
“Research methodology is a way to systematically solve the research problem”

- C.R.Kothari(2004)

Research methodology is a systematic plan for conducting research and ensuring solutions. Chapter III deals with the method and procedures of research in brief manner as followed in the research entitled on **“Performance of the Gram Panchayats of the Selected Blocks in Coimbatore District of Tamil Nadu”**. The various aspects discussed in the chapter are explained under the following subheadings:

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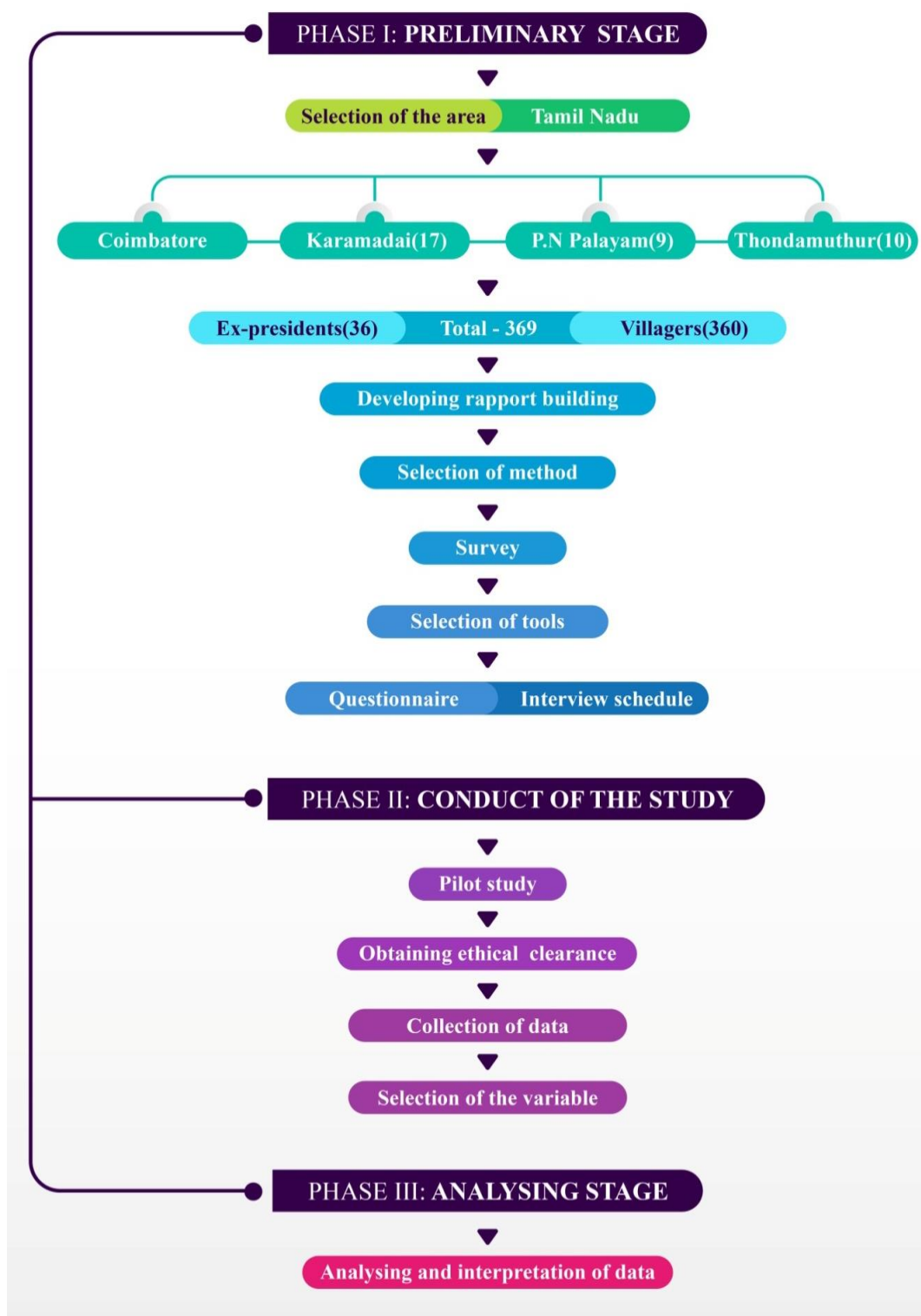
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SCHEMATIC REPRESENTATION OF THE METHODOLOGY

FIGURE 2

PHASE I: PRELIMINARY STAGE

3.1.1. RESEARCH TITLE:

“Performance of the Gram Panchayats of the Selected Blocks in Coimbatore District of Tamil Nadu”

3.1.2. EXPLANATION OF THE TERM

Panchayat Raj:

Panchayat raj is the name of the local government system in India. Panchayat means assembly (ayat of five (panch) and raj means (rule)). In simple way Panchayat is a council of elders representing a village. Panchayat raj is consist of three tier system. District level, block level and village level.

Gram Panchayat:

Village level Panchayat also known as Gram Panchayat. Gram Panchayat is the bottom level tier of Panchayat Raj. It is a local body working for the welfare of the village. It is a political institute, acting as cabinet of the village.

Gram Sabha:

The Panchayat Raj and rural development are centred on the Gram Sabha. People use the Gram Sabha forum to discuss local governance development and create need-based plans for the village. It is a permanent Panchayat raj body.

Gram Panchayat Presidents:

Gram Panchayat leader is called Gram Panchayat presidents. Gram Panchayat president elected members of panchayat who have five years of tenure. Gram Panchayat presidents promote economic, political and social development in the villages. Gram Panchayat presidents plays role in bringing about welfare of the rural people.

