

**DECISION MAKING AND SOCIOMETRY MODELS IN
FARMING**

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FARMING**

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BY

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CERTIFICATE

This is to certify that the thesis entitled "DECISION MAKING AND SOCIOMETRY MODELS IN FARMING" submitted by Miss JYOTI K. KUMBAR for the degree of MASTER OF SCIENCE (AGRICULTURE) in AGRICULTURAL EXTENSION EDUCATION to the University of Agricultural Sciences, Dharwad is a record of research work carried out by her during the period of her study in this university, under my guidance and supervision, and the thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar titles.

**DHARWAD
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1. INTRODUCTION

Farmers are liable to face situations of decision making with regard to agriculture management. Insufficient information and inefficiencies of formal institutions and informal institutions create constraints of the flow of resource at the time of agriculture crisis situations and agriculture emergencies. Farmers knowingly, unknowingly build a pattern of day today interaction within the farmers in their social life. Correspondingly the farmer's channelize a network of interaction for achieving their day today needs and risk of crisis. In agricultural management the interpersonal interaction and inter dependents leads to a formal, social life and a stable pattern of farmers network. It is the age old practices in agrarian life that it is the regular and unavoidable pattern of life for them to depend on each other to get information related to land preparation, seed procurement, to borrow agricultural implements and equipments for preparing land, sowing, weeding, integrated management, harvesting etc. in the process of such an agrarian interdependence, the buildup relationships are interdependent among each other for developing social and agrarian life.

The heterogeneity of farmers' needs, expectations, objectives, preferences, and relationships in relation to the role farm enterprise are not well documented in the developing countries (Berkhout *et al.* 2010). The farmers farming objectives determine a greater extent of adoption and decision of individual farmers and have direct effects on efficacy levels of farming (Pannaell, 2003). A particular farmer that is the head of the family regularly makes the decisions in farm households.

Farmers make decisions in different patterns based on significance of a decision and information availability in the process of decision. Farmer's decision making involve studied or researched decision, those influenced by neighbours, friends, peers and decisions made by past experiences of the farmers. In studied decision the farmers follow at defined procedure, which includes problem identification, information collection, analysis of alternatives, implementation and evaluation of the decision correspondingly another category of decision are made by using information obtained from experience or experience of the fore fathers. Subsequently some other farmers make decision by observing farming practices and management of friends and neighbours.

Heady and Jensen (1954) viewed that farmer's interaction with neighbours and agricultural scientists in obtaining of information for agriculture management, avoidance of losses, which helps to develop opportunities for decision making in the community. They concluded that information gathered from neighbour farmers could give the farmers the factual information into the possible predicted result if the farmers adopted the practices in his farming.

Sears *et al.* (1985) Reviewed several research studies on peer pressure on making of the decisions among the people. Solomon (1951) demonstrated that group pressure will make a persons decision although the individual knows that their action would be incorrect. Milgram *et al.* (1969) found that when a more number or higher percentages of friends participated in an activity, more individuals would conform to their action.

The particular way of communication and information exchange among farmers constitutes an integral part of their farming system (Ramirez, 1997). Exploration of interpersonal relation system is important to explore in the context of decision making. The importance of issued here is how do the farmers receive and practice the decision in agricultural management. Monge *et al*, 2008 has reviewed various studies on diffusion of an innovation in relation to the effect of socio-cultural factors and individual attributes of farmers. The relationship among various farmers at a specific time and at individual level analysis of farmers' relationships has the contributory factor for decision making in the social system.

The researches on adoption have given much importance for individual farmers for analysis but the importance of interpersonal relationships with respect to social relations, emotional relations and information seeking pattern are not given much emphasis. Social relationship analysis is invariably to identify social structure and social network about a person, a group and organization which affects decision making of the farmers. Rogers (1986) Identified a communication network consisted of interconnected individuals who are linked by pattern communication flow. The analysis of interpersonal information sharing process emphasized interpersonal relationships created by exchanging of information in the interpersonal relationships. Most of the studies on agriculture adoption have implied significance of agricultural social networks on adoption and adaptation of agricultural technologies (Mazur and Onzere, 2009).

Goswami and Basu (2011) have explored role of relationship between farmers' position within their agricultural information networks and their adoption decision. Many of the studies on diffusion process of agricultural innovations emphasized. The role of socio-cultural factors; and diffusion is explained in individual and social relationships (Jana, 2011).

There are many variables of social relationships, of which most important is reciprocity. Reciprocity is helping one another in specific situation based on risk demands. The process of reciprocity relationships is measured by sociometry. Historically, sociometric was a central influence in sociology and other social science. Sociometry provides tremendously powerful structure and tools for the use not only in small group interactions but also whenever and wherever interpersonal dynamics, into effect. Sociometry theory is focused on measuring relationships and it is diagrammatically represented. The diagrammatic representation is a sociogram. The sociogram depicts reciprocity among the individuals in relation to liking – disliking, agree – not agree and approval – disapproval. Reciprocity measure obtained by specific number of pairs indicates the extent of interdependence among the members of each pair of farmers or individuals and a social network in the sense of emotional bondage. A pair of farmers' households is said to be a reciprocal pair if they go to each other for decisions help with respect to agricultural inputs among farmers.

Reviewing the earlier research studies implied a standardized graph theoretic measure of reciprocity derived earlier by Rao and Bandyopadhyay (1987) is applied to carryout social network analysis in respect of agricultural production among the farmers of two villages in order to study variation in measures of reciprocity indicating some extent of interdependent among the households of the networks in the sense of mutual help in agriculture production. The relationship among farmers

and decision making is rarely analyzed, so a valid point of contemplation is to analyze a sociometry model that is social networks among farmers, and decision making among farmers. There are very few studies on application of sociometry analysis in relation to decision making of farmers about application of technologies. Therefore the present study is under taken with the following objectives:

1.1 Objectives of Investigation

1. To study the socio-economic profile of the farmers.
2. To identify the sources of decision making of the farmers.
3. To study the sociometry models of farmers.
4. To compare between decision making and sociometry models among the farmers.

1.2 Scope of the Study

In the age of emphasis on farmer's empowerment and acceleration of agricultural development, it is only appropriate that we study the role of elected farmer's representatives in decision making and we study the socio-metric models among the farmers to know the communication of farmers and build mature group networks and positive relationship behaviors.

