors.

The scale developed by Ray (1991) was followed. The scale containing 8 statements was put to 5 point continuum. viz., very important, important, some what important, less important, not important with sores of 5, 4, 3, 2 and 1 respectively. The scale was administered to the intendent respondents and on the basis of the scores obtained, they were classified into 3 levels with the help of mean and standard deviation.

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>( \bar{X} - \text{SD} )</td>
</tr>
<tr>
<td>Medium</td>
<td>( \bar{X} - \text{SD} ) to ( \bar{X} + \text{SD} )</td>
</tr>
<tr>
<td>High</td>
<td>( \bar{X} + \text{SD} )</td>
</tr>
</tbody>
</table>
(IX) Cosmopoliteness

It is the degree to which an elected member of Panchayati Raj Institution was oriented to his immediate social system outside. The respondents were asked to indicate the number of visits made by them to block and district headquarters and purpose of visit during the last one year.

The scale developed by Desai (1975) was used as detailed below.

**A. Frequency of visits to nearest two during last one year**

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or more times per week</td>
<td>5</td>
</tr>
<tr>
<td>Once in a week</td>
<td>4</td>
</tr>
<tr>
<td>Once in a fortnight</td>
<td>3</td>
</tr>
<tr>
<td>Once in a month</td>
<td>2</td>
</tr>
<tr>
<td>Seldom</td>
<td>1</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
</tr>
</tbody>
</table>

**B. Purpose of visit to nearest town during last one year**

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relating to Panchayat work</td>
<td>5</td>
</tr>
<tr>
<td>Relating to farming</td>
<td>4</td>
</tr>
<tr>
<td>Personal/domestic</td>
<td>3</td>
</tr>
<tr>
<td>Entertainment</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>0</td>
</tr>
</tbody>
</table>
The total score was arrived at by adding the scores obtained on the frequency of visits and purpose of visits to elected panchayat leaders made, the total score ranged from 0 to 10.

The respondents were grouped into these categories based on the mean and standard deviation as follows.

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>(&lt; \overline{X} - SD)</td>
</tr>
<tr>
<td>Medium</td>
<td>(\overline{X} - SD) to (\overline{X} + SD)</td>
</tr>
<tr>
<td>High</td>
<td>(&gt; \overline{X} + SD)</td>
</tr>
</tbody>
</table>

(X) Personality level of members of Panchayati Raj Institution

The behavioral characters associated with personality level of members of Panchayati Raj Institution for three tiers viz. Zilla Parished, Anchalik Panchayat and Gaon Panchayats are the base materials to measure the personality level of PRI members.

Based on the pilot study and observations made during discussions with various resource persons and review of the available literature, five broad dimensions of personality level of members of PRI’s viz. openness to experience, conscientiousness, extraversion, agreeableness and neuroticism were identified. Further these dimensions were operationalised to fit the requirement of the present study, considering the available definitions of these concepts.

69 statements, expressing the personality level of members of PRI’s which covers the universe of the variable were constructed in consultation with the specialists in the field of Panchayati Raj Institution and they were edited on the basis of criteria suggested by Thurstone (1946), Likert (1932) and Edward (1957).
Relevancy Test

It was possible all the statements selected may not be relevant equally in measuring the level of personality of members of PRI’s. Hence those statements were subjected to scrutiny by an expert panel of judges to determine the relevancy and screening for inclusion in the final schedule. The items were classified and grouped under respective dimension of personality level of members of PRI’s. The 69 statements ranging from 14 to 15 sets under each dimension. The 69 statements were sent to 42nos. of judges spread over N.E. Region. The judges were requested to critically evaluate each statement for its relevancy to measure the level of personality of members of PRI’s. Out of 42nos. of judges only 23 judges responded within stipulated period of two months. Responses were obtained in a four point continuum namely highly relevant, relevant, least relevant and not relevant with a weightage of 4, 3, 2, 1. scores respectively.

The relevancy score of each item was obtained by adding the scores on rating scale for all the 23 judges response. From this data relevancy percentage, mean relevancy score and relevancy weightage were worked out for all the statement by using the following formula as followed by Kumar et al. (2011).

Relevancy percentage: Relevancy percentage was worked out by summing up the scores of highly relevant and relevant and divided by number of statements and converted it to the percentage.