3.1.3. RESEARCH DESIGN:

A research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research with economy in procedure. In a broader sense, the research design is the conceptual structure within which

research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2004).

Descriptive Research Design is followed in this study. Descriptive research systematically describe the performance of the Gram Panchayat. Through Descriptive research design researcher studied independent and dependent variable inter relation. Descriptive research has no control over the variable.

3.1.4. SELECTION OF THE STUDY AREA

The present research was carried out in the district of Coimbatore located in Tamil Nadu, India.

3.1.4.1. Number of Panchayats in Tamil Nadu

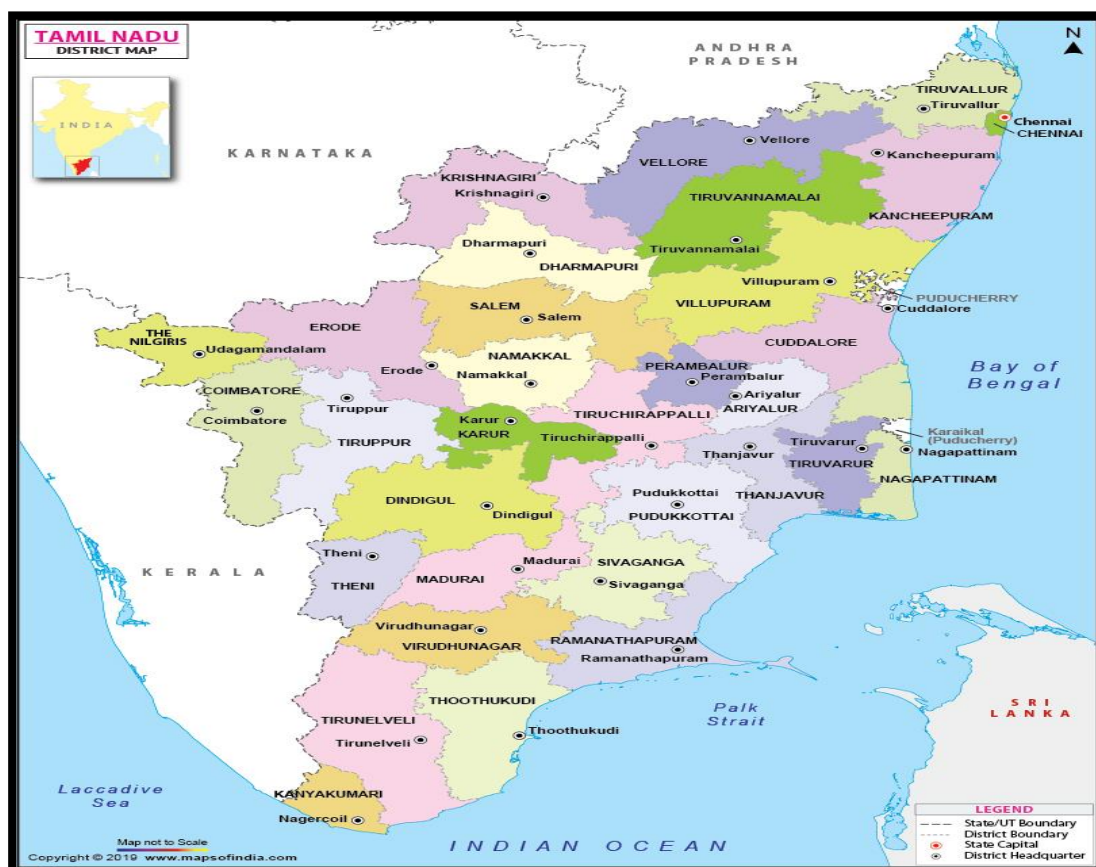
The details of the number of Panchayats in Tamil Nadu are given in Table II

TABLE II: TOTAL NUMBER OF PANCHAYAT IN TAMIL NADU

Panchayat	Number
Gram Panchayats	12,620
Block Panchayats	411
Zilla Panchayats	38

Source: Census of India 2011

Table II depicts the total number of Panchayats functioning in different categories in Tamil Nadu, such as Gram Panchayats (12,620), block Panchayats (411) and Zilla Panchayats (38) respectively. Figure 3 depicts the Map of Tamil Nadu.