1.3 Limitations of the Study

It is a student's research study and hence, there is a limitation of time and resource. The present study was confined only to Sulla village of Badami taluk of Bagalkot district of Northern Karnataka comprising varied agro climatic, socio economic and living habitat. In spite of these limitations every effort was made by the researcher to keep the study as objective as possible, by following all the norms of scientific research with adequate sampling, well-structured schedule and objective measurement.

2. REVIEW OF LITERATURE

The present study is regarding decision making and socio-metric models in farming. Efforts are made to review the available literature having direct or indirect relation of content of the present study. For the order of convenience, the available related reviews are presented under the following headings:

- 2.1 Theoretical background of decision making
- 2.2 Theoretical background of sociometry models
- 2.3 Socio economic profile of the farmers
- 2.4 Sources of decision making of farmers
- 2.5 Sociometry models of farmers
- 2.6 Compare between decision making and sociometry models among the farmers

2.1 Theoretical background of decision making

Decision making is the cognitive process resulting in finding an appropriate selection of a belief, or a thought, or a course of action among several alternatives. Decision making process leads to a definite choice that may lead to action. The process of identifying and selecting alternatives dependent on the merits and demerits, values and preferences of the decision maker. Decision making is a problem solving activity terminated by a solution which demands satisfactory. Decision making is based on individual knowledge and experiences.

There are academic theories about how individuals try to make decisions. These theories are categorized under three groups are:

2.1.1 Motivation to decide

2.1.1.1 Cognitive Dissonance

Cognitive dissonance is a very powerful motivator which will often lead us to change one or other of the conflicting belief or action. The discomfort often feels like a tension between the two opposing thoughts. Cognitive dissonance appears in virtually all evaluations and decisions and is the central mechanism by which we experience new differences in the world. When we see other people behave differently to our images of them, when we hold any conflicting thoughts, we experience dissonance. Dissonance increases with the importance and impact of the decision, along with the difficulty of reversing it.

2.1.1.2 Consistency Theory

When our inner systems (beliefs, attitudes, values, etc.) all support one another and when these are also supported by external evidence, then we have a comfortable state of affairs. When there is conflict between behaviors that are consistent with inner systems and behaviors that are consistent with social norms, the potential threat of social exclusion often sways us towards the latter, even though it may cause significant inner dissonance.

2.1.1.3 Commitment

A commitment is a public or private decision to act. If we make a commitment, we often feel bound to follow through on it, for fear of social rejection or simply due to the threat of cognitive dissonance.

2.1.1.4 Certainty effect

There is also a pseudo-certainty effect, where the certainty is only perceived.

Overall, this works because of our preference for absolutes and our inability to really understand the meaning of the difference between different probabilities. To most people, 70 %, 80 % and 90 % all mean the same: not certain, but fairly likely. Thus we would rather eliminate risk rather than reduce it.

2.1.1.5 Choice-supportive bias

When we recall a past decision, we distort memories to make the choices we made appear to be the best that could be made.

Thus when we have selected from a set of options, we will attribute more positive and less negative attributes to the option we have chosen (and vice versa for options we rejected).

2.1.1.6 Scarcity principle

In our need to control our world, being able to choose is an important freedom. If something becomes scarce, we anticipate possible regret that we did not acquire it, and so we desire it more. This desire is increased further if we think that someone else might get it and hence gain social position that we might have had.

2.1.1.7 Confirmation bias

When we have made a decision or build a hypothesis, we will actively seek things which will confirm our decision or hypothesis. We will also avoid things which will disconfirm this. The alternative is to face the dissonance of being wrong.

Confirmation bias has also been called confirmatory bias, mysid bias and verification bias.

2.1.1.8 Sunk-cost effect

When we have put effort into something, we are often reluctant to pull out because of the loss that we will make, even if continued refusal to jump ship will lead to even more loss. The potential dissonance of accepting that we made a mistake acts to keep us in blind hope.

2.1.2 Thinking process

2.1.2.1 Ambiguity Effect

When people make choices, sometimes they have a good understanding of the probability of something happening whilst other times the situation is ambiguous, whereby the probability of the event is unknown. In such situations, people are more likely to choose the former situation, preferring a known probability over an unknown probability.

Taking a decision on something that may not happen is a risk. When the probability is unknown this can increase the sense of discomfort beyond even that of a known low probability.

2.1.2.2 Bias blind spot

We often know that people have biases. If we think about it, we also realize that we also use bias in our decisions, yet we still do not compensate sufficiently for our biases. In particular, we will consider ourselves as being relatively unbiased compared with others.

2.1.2.3 Elaboration likelihood model

When we are motivated *and* able to pay attention, we take a logical, conscious thinking, central route to decision-making. This can lead to permanent change in our attitude as we adopt and elaborate upon the speaker's arguments.

In practice, this is more of a spectrum than a bipolar model. We may increasingly notice and consider evidence or steadily let events act simply as cues to automatic responses.

2.1.2.4 Heuristic-systematic persuasion model

People either use heuristics and short-cuts in decision-making or they systematically process the merits and demerits of a given argument.

Heuristics include our own emotions as we ask 'How do I feel about this?' although this can cause a problem where we mix up the cause and effect of our emotions.

2.1.2.5 Hyperbolic discounting

Given a choice, we choose a small benefit in the short term over a larger benefit in the longer term. However, if all choices appear to be in the longer term, larger benefits will be chosen, even if these appear even later than the smaller benefit.

2.1.2.6 Information bias

When we are trying to make a decision, we generally seek data on which to rationally base the choice. Where this goes wrong, is when we assume that all information is useful, and that 'more is better'. Sometimes, extra information adds no significant value. Sometimes it simply serves to confuse.

2.1.2.7 Information processing theory

To be persuaded, you have to first pay attention to a message and then agree with it. To agree with it, you must compare your previous view with the new view and reject the previous view.

2.1.2.8 Source Credibility

People are more likely to be persuaded if the person doing the persuading is seen as being credible, expert and trustworthy.

It is worth noting that expertise is not the only factor for example physically attractive communicators are generally more successful than unattractive ones in changing beliefs, as are people who are generally likeable.