Mean Relevancy Scores (MRS): Mean relevancy score was calculated by the following formula.

\[
\text{Mean Relevancy Scores} = \frac{H.R. + R + L.R + N.R}{N}
\]

Where, H.R. = Highly relevant response  
R = Relevant response  
L. R = Least relevant response  
N. R = Not relevant response  
N = Number of Judges
(c) **Relevancy weightage (R.W):** Relevancy weightage was obtained by formula,

\[
RW = \frac{H.R. + R + L.R + N.R}{M.P.S}
\]

MPS = Maximum Possible Scores

Using these three criteria the statements were screened for their relevancy. Accordingly the statements having relevancy % >63.65, mean relevancy score >2.59 and relevancy weightage >0.2161 were considered for final selection of statements.

Thus, from the total of 69 statements 35 statements were qualified for inclusive in the final scale. In each dimension of personality level of members of PRI’s, seven statements were selected, i.e. 7 statements × 5 dimensions = Total 35nos. statements finally selected.

**Standardization of scale:** The reliability and validity ascertained for standardization of the scale.

**Reliability:-** Reliability is the ability of a test instrument to yield consistent results from one set of measures to another. A good instrument should evoke responses that are valid and yield nearly same results if administered twice to the same respondents. In the present study test-retest method was employed to test the reliability of the scale.

The final set of the 35 statements, which represents the level of personality of the members of PRI’s, was administered to 15 numbers of members of PRI’s of Majuli sub-division of Jorhat District, which is a non sample area. After a period of 15 days the scale was once again administered to the same respondents and thus two set of scores obtained. The scores obtained by each respondents at two point of time were correlated. The Pearson Product Moment Correlation ‘r’ = 0.931 was significant at 0.01 level of probability indicating the scale of personality level of members of PRI’s was stable for administration to the members of PRI’s as the scale was stable and dependable in its measurement.
Validity of the scale: The term validity means truthfulness. Lindquist (1951) defined validity of a test as the accuracy with which it measures that which is intended to measure. A test is valid only, for a particular purpose. Validity refers to the degree to which a test measures what it claims to measure.

In this study the validity of scale was obtained by establishing its content validity which is a form of validity by assumption (Guilford, 1950). The main criterion of content validity is how well the content of the scale represent the subject matter which is important for the variable under study. It was ensured in the initial stage of selection of dimensions and items for inclusion in the scale by exercising almost care to cover the entire universe of personality level of members of PRI’s, through literature, expert opinion and pilot study. The involvement of experts in the field of psychology, management and extension, member of PRI,s, the observations made by the researcher during the preliminary study visit to PRI’s ensures the adroitness in selection of dimensions and item for measuring the personality level of members of PRI’s.

Method of scoring and categorization: Finally the scale with 35 items representing different dimensions of level of personality of members of PRI’s was administered to the member of all three tiers of Panchayati Raj Institutions. A three point continuum representing yes, no, undecided with the scores 3, 2, 1 respectively was specially spelt out for the items.

Level of Personality of the respondents was classified with the help of mean and S.D.

\[
\bar{X} - SD = \text{Low level of Personality}
\]

\[
\bar{X} - SD \text{ to } \bar{X} + SD = \text{Medium level Personality}
\]

\[
< \bar{X} + SD = \text{High level Personality}
\]
3.2.2. Dependent Variables

Role perception of members of the Panchayati Raj Institutions

Role of members of the Panchayati Raj Institution refers to the specific activities laid down as per Assam Panchayati Raj Act. 1993. Role Perception is operationally taken as the view point or opinion of the respondents on the prescribed list of role items on agricultural development programmes.

The role perception of the members of the PRI’s by themselves and as perceived by the beneficiaries were investigated with the help of role perception questionnaires. The questionnaires were prepared with the set of role prescribed in agriculture as found in the ‘Assam Panchayati Raj Act. 1993’. The respondents were asked to indicate their perception regarding each role items on a five point continuum shown below with their respective weightage.

<table>
<thead>
<tr>
<th>Category</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>4</td>
</tr>
<tr>
<td>Important</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>2</td>
</tr>
<tr>
<td>Not Important</td>
<td>1</td>
</tr>
</tbody>
</table>

Based on the score obtained, with the help of mean and standard deviation the respondents were grouped into three categories as follows.

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>$&lt; \bar{X} - SD$</td>
</tr>
<tr>
<td>Medium</td>
<td>$\bar{X} - SD$ to $\bar{X} + SD$</td>
</tr>
<tr>
<td>High</td>
<td>$&gt; \bar{X} + SD$</td>
</tr>
</tbody>
</table>
Role performance of members of the Panchayati Raj Institution

The term role performance is in this study operationally defined as the actual behaviours of the members of Panchayati Raj Institution in accomplishing prescribed roles in relation to various agricultural development programmes. Role performance reflects the ‘actual does’ part of the role incumbent.