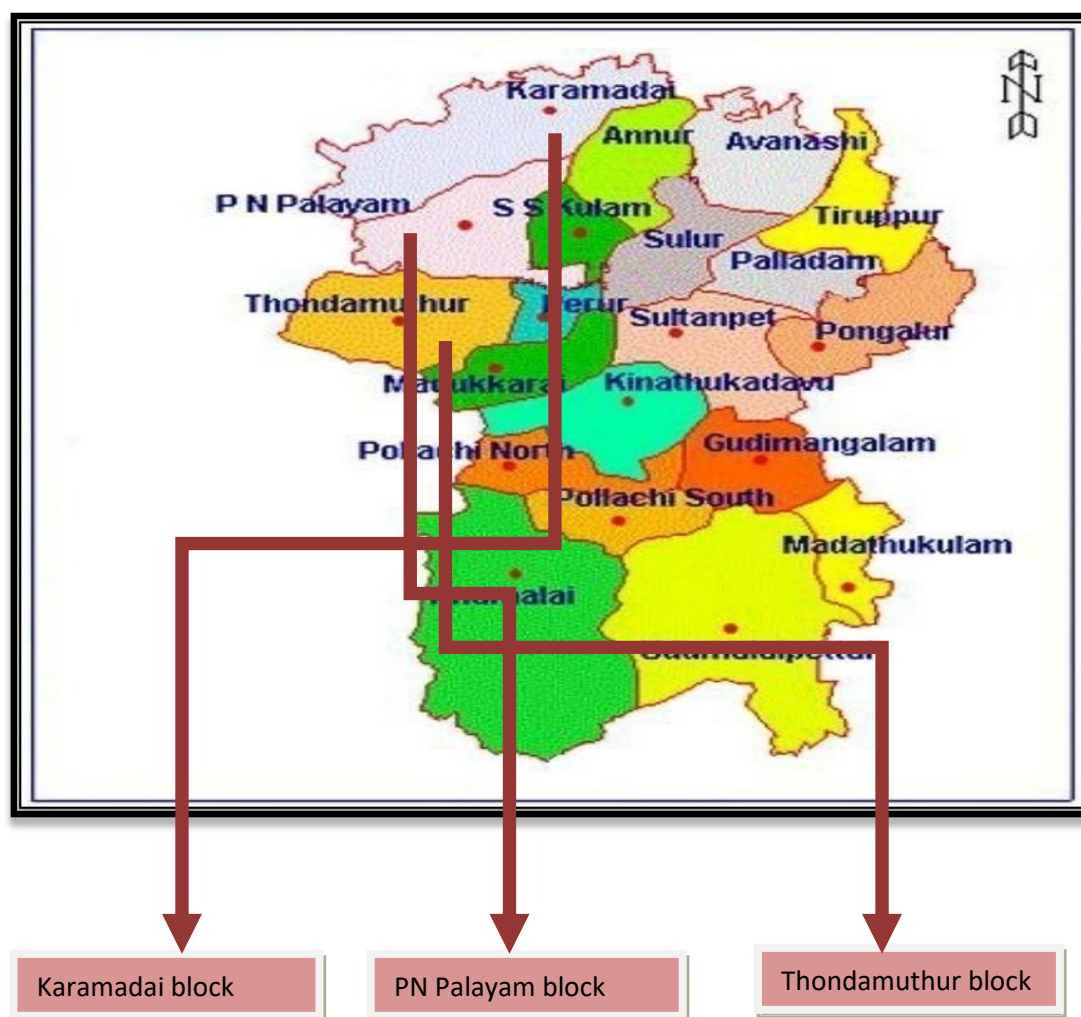
Source: Maps of India.com

TAMIL NADU STATE MAP INDICATING THE GEOGRAPHICAL LOCATION OF 32 DISTRICTS

FIGURE 3

3.1.4.2. Selection of District

Coimbatore district was selected for the study, because the institution is situated in this district. From the capital of Tamil Nadu Chennai to Coimbatore district distance 512.2 km. Kongu region, especially Coimbatore region is known as the Manchester of South India, because of the great number of textile industries located in Coimbatore. Coimbatore is one of the most industrialized district in Tamil Nadu and the state third-largest metropolis, after Chennai and Trichy. The city is located on the banks of Noyyal River. East: Tiruppur District; North: Nilgiris District; North-East: Erode District; West: Palghat District; South: Kerala's Idukki District. The population of Coimbatore district in 2011 census was estimated 3,458,045. Figure 4 shows the Map of Coimbatore district



Source:Uploaded by B.Swaminathan

COIMBATORE DISTRICT MAP INDICATING 12 BLOCKS

FIGURE 4

3.1.4.3.Selection of Blocks

Twelve blocks of Coimbatore district are selected for the study due to the reason.Such as:

- ❖ Easy accessibility
- ❖ Adequate transport facilities
- ❖ Availability of model Gram Panchayats as well as award winning Gram Panchayats.
- ❖ Owing to shortage of transportation, it was impossible to travel and collect the data from all the specific locations

3.1.4.3.1. Details about the number of blocks in Coimbatore

Table III shows total number of blocks in Coimbatore district

TABLE III:NUMBER OF BLOCKS IN COIMBATORE DISTRICT

S.No	Name of the Blocks	Number of Gram Panchayats
1	Annamalai	19
2	Karmadai	17
3	Madukkarai	9
4	Polachi(North)	39
5	Saaecarsamakulam	8
6	Sulur	17
7	Annur	21
8	Kinathukadavu	34
9	Periyanayakkanpalayam	9
10	Polachi(South)	26
11	Sultanpet	20
12	Thondamuthur	10
Total	12	229

Source:Census of India 2011

The district comprises a total of 12 blocks.Kinathukadavu block has the highest number of Gram Panchayats (34), while Madukkarai and Perinayakkanpalayam have the lowest number (9) of Gram Panchayats. Hence three blocks, namely Karamadai, Periyanayakkanpalayam and Thondamuthur Block were chosen for the study.These blocks were chosen considering the presence of a model Gram Panchayat as well as an award winning Gram Panchayat.6 per cent of total Gram Panchayats were selected for the study.

Karamadai block: Karamadai block one of the selected block for the study .Karamadai block is located in the northern part of Coimbatore.From Coimbatore administrative to Karamadai block distance is 26.9 km. The model Gram Panchayat ‘Odanthurai’is known for Green House Project Scheme and electricity production for its own use, as well as for

the Tamil Nadu Electricity Board(TNEB).Is situated in Karamadai block it was chosen for the study. There are 17 Gram Panchayats in this Block. In 2011, population in Karamadai was estimated at 1,37,448 people. There are 68,581 men and 68,867 female. 0-6 year-olds make up 11,671 of the population. In all, there are 5,841 male and 5,830 female in the group. Sixty-six percent of the population in Karamadai block is literate. There are 91,146 illiterate people out of the total of 1,37,448 people. A total of 49.994 out of 68,581 male are literate, while 41.152 out of 68.867 female are educated in Karamadai Block.It is a glaring fact that 33 per cent of the population are illiterate,which requires serious attention. 46,302 individuals out of a total population of 1,37,448 are illiterate.