2.1.2.9 Unconscious thought theory

A better way is to let our unconscious mind choose, giving it sufficient information and then letting us decide at a later moment. Unconscious thought can be defined as thought or reasoning that takes place when conscious attention is directed elsewhere.

2.1.3 Deciding

2.1.3.1 Augmenting principle

When making a decision, each piece of evidence we glean will add in some way towards our decision. The discounting principle works in the opposite way, when we ignore evidence that we expected.

2.1.3.2 Bounded rationality

We are, to some extent, rational beings in that we will try to logically understand things and make sensible choices. However, the world is large and complex, and we do not have the capacity to understand everything. We also have a limited time in which to make decisions. Herbert Simon indicated that there were thus two major causes of bounded rationality:

- Limitations of the human mind
- The structure within which the mind operates

2.1.3.3 Bias correction

When we believe we are showing bias (or are likely to do so), our efforts to neutral easily end up with us displaying bias in the opposite direction. In this way, people who are trying to be 'politically correct' end up breaking their own rules of equality.

2.1.3.4 Explanatory coherence

When we are trying to understand something, we will often build several candidate hypotheses as possible explanations. We will tend to prefer those explanations which:

- Have greater explanatory breadth, which explains a wide number of factors.
- Are *simple*, requiring very little thought to fully understand?

2.1.3.5 Filter theory

We make some choices through a series of selection filters. The more important, the more effort and filtration. One of the most important selections is of our friends and partners. Then it moves to internal values. Finally, it moves to personality traits. Note that we seek similarity in social variables and values, but personality traits may be complementary.

2.1.3.6 Multi-attribute choice

How do people make a choice when there are many attributes to compare (which is most of the time). When there are simple choices, they will use *compensatory* strategies, trading off different attributes, such as condition against color. Traded attributes are often of similar priority. Another approach is to focus on differences.

2.1.3.7 Involvement

When a person is emotionally involved in an issue they will process information and hence react in a different way to when the issue is not important and they are not really paying attention to it. Involved people want to make their own decisions. Non-involved people do not want to put effort into decisions and will probably let you tell them what to think.

2.1.3.8 Mere exposure theory

The more exposure we have to a stimulus, the more we will tend to like it. Familiarity breeds liking more than contempt. Things grow on us and we acquire tastes for things over time and repeated exposure.

2.1.3.9 Perceptual contrast effect

When we make decisions, we tend to do it by contrasting between the decision item and reference items. When two things appear close to one another, we will tend to evaluate them against one another more than against a fixed standard.

2.1.3.10 Priming

Priming is providing a stimulus that influences their near-term future thoughts and actions, even though they may not seem to be connected. Priming also increases the speed at which the second, related item is recognized.

2.1.3.11 Self-determination theory

People have an external 'perceived locus of causality' (PLOC) to the extent they sees forces outside the self as initiating, pressuring, or coercing one's action. In an internal PLOC a person feels they are the initiator and sustainer of their own actions.

2.1.3.12 Self-regulation theory

What we want is not always good for us. Short-term desires and urges might suggest that we eat high fat food or punch people who annoy us, but clearly these have a longer-term cost. Self-regulation theory (SRT) says that we expend effort in control of what we think, say and do, trying to be the person we want to be, both in particular situations and in the longer-term.

2.1.3.14 Transtheoretical model of change

We go through a number of stages when faced with a need to change or take action.

- Precontemplation: Unaware of problem, not thinking of or wanting to change.
- Contemplation: Aware of problem and thinking about taking action.
- Preparation: Getting emotionally ready. Intending to act.
- Action: Taking the necessary action.
- Maintenance: Keeping up the necessary action. Not backing out or slowing down.
- Termination: Ending at the appropriate point. Not becoming 'institutionalized'.

This model is particularly applicable for such as addiction and health, where the person is not likely to be easily willing to change.

2.2 Theoretical background of socio-metric models

Sociometry as "the inquiry into the evolution and organization of groups and the position of individuals within them." He goes on to write "As the ...science of group organization, it attacks the problem not from the outer structure of the group, the group surface, but from the inner structure. "Sociometric explorations reveal the hidden structures that give a group its form: the alliances, the subgroups, the hidden beliefs, the forbidden agendas, the ideological agreements, the 'stars' of the show."

Within sociology, sociometry has two main branches: research sociometry, and applied sociometry. Research sociometry is action research with groups exploring the socio-emotional networks of relationships using specified criteria e.g. Who in this group do you want to sit beside you at work? Sometimes called network explorations, research sociometry is concerned with relational patterns in small (individual and small group) and larger populations, such as organizations and neighborhoods. Applied sociometrists utilize a range of methods to assist people and groups review, expand and develop their existing psycho-social networks of relationships. Both fields of sociometry exist to produce through their application, greater spontaneity and creativity of both individuals and groups.

2.3 Socio economic profile of the farmers

2.3.1 Age

Balamatti (1993) in his study on “A study on paddy pattern of siddhi farmers and their socio-economic characteristics” the study was conducted in yallapur. Found That majority of the respondents (paddy growers of north canara) belonged to the middle age group (72.50 %) whereas 15.00 and 12.5 % of the respondents belonged to old and young age group respectively.

Naik (1994) in his study on “A study on awareness, attitudes and use pattern of different seed supplying agencies by farmers of dharwad district” the study was conducted in dharwad. Found that 72.00 % of respondent farmers were of middle age group whereas 23.00 and 3.75 % were of old and young age group, respectively.

Sakharkar (1995) in his study on “ A study on knowledge fertilizers use pattern and constraints in the cultivation of soybean by farmers of nagapur district” Found that majority of soybean growers of nagapur, Maharashtra belonged to belonged to respondent age group (36.33 %) and only 32.00 and 31.67 per cent of the respondents belonged to middle and young age group, respectively.

Patil (1995) in the study on “A study on knowledge and adoption behavior of commercial sunflower growers and seed producers in ranebennur” indicated that majority of the commercial sunflower growers of dharwad district belonged to middle age group (80.00 %), whereas 21.5 and 7.5% of the respondents belonged to young and old age group, respectively.