In this study the role performance of the member of the PRI’s was investigated with the help of role performance questionnaire. The role performance identical to the role perception were included in the role performance questionnaire. The role performance of members of PRI was measured by self rating i.e. as viewed by the members themselves and by beneficiaries rating i.e. the performance of the focal role incumbents as viewed by the beneficiaries was measured on a four point continuum as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most often</td>
<td>4</td>
</tr>
<tr>
<td>Often</td>
<td>3</td>
</tr>
<tr>
<td>Sometimes</td>
<td>2</td>
</tr>
<tr>
<td>Never</td>
<td>1</td>
</tr>
</tbody>
</table>

The data were collected with the same procedure used for role perception.

Based on the score obtained, with the help of mean and standard deviation the respondents were grouped into three categories as follows.

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>$&lt; \bar{X} - SD$</td>
</tr>
<tr>
<td>Medium</td>
<td>$\bar{X} - SD$ to $\bar{X} + SD$</td>
</tr>
<tr>
<td>High</td>
<td>$&gt; \bar{X} + SD$</td>
</tr>
</tbody>
</table>
3.2.3. People’s opinion on role performance of PRIs members

The opinions of beneficiaries of agriculture department were collected by face to face interview. The beneficiaries were asked to give their opinion against each specific roles of members of Panchayati Raj Institution. The opinion of people refers to the perception of people regarding the role performance of members of PRIs. After obtaining the opinions the people were requested to put their opinion into three categories viz. most important, important and least important. Assigning 3, 2 and 1 weightage respectively. The opinions having mean score more than 2.00 were included and those having mean score below or equal 2.00 were deleted from the list. Five opinions having high mean score above 2.00 each were selected against every assigned role of PRIs.

<table>
<thead>
<tr>
<th>Category</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important</td>
<td>3</td>
</tr>
<tr>
<td>Important</td>
<td>2</td>
</tr>
<tr>
<td>Least important</td>
<td>1</td>
</tr>
</tbody>
</table>

3.2.4. Problems faced by members of PRI’s on performing their assigned roles

The problems faced by the members of PRI’s refers to the reasons responsible for the gap between role perception and role performance of the elected panchayat members. The members were asked to give the problems in performing the assigned roles of the panchayat member. After attaining the problems, the members were requested to put these problems into 3 Categories viz. most important, important and least important assigning 3, 2 and 1 weightage respectively. On the basis of the score obtained mean score was calculated for each problem. The problems having mean score more than 2.00 were included and those having mean score below or equal 2.00 were deleted from the list. Five problems having high mean score above 2.00 each were selected against every assigned role of PRIs.
### 3.3 Tools and techniques of data collection and construction of research schedule

#### 3.3.1 Tools of data collection

The major tool used for collection of primary data in the study was a structured schedule as given in Appendix II.

#### 3.3.2 Pre testing of the schedule

The schedule prepared for the present investigation was pretested in a non sampled area of Majuli sub division of Jorhat District. For pre-testing a group of 15 respondents were interviewed. On the basis of information obtained through pre-testing, necessary modifications were made in the body of the interview schedule so as to make it more convenient.

#### 3.3.3 Technique of data collection

The data in the present study were collected directly from the respondents with the help of the structured schedule, through personal interview method. Only the functional heads of the household were taken as respondents of the study.

The interview schedule was taken to each of the respondents by the investigator. After establishing rapport, questions contained in the schedule were explained to each respondent and the responses received were recorded by the investigator. Every effort was made to clarify the questions by repetition in local language to get an objective and correct response. All the interviews were conducted at the respondents’ place of residence. All the data from the sampled farmers were collected during the agricultural year 2011-13.

<table>
<thead>
<tr>
<th>Category</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important</td>
<td>3</td>
</tr>
<tr>
<td>Important</td>
<td>2</td>
</tr>
<tr>
<td>Least important</td>
<td>1</td>
</tr>
</tbody>
</table>
3.4. Statistical analysis and interpretation of data

Various descriptive and inferential statistical methods were used to analyse the data in the present study. The statistical technique and tests used are listed hereunder:

1. Frequency and percentage
2. Mean score and standard deviation
3. Ranking using weighted mean
4. ‘t’ tests
5. Karl Pearson’s product moment coefficient of correlation
6. Multiple regression analysis

The analytical relevance of some of the important statistical techniques used is described below:

(I) Frequency and percentage

Frequency and percentage used to interpret the categories of socio-personal and psychological characteristics of the respondents, they are also used for interpreting the findings pertaining to the problems and suggestions of the respondents.