Periyanayakkanpalaym block: Periyanayakkanpalayam block lies in the north of the main city. Periyanayakkanpalayam block situated 15.6 km distance from Coimbatore administrative. Periyanayakkanpalayam Block consists of nine Gram Panchayats.. Kurudampalaym Gram Panchayat is one of the model villages and award winning Gram Panchayatfor Solid Waste Management.Periyanayakkanpalayam lies between Thondamuthur and Karamadai blocks.Coimbatore lies to the south, Sarkarsamakulam and Karamadai are to the east. Periyanayakkanpalayam is close to Coimbatore, Coonoor, Palladam, and Udhagamandalam, are all neighboring cities. 25,930 people live in this area, with 13,010 men and 12,920 females, according to the data published by Census India 2011. The number of children aged 0-6 in Periyanaickenpalayam is 2,294 representing 8.85 percent of the total population. Male-to-female ratio in Periyanaickenpalayam is 1000:993, while the state average is 1000:996. Aside from that, the child sex ratio in Periyanaickenpalayam is1000:894, whereas the state average for Tamil Nadu is 1000:943.The literacy rate in Periyanaickenpalayam is 89.03 per cent which is more than the state average of 80.09 percent, making it the most educated town in Coimbatore District.It is to be noted that 93.86 percent of men and 84.22 percent of women in Periyanaickenpalayam are literate.

Thondamuthur block:Coimbatore main administrative to Thondamuthur block located in 15.3 km west.Thondamuthur block was chosen because the award winning Gram Panchayat Vellimalipatinam is situated in the block.Vellimalipatinam Gram Panchayat is as selected for Deen Dayal Upadhyay Panchayat Shashaktikaran Purushkar Award in the

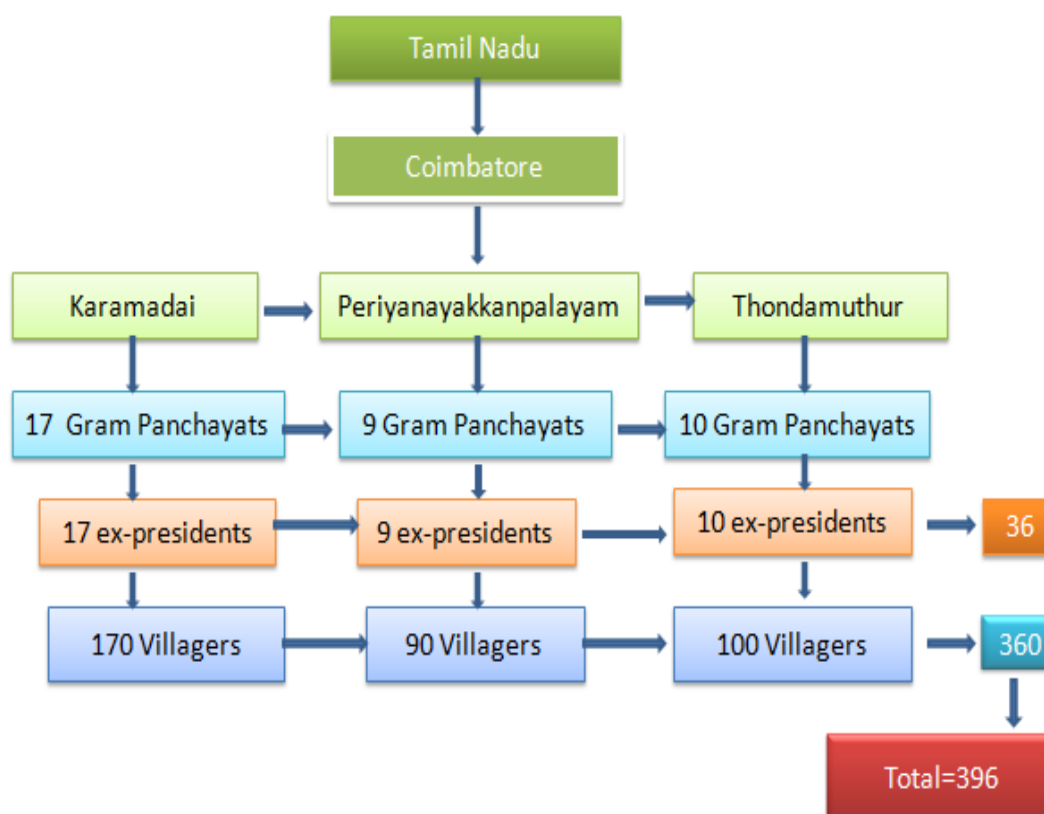
year of 2018 on general theme. Ten Gram Panchayats make up Thondamuthur block. Thondamuthur is near to Coimbatore City, Palakkad City, Chittur-Thathamangalam City, and Pollachi City. It's located around 20 kilometers to the west of Coimbatore district headquarters. Thondamuthur has a population of 66,080 people, according to the 2011 Census. This population 33,009 are male and 33,071 are female. A 69 percent literacy rate is recorded in the Thondamuthur block. Out of the total population of 66,080, 46,215 people are literate in this area. There are 25,044 literate men out of the total population of 33,009, while there are 21,171 literate females out of 33,071. In the Thondamuthur block, 30 percent of the population is illiterate. The illiteracy rate here is 19,865 out of the total population of 66,080. 7,965 out of 33,009 male are illiterate, representing a 24 percent male illiteracy rate. The illiteracy rate among females is 35 per cent and 11,900 out of 33,071 females in this Block are illiterate.

3.1.4.3. Selection of Gram Panchayat

Out of 229 Gram Panchayats in Coimbatore District, 36 Gram Panchayat from three blocks are selected for the study.