Shivalingaiah (1995) in his study on “Participation of rural youth in farm activities” reported that majority of the big farm rural youth belonged to 22 to 30 years age group, whereas, majority of the small farm youth were in the age group of 22 to 30years.

Chaudhari *et al.* (1998) in their study on “Decision making on farm aspects by farm women” revealed that age of the farm women was significantly related with decision making .It means that the age of the farm women play an important role in taking any kind of decision on farm and home aspects.

Gautam *et al.* (2007) in the study on “Socio-personal correlation for decision-making and adoption of dairy practices” the study was conducted in Varanasi district of Uttar Pradesh, noticed that fifty percent of the total respondents were of the middle aged revealing that dairy as a profession demands a good deal of managerial experience with physical fitness. It was revealed that old age beneficiaries did not adopt dairy practices due to lack of scientific knowledge, whereas young beneficiaries were not adopting dairy practices due to lack of experience.

Singh *et al.* (2009) in the study on “Association of socio-economic status with economic motivation of the farmers” revealed that majority of contact farmers (48.0 %) belonged to middle age group. In other words age is an influencing and important factor in the pursuit of state of economic motivation of a person. It may be true that as the age of individual's increases, their need and requirements also increases which motivates them in regard to earn more and more.

Mishra *et al.* (2012) in their study on “A motivation and innovation profile of tribal goat production system in pakur district of jharkhand state” revealed that age of the respondents ranged between 25-26 years. However, it can be seen from data that majority of the respondents were belonging to the middle Age group (40 %).Whereas 30.0 per cent each were falling in the young and old category of age, respectively.

Chayal *et al.* (2013) in their study on “Involvement of farm women in decision- making In agriculture” the study was conducted in Bundi district of Rajasthan concluded from the results that majority (52.50 %) of the respondents fell within the middle age group followed by young age (30.83 %) and old age (16.67 %) group.

Fartly and Rathore (2014) in their study on “Gender differences in decision making pattern of hill vegetables growers” revealed that majority of the respondents were of middle group (71.43%). Among them men farmers constituted 73.46 per cent of the population where as women respondents were 69.38 per cent. There were only 12.25 per cent and 16.32 per cent respondents who belonged to young and older groups respectively which constituted 16.32 per cent and 12.24 per cent women and 8.16 per cent and 20.40 per cent men respectively. From the overall view, it can be concluded that in the area studied, most of the respondents were in the middle age group.

Sajeev and Saroj (2014) in the study on “Technology utilization and its socio-economic determinants among cashew farmers of karnataka” the study was conducted in Dakshina Kannada district of West Coast noted that cashew farmers were equally distributed as far as their age was concerned with mean age of 47 years.

Jaganathan and Nagaraja (2015) in the study on “Perception of farmers about arecanut based multi-species cropping system” Results showed that majority (63.3 %) of the respondents were in middle age group (35-60 years) followed by 28.9 per cent belonged to young age group and only 7.8 per cent in old age category. The average age of the respondents was 42.3 years which led to a conclusion that middle age farmers opt for arecanut cultivation as their profession.

Hagone and Basunathe (2015) in the study on “Decision making pattern of tribal women in dairy enterprise in melghat region of amravati district” Results showed that majority (77.33%) of the respondents belonged to the middle age.

2.3.2 Education

Hanumanaikar (1995) in his study on “A study on knowledge, adoption and marketing behavior of sunflower growers in dharwad district” revealed that only 10.00 % of the sunflower growers of dharwad were illiterate whereas majority of the respondents (38.00 % each) were educated up to primary and middle school level, respectively. 35.00 % of the respondents were educated up to high school level.

Shailaji *et al.* (1997) in the study on “Analysis of socio-economic profile schedule caste females” the study was conducted in kerala reported that more than one third of adults (36.00%) were illiterates, more than one fourths (30.04%) had gone upto primary school level, whereas, 16.43 and 15.52 per cent of them had middle and high school level of education.

Gautam *et al.* (2007) in the study on “Socio-personal correlation for decision-making and adoption of dairy practices” the study was conducted in Varanasi district of Uttar Pradesh, found that the family education status of the study area was medium (18.3 %) because of their poor economic condition. Family education level of the respondent had high positive correlation with adoption at the 0.01 per cent level of probability.

Bankey *et al.* (2012) in the study on “Role performance and knowledge level of tribal women farmers in meghalaya” observed that 62.0 % were illiterate. Only 12.0% had education above 8th class.

Rathod *et al.* (2012) in the study on “Farmers perception towards livestock extension service” the study was conducted in Maharashtra indicated that education, 37.33 per cent respondents possessed higher school education followed by 29.33 per cent in the college level while 20.67 per cent were illiterate.

Chayal *et al.* (2013) in the study on “Involvement of farm women in decision- making in agriculture” conducted in Bundi district of Rajasthan revealed that 56.67% of respondents were illiterate, while 27.50 % were literate, among the literates 7.50 % primary, 5.00 % middle and 3.33 % were graduate level education.

Fartyal and Rathore (2014) in their study on “Gender differences in decision making pattern of hill vegetables growers” revealed that the maximum percentage (27.55%) of respondents had education up to middle level. Among them, 34.69 per cent were women followed by men (20.40%). It is important to note that about one fourth (24.49%) of respondents had high school level education which constituted 20.40 per cent of men and 28.57 per cent women. There were 18.37 per cent of respondents who had passed primary level education which constituted 12.24 per cent of men and 24.48 per cent women. It is also important to note that 14.28 per cent respondents had passed intermediate education which constituted more than one fourth (26.04%) of men and only 2.04 per cent women. Overall only eleven farmers were illiterate; among them 16.32 per cent were women and 6.12 per cent men. There were only four men who were graduates. Thus, it was found that about one fourth of the respondents (27.55%) had acquired middle level education. In general, the educational status of the women respondents was high.

Sajeev and Saroj (2014) in the study on “Technology utilization and its socio-economic determinants among cashew farmers of Karnataka” the study was conducted in Dakshina Kannada district of West Coast reported that Majority farmers had up to high school education (45%).

Jaganathan and Nagaraja (2015) in the study on “Perception of farmers about arecanut based multi-species cropping system” concluded that Educational status of the respondents varied from illiterate to post graduate with a mean score of 2.2. Majority of arecanut growers (60 %) are confined to a secondary education followed by higher secondary (17.8 %).