(II) Mean and standard deviation

This is used to classify the respondent members into three categories as follows.

<table>
<thead>
<tr>
<th>Category</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>$X - S.D$</td>
</tr>
<tr>
<td>Medium</td>
<td>$X - S.D$ to $X + S.D$</td>
</tr>
<tr>
<td>High</td>
<td>$&gt;X + S.D$</td>
</tr>
</tbody>
</table>
(III) Correlation coefficient

Correlation coefficient is calculated to ascertain the relationship between selected socio-personal and psychological characteristics of members of Panchayat Raj Institutions with their role perception and role performance.

(IV) Karl Pearson’s product moment co-efficient of correlation

The relationship between each dependent variable and the selected independent variables under the study were found out by applying Karl Pearson’s Product moment method.

Symbolically, \[ r = \frac{\sum x \sum y - \frac{\sum x \sum y}{n}}{\sqrt{\left(\sum x^2 - \frac{\sum x^2}{n}\right) \left(\sum y^2 - \frac{\sum y^2}{n}\right)}} \]

Where, \( r \) = Co-efficient of correlation

\( x \) = Independent variable

\( y \) = Dependent variable

\( \Sigma xy \) = Summation of total product of \( x \) and \( y \)

\( x^2 \) = Sum of the square of \( x \)

\( y^2 \) = Sum of the square of \( y \)

\( n \) = Total number of respondents

(V) Multiple linear regression analysis

This analysis is carried out to determine the combined influence of independent variables in explaining the variation in the dependent variable and to identify the variables which contributed significantly towards the variation in the dependent variable. The equation was:

\[ Y = a + b_1x_1 + b_2x_2 + \ldots \ldots + b_ax_a \]
Where, \( Y \) = dependent variable

\( a \) = Constant

\( x_i, x_2, \ldots, x_n \) = Independent variables

\( b_1, b_2, \ldots, b_n \) = Regression coefficient for respective independent variables

\( n \) = Number of independent variables fitted into regression equation.

The independent variables have their own units of measurement which did not permit a comparison of the partial regression values. To facilitate comparison, the partial regression values were converted to standardized partial regression values which were free from the units of the measurement. The independent variables were then ranked on the basis of standardized partial regression values to find out their relative importance on predicting the dependent variables under the study.

The predictive power of the multiple regression analysis was measured with the help of the co-efficient of determination (\( R^2 \)).

\[
R^2 = \frac{SS (R)}{SS (R) + SS (E)}
\]

Where, \( SS (R) \) = Sum of squares due to regression

\( SS (E) \) = Residual sum of squares

Again, significance of \( R^2 \) was tested by :

\[
F = \frac{SS (R) / K}{SS (E) / (n-k-1)}
\]

Where, \( SS (R) \) = Sum of squares due to regression

\( SS (E) \) = Residual sum of squares

\( K \) = Number of independent variables

\( n \) = Number of observations

The calculated value of ‘F’ was compared with table value of ‘F’ at 0.05 and 0.01 level of probability.
The calculated values of ‘t’ were compared with table value of ‘t’ at 0.05 and 0.01 level of probability.

3.5. Framing of hypothesis of the study

**Hypothesis No1**

There was no relationship between the role perception and socio-personal characteristics of the members of the Panchayati Raj Institution.

The fisher ‘t’ test was used to verity this hypothesis

\[ H_0 : \bar{X}_1 = \bar{X}_2 \]

\[ H_1 : \bar{X}_1 \neq \bar{X}_2 \]

**Hypothesis No. 2:** There was no difference between the role performance of members of PRI’s as perceived by themselves and role performance of PRI’s as perceived by the beneficiaries.

\[ H_0 : \bar{X}_1 = \bar{X}_2 \]

\[ H_1 : \bar{X}_1 \neq \bar{X}_2 \]

**Hypothesis No. 3:** There was no difference between the role perception and role performance of members of PRI’s.

\[ H_0 : \bar{X}_1 = \bar{X}_2 \]

\[ H_1 : \bar{X}_1 = \bar{X}_2 \]

**Hypothesis No. 4:** There was no relationship between the role perception and role performance of the members of the PRI’s.

\[ H_0 : \bar{X}_1 = \bar{X}_2 \]

\[ H_1 : \bar{X}_1 \neq \bar{X}_2 \]