3.1.5. SELECTION OF THE SAMPLE AND SIZE

Sampling is the process of selecting a subset of people (a statistical sample) from a statistical population in order to estimate the characteristics of the whole population. The random selection of a sample from a finite population is known as sampling. A total number of 396 people (360 villagers- 10 each from Gram Panchayats and 36 ex Gram Panchayat presidents) selected for the study. Figure 5 indicates total sample size of the study.



DETAILS OF TOTAL SAMPLE SIZE

FIGURE 5

The number of sample chosen for the study is shown in Figure 5. **Karamadai block** consisted with 17 Gram Panchayats namely Bellathi, Bellepalayam, Irumborai, Chikkadasampalayam, Chikkarampalayam, Chinnakallipatti, Marudur, Ilupanatham, Jadayampalayam, Kalampalayam, Kemmarampalayam, Mooduthurai, Nellithurai, Odanthurai, Thekkampatti, Tholampalayam, Velliangad come under Karamadai block. **Thondamuthur Block** contains 10 Gram Panchayats namely Devarayapuram, Jagirnaickenpalm, Madampatti, Madavarayapuram, Narasipuram, P.C Palayam, Theethipalayam, Thennamallur, Vellimalaipatinnam and Ikkarai Buluvampatti. **Periyayakkanpalayam Block** has 9 Gram Panchayats: Ashokapuram, Chinnathadagam, Kurudampalayam, Naikenpalayam, Nanjundapuram, Pannimadai, Somayampalayam, Veerapandi and Bilichi.

The study adopted a **multi-cluster sampling method**. The multi-cluster sampling method is designed for large-scale inquiries across a wide geographic region. Multi-cluster sampling involves selecting large main sample units such as states, districts, blocks, Gram Panchayats and villages.

3.1.5.1. Sample size

Ex-presidents and villagers are chosen for the study. The study has involved the 36 ex Gram Panchayat presidents from three blocks. 10 villagers from each Gram Panchayats were selected. Total sample size consisted of 396 Gram Panchayat ex-presidents and villagers.

3.1.6. DEVELOPING RAPPORT BUILDING

Building rapport is the process of establishing confidence and pleasant interactions between two or more individuals. And it is essential to construct a cordial relationship before initiating the research so that accurate information could be collected.

A cordial relationship was developed with the ex-presidents and villagers. The researcher visited Gram Panchayats, after obtaining authorization from the block development officers of the three blocks and gathered data from the respective Panchayats.

3.1.7. SELECTION OF THE METHODS AND TOOLS

3.1.7.1. Selection of the methods

Survey encompasses any measurement procedures that involve asking questions of respondents. A "survey" can be anything from a short paper-and-pencil feedback form to an intensive one-on-one in-depth interview. Researcher selected survey method to collecting the data.

Measurement technique that involves asking respondents questions is referred to as a survey. A "survey" can range from a simple paper-and-pencil feedback form to an in-depth one-on-one interview. The survey method was chosen by the researcher for data collection.

3.1.7.2. Selection of the tools

The researcher designed the questionnaire and interview schedule for the study. Questionnaire constructed for collecting data from ex Gram Panchayat

presidents, because of ex-presidents are educated hence they had filled the questionnaire by themselves. Interview schedule for village people.

Questionnaire was constructed with the help of devolution index. Devolution index prepared by the National Council of applied economic research and Ministry of Panchayat Raj to motivate the states to devolve the powers and responsibility of the Panchayat Raj. Devolution index has 6 indicators namely framework(D1), function(D2), finance(D3), functionaries(D4), capacity building(D5) and accountability(D6). A well structured questionnaire developed by the researcher is enclosed in **(Annexure I)**.

An interview is another data collection technique that includes presenting oral-verbal stimuli and replies in the form of oral-verbal responses. Because most of the villagers were illiterate. Therefore interview schedule was constructed for the villagers. Therefore well structured interview schedule developed by the researcher is enclosed in **(Annexure II)**.

PHASE II: CONDUCT OF THE STUDY

3.2.1. CONDUCT OF PILOT STUDY

A pilot study was conducted in four Gram Panchayats namely Kurudampalayam, Odanthurai, Ashokapuram and Narasipuram which included four ex-presidents and 40 villagers. Pilot study was conducted for two weeks. A schedule was prepared to collect the required information and also to check the validity and reliability of the questionnaire. The pilot study has helped the researcher in data collection, scoring techniques and also in checking the appropriate standard measures. Glimps of pilot study attached in.

3.2.2. OBTAINING ETHICAL CLEARANCE FOR THE STUDY

The Avinashilingam Institute for Home Science and Higher Education for Women's institutional Human Ethics committee institute has approved the study (proposal no. IHEC/18-19/HSEE/03) on the topic "Performance of the Gram Panchayats of Selected Blocks in Coimbatore District of Tamil Nadu" as submitted for approval. The authorization number is "IHEC/18-19/HSEE/03." A copy of the clearance certificate is also enclosed in **Annexure III**.

3.2.3. COLLECTION OF DATA

A primary data source is an original source, meaning it is gathered firsthand by the researcher for a particular study goal or project. Questionnaire and interview schedule were used to collect primary data. After obtaining approval from the Block Development officer data has collected from Gram Panchayat presidents and village people. However, owing to shortage of transportation, it was impossible to travel and collect the data from all the specific locations. The Investigator, hired a local person to accompanied with the researcher to gather gather the data.