2.3.3 Family type

Mishra *et al.* (2012) in their study on “A motivation and innovation profile of tribal goat production system in pakur district of Jharkhand state” observed that majority (65 %) of the respondents had nuclear family. Whereas, 35 percent of them were having a joint family.

Chayal *et al.* (2013) in the study on “Involvement of farm women in decision- making in agriculture” conducted in Bundi district of Rajasthan observed that majority (65.83%) of respondents were belonged to nuclear family and followed by (34.17%) were from joint family.

Vaibhav and Basunathe (2015) in the study on “Decision making pattern of tribal women in dairy enterprise in melghat region of amravati district” revealed that majority (61.33 %) of the respondent belonged to joint family.

Saha *et al.* (2010) in their study on “Livestock farmers’ knowledge about rearing practices in Ganderbal district of Jammu & Kashmir” showed that maximum (57.5 %) had nuclear type of family.

2.3.4 Family size

Gautam *et al.* (2007) in the study on “Socio-personal correlation for decision-making and adoption of dairy practices” the study was conducted in Varanasi district of Uttar Pradesh, showed that the majority of respondents (69.2%) had small family size.

Saha *et al.* (2010) in the study on “Livestock farmers’ knowledge about rearing practices in Ganderbal district of Jammu & Kashmir” noted that Majority of women farmers were found to have small (38.67%) and medium (49.33%) size of family with farming (83.33%) as the major source of livelihood

Mishra *et al.* (2012) in their study on “A motivation and innovation profile of tribal goat production system in Pakur district of Jharkhand state” indicated that majority of respondents (52.50 %) were having medium family size. About 31.25 percent had small family, whereas only (16.25 %) of the respondents belonged to a large family size in the study area.

Hagone and Basunathe (2015)) in the study on “Decision making pattern of tribal women in dairy enterprise in melghat region of Amravati district” showed that more than 60 per cent had medium family size i.e. 4 to 8 members.

2.3.5 Marital Status

Shantha Sheela (2002) in the study on “Performance analysis of elected women presidents in village panchayat” revealed that majorities (94.52%) of the respondents were under married group and only 5.48 per cent were unmarried. In the married group, 2.74 per cent were widows and 1.37 per cent were deserted.

Belli (2008) in his study on “Leadership behaviour of presidents of Panchayat Raj institutions for Horticulture development in Vijayapur district” revealed that majorities (82.80%) of respondents were married and 16.13 per cent were in unmarried group.

Saha *et al.* (2010) in the study on “Livestock farmers’ knowledge about rearing practices in Ganderbal district of Jammu & Kashmir” concluded that maximum (91 %) livestock farmers were married, while few were unmarried (3 %), widowed (5 %) and divorcee (2 %).

2.3.6 Farming experience

Sajeev and Saroj (2014) in their study on “Technology utilization and its socio-economic determinants among cashew farmers of Karnataka” conducted in Dakshina Kannada revealed that most of the farmers (48 %) had medium level of experience in farming with an average experience of 23.5 years in agriculture.

Jaganathan and Nagaraja (2015) in their study on “Perception of farmers about arecanut based multi-species cropping system” conducted in Dakshina Kannada concluded that arecanut growers were well experienced based on the number of years of experience which might have helped them in adoption of cropping system in arecanut.

2.3.7 Land holding

Singh *et al.* (2009) in the study on “Association of socio-economic status with economic motivation of the farmers” revealed that majority of contact farmers, (50 %) belonged to small category under land holding trait.

Rathod *et al.* (2012) in their study on “Farmers perception towards livestock extension service” conducted in Maharashtra revealed that 76.67 per cent respondents were medium farmers followed by small (12.67 %) and large (10.66 %) farmers based on land holding.

Bankey *et al.* (2012) in his study on “Role performance and knowledge level of tribal women farmers in Meghalaya” concluded that majority of women farmers had small size (<1 acre) of land holding (58 %) followed by medium (1-2.5 acre) (31.33 %) and large (>2.5 acre) land holding (10.67 %).

Mishra *et al.* (2012) in their study on “A motivation and innovation profile of tribal goat production system in Pakur district of Jharkhand state” revealed that majority (68.75%) of the respondents were marginal farmers. However, 31.25 percent of them belonged to the category of small farmers. None of the respondents were in the category of medium farmers.

Hagone and Basunathe (2015) in the study on “Decision making pattern of tribal women in dairy enterprise in Melghat region of Amravati district” revealed that majority of the respondents belonged to the small land holding (2.6 -5 acres) (38.66 %), followed by medium (5-10 acres) (21.34 %) and marginal (0.1-2.5 acres) (13.33%) land holding categories.

2.3.8 Annual income

Ingle and Dharmadhikari (1987) in their study on “Personal and socio-economic status of agricultural women labour” conducted in Akola observed that majority of respondents (82.22 %) had annual family income of more than 3000/-.

Rathod *et al.* (2012) in their study on “Farmers perception towards livestock extension service” in Maharashtra pointed out that 69.34 per cent respondent were under medium income category followed by 20.33 per cent in low income and 10.33 per cent in higher annual income category.

Fartyal and Basunathe (2015) in the study on “Decision making pattern of tribal women in dairy enterprise in Melghat region of Amravati district” concluded that more than 80 per cent of respondents had medium annual income and medium experience in dairy enterprises i.e, 6 to 24 years.

2.3.9 Social participation

Maraddi (1999) in his study on “A study on knowledge and adoption behaviour of rice growers of Uttar Kannada district” reported that 27 per cent of the farmers studied had low social participation and only 5.00 per cent had high social participation.

Gautam *et al.* (2007) in their study on “Socio-personal correlation for decision-making and adoption of dairy practices” observed that majority of respondents (89.6%) had medium social participation because of low education status.

Singh *et al.* (2009) in the study on “Association of socio-economic status with economic motivation of the farmers” showed that 49.0 percent farmers were member in one organization in participation.

Saha *et al.* (2010) in the study on “Livestock farmers’ knowledge about rearing practices in Ganderbal district of Jammu & Kashmir” indicated that about 70 per cent of the farmers were not linked with any institution. Only 17.92 per cent farmers were office bearer. It was also revealed that about 12 per cent farmers were associated with one or more organizations.

Rathod *et al.* (2012) in their study on “Farmers perception towards livestock extension service” conducted in Maharashtra depicted that 68 per cent were members of one organization followed by 30.33 per cent farmers having membership in more than one organization while 1 per cent did not participate in any social activities.

2.3.10 Extension participation

Kalakanavar (1999) in his study on “Role performance and training need identification of panchayat women members” revealed that majority of women belonged to the category of ‘medium’ extension contact (37.00%) followed by ‘high’ (34.00%) and low (29.00%), extension contact of women members showed that respectively.

Mankar (2003) in the study on “Knowledge of gram panchayat members about agricultural technologies and their role performance in Konkan region of Maharashtra” reported that more than half of the respondents (53.33%) had medium extension participation followed by high (28.89%) and low (13.65%) extension participation, while, 4.13 per cent of them were found in no participation category. The extension participation was higher in case of female respondents (58.95%) as compared to male respondents (50.91%) in medium category. In case of high category, male and female respondents were 35.91 and 12.63 per cent, while 9.54 per cent of male and almost one-fourth (23.16%) of female respondents had low extension participation.

Sajeev and Saroj (2014) in their study on “Technology utilization and its socio-economic determinants among cashew farmers of karnataka” revealed low participation programmes by the majority of the cashew farmers (68 %) while participation in extension programmes was found to be medium for almost two-thirds of the farmers (64 %).

2.3.11 Mass media exposure

Mahadik (1995) in his study on “A study of the knowledge level of the members of the Panchayat Raj Institution about agricultural development programme found that, more than three-fifth of the respondents (63.73%) had ‘medium’ mass media exposure. One-fifth (20.59%) and 15.68 per cent of them had ‘low’ and ‘high’ mass media exposure, respectively.

Kalakanavar (1999) in his study on “Role performance and training need identification of panchayat women members” indicated that equal percentage of Gram panchayat members (35.00%) possessed ‘medium’ and ‘high’ mass media participation, and, 30.00 per cent of women members of Gram panchayat possessed ‘low’ level of mass media participation.

Mohanty (2005) in his study on “The pattern of rural leadership among farming community : A study on leadership dynamics in Uttaranchal revealed that majority (55.00%) of the respondents belonged to high mass media exposure category followed by 42.50 per cent medium level category, whereas only 2.50 per cent of leaders belonged to low mass media exposure category.

2.4 Sources of decision making of farmers

Bajaj and Shaikh (1989) in his study on "Role of farm women in decision making regarding agriculture" carried out in Pune revealed that 88.00 per cent farm women are not consulted in decisions about agriculture because they don't have knowledge about agriculture. About 33.00 per cent women stated that males in the family think that it is not necessary to consider the opinion of women in decisions regarding agriculture.

Arti (1996) in her study on "Pattern of 'HO' tribe women in decision making" conducted in West Singhbhum district of Bihar revealed that majority (75%) of 'Ho' women as enjoyed the status in decision making of choice of food for family and the percent declined shortly in other areas of decisions. Men were responsible for deciding the family size in 70% of households as against only 4 % of women

Patil and Sawant (1996) in his study on "Decision making pattern of farm families" carried out in Ratnagiri found that the extent of decision making was 100 percent on agricultural operations such as selection of crop varieties and fertilizers, buying of farm implements, care of animals and poultry birds, storage of grains and preparation of fruit products. It was found to be least (40%) for irrigation facilities.

Deshpande *et al.* (1998) in their study on "Innovation process and adoption of sunflower technology" conducted in Osmanabad and Latur districts showed that 72.72 percent growers were decision makers.

Punam (1998) in her study on "women role in economic decision making" conducted in Samastipur district of northern plains of Bihar showed that all the major decisions in the households were being taken by the men, 50 per cent male took economic decisions independently, followed by joint decision making in 27.12 per cent cases, about 23 per cent women could decide independently under the head of economic decision making.

Chaudhari *et al.* (1998) in the study on "Decision making on farm aspects by farm women" conducted in Nagpur noted that 47.10 per cent of women had high level of decision making ability on farm and home aspects whereas 23.20 per cent respondents were found in low decision making.

Mishra *et al.* (2009) in the study on "Participation of rural women in decision making" conducted in Koylanchal noted that majority of the vegetable cultivators decided on their own about the area of various vegetable to be grown. Regarding to decisions taken by men and women together, the highest percentage of responses were found in the case of seedling preparation (51%) and field preparation (49%) followed by taking loan (45%).

Singh and Srivastava (2012) in the study on "Decision making profile of women of Ummednagar village of Jodhpur district" conducted in Ummednagar concluded that most of the decisions about breeding (66.66%), feeding (83.33%) as well as management of cattle were taken jointly (85.33%).

Rathod *et al.* (2012) in their study on "Farmers perception towards livestock extension service" conducted in Maharashtra found that 82 per cent farmers belonged to medium level of decision making followed by 12 per cent respondents in the low level.

Chayal *et al.* (2013) in the study on “Involvement of farm women in decision- making in agriculture” conducted in Bundi district of Rajasthan revealed that farm women’s involvement in decision-making process in agriculture field was quite minimal, and the involvement is very fast in marketing of Agri-inputs and farm produce, manure/ fertilizer application activities.

Fartyal and Rathore (2014) in the study on “Gender differences in decision making pattern of hill vegetables growers” observed that majority of decisions regarding ploughing the field, leveling of field and marketing activities were male dominated. In the activities, raising nursery for seedling and seed treatment before sowing, majority of decisions were taken by women.

Hagone and Basunathe (2015) in his study on “Decision making pattern of tribal women in dairy enterprise in Melghat region of Amravati district” revealed that majority (81.33%) of the respondents belonged to medium followed by low (9.33%) and high (9.34%) level of decision making.

2.5 Sociometry models of farmers

Heidi *et al.* (1997) in their study on “The role of social anxiety in adolescent peer relations: differences among sociometric status groups and rejected groups” revealed that significant differences were found with regard to the standard socio-metric descriptors (i.e., like most, like least), composite peer acceptance scores (i.e., social preference, social impact), and the five behavioral descriptors. The average group received the greatest number of liked most nominations, whereas those in the submissive rejected and neglected groups received the least.