PLATE I
GLIMPSE OF DATA COLLECTION

3.2.4. SELECTION OF VARIABLES

The words, ideas and variables with particular meanings were employed in the present research should be operationalized. An operational definition gives meaning to variable by defining the reaction or operation required to measure it. It functions as a kind of instruction manual for the investigator. The variables selected for this study are exhibited in **Table IV**

3.2.4.1. Operationalization and measurement of Independent variables

TABLE-IV:LIST OF SELECTED INDEPENDENT AND DEPENDENT VARIABLES FOR THE STUDY AND THEIR MEASUREMENT PROCEDURE

S. No	Variables	Measurement
A. Independent variable		
X ₁	Gender	The scale followed by Sridevi Krishnaveni (2015)
X ₂	Age	The scoring procedure followed by Jayanthi (2016)
X ₃	Caste	Followed by Belli, R. B., 2008,
X ₄	Religion	Followed Durkheim 1915; Fasching and deChant 2001
X ₅	Marital status	The procedure followed by Mansingh (1993)
X ₆	Educational qualification	Developed by Mansingh(1993)
X ₇	Types of family	Developed by Trivedi(1963)
X ₈	Family income	Followed by Krishnakumar(2002)
X ₉	Political affiliation of Gram Panchayat presidents	Developed for the study by researcher
X ₁₀	Roles of Gram Panchayat presidents	Developed for the study by researcher

S. No	Variables	Measurement
X ₁₁	Working pattern of the Gram Panchayat presidents	Developed for the study by researcher
X ₁₂	Skill possess by the Gram Panchayat presidents	Reseracher develop with the guidance of likert scale (1967)
X ₁₃	Finance of Gram Panchayat	Followed by Devolution Index(2015-16) with slight modification
X ₁₄	Infrastructure facility of Gram Panchayat	Developed for the study by researcher
X ₁₅	E-connectivity of the Panchayat office	Followed by Devolution Index(2015-16) with slight modification
X ₁₆	Gram Sabha	Followed by Devolution Index(2015-16) with slight modification done by researcher
X ₁₇	Capacity building of the Gram Panchayat presidents	Followed by Devolution Index(2015-2016) with slight modification done by the researcher
X ₁₈	Gram Sabha	Followed by Devolution Index(2015-16) with slight modification done by researcher
X ₁₉	Achievements of Gram Panchayat	Developed for the study by researcher
X ₂₀	Challenges faced	Developed for the study by researcher
X ₂₁	Source of income of the villagers	Developed for the study by researcher
X ₂₂	Reason for voting	Developed for the study by researcher
X ₂₃	Attitude towards Panchayat presidents	Reseracher develop with the guidance of likert scale (1967)
X ₂₄	Facilities aquiring from Gram Panchayat	Developed for the study by researcher

S. No	Variables	Measurement
X ₂₅	Knowledge on different schemes of Gram Panchayats	Reseracher develop with the guidance of likert scale (1967)
B.Dependent variable		
Y ₁	Leadership qualities of the Gram Panchayat	Reseracher develop with the guidance of likert scale (1967)
Y ₂	Performance of Gram Panchayat presidents	Developed for the study by researcher

3.2.4.1.1.Gender

Gender refers to the socially constructed relationship between women and men. It is also distinct from the term 'sex' which refers to biological differences. The term gender is strictly socially constructed. The scale followed by Sridevi Krishnaveni (2015) was adopted to measure this variable. Percentage analysis was employed to conclude.

Gender	Score
Male	1
Female	2

3.2.4.1.2.Age

The respondents age was calculated as the number of completed years at the time of the survey. Based on the chronological age, the respondents were classified following the procedure employed by Jayanthi (2016) using percentage analysis.

Age	Age	Score
Young	18-30	1
Middle	31-45	2
Old	More than 45	3

3.2.4.1.3.Caste

Caste has been defined as the caste to which a person is born. The Lingayat and Brahmin castes were included in the 'upper' or 'general' caste category in this study. Respondents who belonged to scheduled castes and scheduled tribes were categorised as SC/ST. Belli's (2008) technique was employed in this study. The categorization is as follows.

Caste	Score
BC	1
MBC	2
ST	3
SC	4

3.2.4.1.4.Religion

The term religion is derived from the Latin religion (respect for what is sacred) and Religare (to bound, in the sense of an obligation), and it refers to a variety of belief and practise systems surrounding what people consider to be sacred or spiritual (Durkheim 1915; Fasching and de Chant 2001)

Religion	Score
Hindu	2
Christian	1

3.2.4.1.5. Marital status

Marital status indicates whether the person is married or not. The scoring procedure followed by Mansingh (1993) was adopted, which is detailed below.

Marital status	Score
Married	2
Unmarried	1

3.2.4.1.6. Educational qualification

It is defined as the total number of years that Gram Panchayat presidents have had formal education. The primary goal of this research is to determine how much education influenced Gram Panchayat presidents decision to run for office. The scoring procedure developed by Mansingh(1993) is given below.

Educational qualification	Score
Illiterate	1
Functionally literate	2
Primary education	3
Middle education	4
Secondary education	5
Collegiate education	6

3.2.4.1.7. Types of family

Type of family refers to nuclear and joint family types to which the presidents belong. The scoring procedure followed by Trivedi(1963). Percentage analysis was used to classify the types of families.

Types of family	Score
Nuclear family	1
Joint family	2

3.2.4.1.8. Family income

Annual income was defined as the total amount of money earned by the president's family in a given year. According to Krishnakumar(2002), the respondents were divided into groups based on their family's income range. Percentage analysis was used to classify family income.