Walter and Lafreniere (2000) in their study on “A naturalistic study of affective expression, social competence, and sociometric status in preschoolers” showed that distress was associated with less acceptance ($r=-.50$, $p<.01$) and impact ($r=-.40$, $p<.01$) among girls, but was not significantly related to boy’s peer acceptance, although the difference between boys and girls only approached significance, $z=1.73$, $p<.08$. In addition, distress was correlated with boy’s peer rejection ($r=.38$, $p<.05$), but not girls, although boys and girls not differ significantly from each other, $z=1.50$, $p<.13$. As predicted, anger expressions were associated with greater peer rejection among boys ($r=.44$, $p<.01$) but surprisingly with less rejection among girls ($r=-.42$, $p<.05$), $z=3.07$, $p<.01$.

Kosir and Pecjak (2005) in their study revealed that 149 (23%) students were identified as popular, 124 (19.1%) as rejected, 111 (17.1%) as neglected, 39 (6%) as controversial, and 225 (34.7%) as average in socio-metric status. With regard to the levels of perceived popularity, 53 (10.7%) were identified as high on perceived popularity, 56 (11.3%) as low on perceived popularity, and 383 (77.9%) as average on perceived popularity.

Jyothi and Suresh (2013) concluded that seven key communicators were identified by the sample respondents, of which three were grouped under low communicator’s category, followed by two each in medium and high communicator categories. Two high communicators with cumulative percentages 100.00 and 78.89 occupied the central circle indicating the power of influence with respect to dissemination of agricultural information. Two medium communicators with cumulative percentages 61.11 and 38.89 occupied the second circle from the centre. Three low communicators with cumulative percentages 22.50, 10.56 and 0.83 occupied the third circle from the center.

2.6 Compare between decision making and sociometry models among the farmers

Goswami and Basu (2011) found that most of the farmers having higher network scores were earlier adopters of chilli and wheat cultivation, but the reverse was not true. A string of other factors were found to be operating at the community level. Understanding these information networks may help understanding diffusion process of agricultural innovations at the micro-level.

3. METHODOLOGY

Every research follows a systematic procedure to conduct a study in the light of the predetermined objectives. Accordingly, the scope of this study and the techniques of investigation to be adopted, tools to be used and the empirical measures to be followed are decided as per the set objectives of the present study. The research methods and procedures followed in conducting the study are described under the following major headings:

3.1 Research design

3.2 Locale of the study area

3.3 Brief description of the study area

3.4 Selection of the Respondents

3.5 Variables for the study

3.6 Operationalization and measurements of variables

3.7 Sources and method of data collection

3.8 Statistical tools used

3.1 Research design

In the present study, exploratory research design was employed. Exploratory research is conducted for a problem that has not been clearly identified and defined.

3.2 Locale of the study area

The present study was conducted in Sulla village, Badami taluk of Bagalkot district, which is situated in northern dry zone of Karnataka, during the year 2015-16.

3.3 Brief description of study area

According to Census 2011 information the location code or village pin code of Sulla village is 598731. Sulla village is located in Badami tehsil of Bagalkot district in Karnataka, The total geographical area of village is 916.12 hectares. Sulla has a total population of 1,053 people. There are about 227 houses in Sulla village. Among them 60 families are exclusively involved in farming. Badami is nearest town to Sulla which is approximately 19 km away. Elevation / Altitude is 573 meters above sea level.

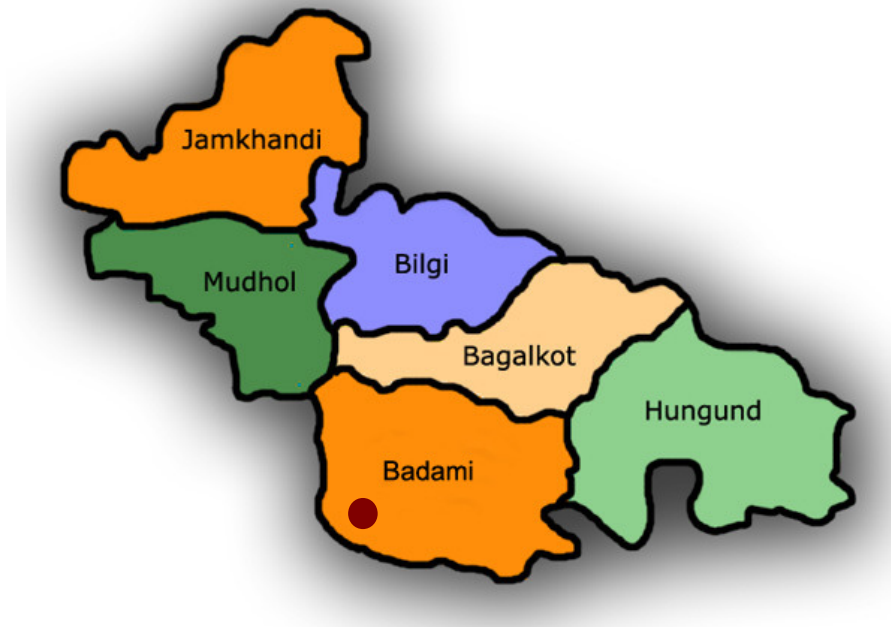
3.4 Selection of the Respondents

Sulla village consisted of 227 families. Among them 60 families were selected because those families are exclusively involved in agriculture. This sample is purposively selected for the study.

Karnataka state



Bagalkot District



Selected village Sulla

Fig. 1. Map showing the study area

3.5 Variables for the study

The variables studied under the present investigation are categorized a dependent and independent variables as given below.