Income	Family income per month	Score
Low income	Earning Rs 50,000 and below/annum	1
Middle income	Rs 50,001-Rs 1,00,000	2
High income	Rs 1,00,001 and above/annum	3

3.2.4.1.9. Political affiliation of Gram Panchayat presidents.

Political affiliation of Gram Panchayat presidents define as political party, challenges faced during election campaign, mode of campaign, source of motivation etc

Political affiliation	Score
Political party	
DMK	1
AIDMK	2
BJP	3
Challenges faced during election campaign	
Caste based	1
Community based	2
Development based	3
Mode of campaign	
Door to door campaign	1
Public meeting	2
Distribution of pamphlet	3
Source of motivation	
Self	1
Family	2
Friends	3
Political party	4
Chosen as a president	
One time	1
Two time	2

3.2.4.1.10. Roles of Gram Panchayat presidents

The roles and responsibilities of Gram Panchayat presidents, categorized as yes and no.

Responses	Score
Yes	1
No	2

3.2.4.1.11. Working pattern of the Gram Panchayat presidents

a) Daily working hour

Daily working hours define how many hours they were working in the Gram Panchayats daily.

Daily working hour	Scoring
8 hours	1
9-10 hours	2
More than 10 hours	3

Percentage analysis was used to classify the daily working hours of the presidents. An individual's highest and least possible scores were 1 and 2 respectively.

b) Types of work

Types of work define that Gram Panchayat presidents what kind of work doing daily.

Types of work	Scoring
Official work	1
Monitoring account	2
Supervision of field	3
Interacting with village people	4

3.2.4.1.12. Skill possess by the Gram Panchayat presidents

The skill management ability of the presidents was studied through four selected statements which were put on a five-point continuum. Percentage analysis was used to classify the skill management ability of the presidents.

Skills	Score
Leadership skills	1
Communication skills	2
Emotional management skills	3
Decision-making skills	4
Problem-solving skills	5

3.2.4.1.13. Finance of the Gram Panchayat

a) Bak account of Gram Panchayats

Bank account details means the total number of bank accounts of the Gram Panchayats having.

Total number of accounts	Score
One	1
Two	2
Three	3
Four	4

b) Operating bank account of the Gram Panchayat

Operating bank account defines the number of accounts operated by the Gram Panchayats.

Operating account	Score
One	1
Two	2
All	3

c) Types of bank account

Types of bank account operationalized are the kinds of bank account the Gram Panchayats are using.

Types of account	Score
Savings account	1
Deposit account	2

d) Name of the bank

The name of the bank refers to the bank names operated by the Gram Panchayats.

Name of the bank	Score
Indian bank	1
Corporation bank	2
State Bank of India	3
HDFC	4
ICICI	5
Others	6

3.2.4.1.14. Infrastructure facilities of Gram Panchayats

The infrastructure facility of Gram Panchayats mean the facilities available in the Gram Panchayats, like transport, bus, road, street light and sanitation.

Responses	Score
Yes	1
No	2

3.2.4.1.15. e-connectivity of the Gram Panchayat panchayats

a) Amenities available in Gram Panchayats

Amenities provided in Gram Panchayats refer to facilities such as a conference hall, power, telephone, etc. The investigator determined the facilities provided in the Gram Panchayats using percentage analysis.

Responses	Score
Yes	1
No	2

b) Software application adopted by the Gram Panchayats

The software programs that the Gram Panchayats use to digitize Panchayats are referred to as Gram Panchayat software applications.

Responses	Score
Yes	1
No	2

3.2.4.1.16. Gram Sabha

a) Gram Sabha

The Gram Sabha is intended to be a model of participatory and direct democracy, as well as the sole entity that can offer important insights into Gram Panchayats for them to run local governments successfully. At the same time, the Gram Sabha serves as a

watchdog in the interests of rural communities by reviewing the Gram panchayat's operations.(Barna,2013). General information of the Gram Sabha is comprises eight statements.

Responses	Score
Yes	2
No	1

b) Role and prospective of Social Audit

A social audit is a procedure in which public organizations exchange information about their resources for development projects-both financial and non-financial.Opinions on the function and scope of Gram Panchayat bind social auditing procedures.There are 11 statements on the scale. The scores are 1,2,3,4, and 5 on a scale of strongly agree, agree, neutral, strongly disagree and disagree, respectively.

Responses	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive	1	2	3	4	5

3.2.4.1.17.Capacity building of the Gram Panchayats

Gram Panchayat capacity development refers to the way the Gram Panchayat presidents are trained.

Responses	Score
Yes	1
No	2

3.2.4.1.18.Achievement of Gram Panchayats

a) Award received by Gram Panchayats

Award received by the Gram Panchayats refers to awards received by The Gram Panchayats from State and Central governments.

Responses	Score
Yes	1
No	2

b)Name of the awards

Name of the awards for Gram Panchayats.

Name of the awards	Score
Deen Dayal Upadhyay Panchayat Shashaktikaran Purashkar	1
Nanaji Deshmukh Rashtriya Gaurav Gram Sabha Purashkar	2
Panchayat Shashaktikaran Purashkar(PSP)	3
GPDP	4
Child-friendly Gram Panchayat award	5

c)Deen Dayal Upadhyay's Theme Purashkar Shashaktikaran Panchayat

Deen Dayal Upadhyay (Deen Dayal Upadhyay) The Panchayat Sashaktikaran Puraskar is awarded to the top-performing Panchayats throughout the State/UT in appreciation of the excellent work done by PRIs at all levels to improve service and public goods delivery.

Theme of the award	Score
Sanitation	1
Civic service(Drinking water,street light,infrastructure)	2
Natural resources management	3
Marginalized section(Women,ST/SC,Disabled,Senior citizen)	4
Social sector performance	5
Disaster management	6
Community-based organizations/Individuals taking voluntary action to support to GPs	7
Innovation for revenue generation	8
e-Governance	9

3.2.4.1.19. Challenges faced by the presidents

The challenges faced by the Gram Panchayat presidents define what kinds of obstacles they faced during their periods. The scale is made up of 16 statements. The scores are assigned on a scale of 1 to 5 as strongly agree, agree, neutral, strongly disagree and disagree.

Responses	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive	1	2	3	4	5

3.2.4.1.20. Source of income of the villagers

The source of income of the villagers was categorized for the study. Totally 10 aspects were operationalized as ten scores.

Source	Score
Agriculture – own cultivation	1
Agricultural labour	2
Own farm enterprise-Dairy/Poultry farming	3
Fishing	4
Casual labour (Coolie)	5
Salaried employment	6
Non-agricultural enterprise e.g. tea shop, tailor	7
Remittances from family members or any relatives	8
Interest and dividends	9
Pension	10

3.2.4.1.21. Reason for voting to the president

The rationale for voting for presidents describes the reason for inhabitants of the village to choose their presidents. The reason for voting for a particular Gram Panchayat presidents was determined using percentage analysis.

Reason	Score
Same religion	1
Same caste	2
Same gender	3
Belongs to my area (born locally)	4
He / She is a friend / relative	5
Helped me / my family	6
Candidates income	7
Candidates education	8
Candidates land ownership	9
Party identity (Same party)	10
Promises are good / Stated policies	11
Reputation / previous record in politics	12
Active in village	13
Gave maximum money for vote	14
Wanted change	15
The family told me to vote for him	16

3.2.4.1.22. Attitude towards Gram Panchayat presidents

The following section examines the attitude of village people towards Gram Panchayat presidents. 16 comments on the behavior of the presidents. The scores are assigned on a scale of 1 to 5 on strongly agree, agree, neutral, strongly disagree and disagree.

Responses	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive	1	2	3	4	5

3.2.4.1.23. Facilities getting from Gram Panchayat

Facilities received from Gram Panchayats are categorized as yes and no with scores 1 and 2. Percentage analysis was used to identify the facilities.

Responses	Score
Yes	2
No	1

3.2.4.1.24. Knowledge on different schemes of the Gram Panchayat

The following describes the village people level of knowledge and awareness on the various programmes of the Gram Panchayats. The scoring method is outlined below.

Responses	Score
Yes	2
No	1

3.2.4. Dependent variable:

3.2.4.2.1. The leadership qualities of the Gram Panchayat presidents

The leadership characteristics of the Panchayat presidents was analysed using a 14 points scale. The scale was made up of 14 statements. The continuum of strongly agree, agree, neutral, strongly disagree and disagree with scores 1, 2, 3, 4, and 5 were used for scoring.

Responses	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive	1	2	3	4	5

3.2.4.2.2. Performance of Gram Panchayats presidents

The performance of the Gram Panchayats presidents describes how the Gram Panchayat are performing in different aspects. A total of 10 statements were categorized for the study. Scoring was done by a continuum of strongly agree, agree, neutral, strongly disagree and disagree with scores 1, 2, 3, 4 and 5 respectively.

Responses	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive	1	2	3	4	5

PHASE III: ANALYSING STAGE

3.3. ANALYSING AND INTERPRETATION OF DATA

It is essential to arrange the information system to get the required findings and produce the scientific interpretation. As a result, the information collected via interview schedule and questionnaire was aggregated, tallied, and presented in **Chapter III**.

3.3.1. Percentage analysis

In the descriptive analysis, percentage analysis was used in socio economic characteristics of the Gram Panchayat presidents, socio economic characteristics of the village people, details on the role of Gram Panchayat presidents, daily working pattern of the Gram Panchayat presidents, skill possess by the Gram Panchayat presidents, infrastructure facility of the Gram Panchayat, e-connectivity available in the Gram Panchayat, details on gram sabha, social audit practices of Gram Panchayat, capacity building of the Gram Panchayat, details on achievement of Gram Panchayat, source of income of the village people, reason for voting Gram Panchayat presidents, facilities getting from Gram Panchayat, knowledge of the village people in rural development scheme and opinion on role of Gram Panchayat in 11th schedule.

3.3.2. Chi-square test:

A Chi-Square analysis was used to compare the leadership qualities of the three blocks and comparing gender with social audit practices in Gram Panchayat.

The Formula for Chi-Square is:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where,

c =Leadership qualities/Gender

O =Three blocks/Social audit

E =Expected value(s)

3.3.3. Ranking

The Gram Panchayat presidents preferences were ranked using Garrett's ranking technique. Challenges faced by the Gram Panchayat presidents identified through garrett's ranking:

$$\text{Percentposition} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where R_j = Rank given for the variable by 'jth' challenges faced by the Gram Panchayat presidents.

N_j = Number of variables ranked by 'j' Gram Panchayat presidents.

3.3.4. Factor Analysis

The term "factor analysis" refers to a group of multivariate statistical approaches whose primary goal is to identify the underlying structure of a data matrix. Factor analysis used by the researcher to arrive the results. Through factor analysis researcher identify the factor related to the attitude towards Gram Panchayat presidents of villagers. Villagers attitudetowards presidents such as president is good delegatore, president is problem solver, president is a hard worker, president is loyal so on.

3.3.5. t-test

The t-test is used for statistical null hypothesis test. t-test was used for checking relationship between gender, marital and education qualification with leadership qualities of Gram Panchayat presidents. Relationship with software application adopted by the Gram Panchayat with e-connectivity and age, gender, education qualification, annual income with performance of Gram Panchayat.

$$t = \frac{m - \mu}{s / \sqrt{n}}$$

t = Student's t-test

m = mean

μ = theoretical value

s = standard deviation

n = variable set size

Analysis the interpretation of data are presented and discuss in the **chapter IV**.