Sl. No	Name of the variables	Empirical measurement
Dependent variable		
1.	Decision Making	Schedule Developed by the researcher
2.	Socio-metric model	A specific procedure was followed by the researcher
Independent variable		
1.	Age	Chronological age of respondents
2.	Education	Scale developed by Savitha (2011)
3.	Family type	Scale developed by Savitha (2011)
4.	Family size	Scale developed by Kiran vani (2007)
5.	Farming experience	Scale developed by Savitha (2011)
6.	Marital Status	Scale developed by Shraddha (2015)
7.	Land holding	Scale developed by Adhoni (2011)
8.	Annual income	Scale developed by Santhosh swami (2006)
9.	Social participation	Schedule Developed by the researcher
10.	Extension participation	Schedule Developed by the researcher
11.	Mass media exposure	Schedule Developed by the researcher

3.6 Operationalization and measurements of variables

3.6.1 Measurements of dependent variable

3.6.1.1 Decision making

Decision making refers to the mental process of an individual through which individual takes a firm decision. This will be operationalized as the degree to which farmers participate in the decision making which involves two broad categories.

- 1) Self decision
- 2) Decision with the help of others:

a) Neighbors
b) Relatives
c) Friends
d) Family members
e) Progressive farmer
f) Shop keeper
h) Agriculture officer

Areas of decision making

1. Purchase of agricultural inputs

- a) Seed b) Fertilizer c) Insecticides

2. Choice of crops

- a) Maize b) Sorghum c) Chickpea d) Green gram

3. Selection of varieties

4. New farm technologies

- a) Acceptance b) Rejection

5. Plant protection measures

1) Maize:

- a) Composting and poultry manure b) Inter cropping c) Intercultivation
- d) Insecticides, fungicides, herbicides

6. Sorghum

- a) Seed treatment b) Inter cultivation c) Herbicides / hand weeding d) Composting
- e) Insecticides, fungicides

7. Chick pea

- a) Bio-fertilizers b) Inter-cultivation
- c) Hand weeding d) Insecticides, fungicides

8. Green gram:

- a) Bio-fertilizers b) Inter-cultivation c) Insecticides, fungicides

9. Taking loan for farm activities

10. Soil and water conservation practices

- a) Rain water harvesting b) Farm pond, compartment bunding
- c) Drip irrigation, sprinkler irrigation

11. Integrated pest management

- a) *Helicoverpa armigera* management b) Rat management
- c) Storage pest management d) Snail management

12. Organic farming

- a) Vermicomposting b) Green manuring c) Bio-fertilizer

13. Purchase and sale of Agricultural implements

- a) Tractor b) Wooden plough c) Harrow d) Seed drill
- e) Seed-cum-fertilizer drill f) Cultivators g) Bullock cart h) Motor cycle
- i) Knapsack sprayer j) Pump set k) Iron plough

14. Marketing produces

- a) Selling of cereals b) Selling of pulses
- c) Selling of commercial crops d) Selling of oilseeds

3.6.1.2 Sociometry models

Measurement of sociometry models:

1. The list of farmers who were head of the farming family was prepared.

2. The list of names was arranged in alphabetical order on the basis of name of the farmers.
3. The information of the farmers was collected from each farmer by personal interview method and a schedule was used record the responses of the farmers.
4. Selected farmer was asked two questions, a) who do you like most among the farmers? And b) who do you dislike most among the farmers? were asked to prepare and identify sociometry models.

3.6.2 Measurement of Independent Variables

3.6.2.1 Age

Age was operationalized as the number of completed years of the respondents at the time of interview and the chronological age was taken as a measure. The Respondents were classified into three categories, viz., young, middle and old as found in Government of India census report (1981). The respondents were classified of percentage basis.

Category	Score
Young	Up to 30 years
Middle	31 to 50 years
Old	Above 50 years

3.6.2.2 Education

It is operationalized as the extent of formal education rural farmers had undergone. The respondents were grouped into different categories. The procedure followed by Savitha (2011) was used with slight modification. Scoring pattern as was follows.

Category	Score
Illiterate	1
Can read and write	2
Primary School	3
Middle School	4
High school	5
PUC	6
Degree	7

3.6.2.3 Family type

Taking into consideration the relationship 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 (i) a married couple with one or more unmarried children or (ii) a married couple without children or (iii) parent with one or more unmarried children

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

Category	Score
Nuclear family	1
Joint family	2

This method adopted by Kiran vani (2007) was used with slight modifications.

3.6.2.4 Family size

In the present study the family size of the respondents was operationally defined as total number of members residing in the family, including new borne baby also. It was categorized as small, medium, large by following general norm. The procedure was followed by Kiran vani(2007) .

Category	score
Below 5 members	1
5-8 members	2
>8 members	3

3.6.2.5 Farming Experience

It is the number of years of experience a respondent has in cultivation. For measuring this variable, a score of one was assigned for each completed year. Then the respondents were grouped into three categories. The classification was based on procedure followed by Savitha (2011).

Category	Score
Low experience	<10
Medium experience	10-20
High experience	>20

3.6.2.6 Marital status

Marital status was operationalized as the individual was married or not. The respondents were classified as married or unmarried and assigned score as detailed. The classification was based on procedure followed by Shraddha (2015)

Category	Score
Unmarried	1
Married	2

3.6.2.7 Land holding

It refers to the number of acres of land possessed by the farmer. The criteria prescribed by the Karnataka Land Reforms Act 38 to 1966 (Part-B) 99 and 195-96 under sections 2 (a) 32 was used where in one acre of irrigated or garden land is equated to 2.5 acres of dry land.

The criterion prescribed by Ministry of Rural Development, Government of India vide circular No.280-12/16/19 RD-III (Vol- II) dated 15th November 1991 and as by followed by Hiremath (2009) was used and the respondents were grouped into five categories.

Category	Score
Less than 2.5 acres (Marginal farmers)	1
2.51 to 5 acres (Small farmers)	2
5.01 to 10.00 acres (Semi-medium farmers)	3
10.1 to 25 acres (Medium farmers)	4
above 25 acres (Big farmers)	5

3.6.2.8 Annual income

It was measured by considering the total income of the family from the all sources. The classification as suggested by ministry of rural development, government of India (Anonymous 1998) as followed by Santhosh swami (2006) was followed.

Category	Score
Low (up to Rs. 11,000)	1
Semi medium (Rs. 11,001 -22,000)	2
Medium (Rs. 22,001-33,000)	3
High (above Rs. 33,000)	4

3.6.2.9 Social participation

It refers to the degree of involvement of the individual in various organizations as a member or as official bearer.

Accordingly, a score of one was assigned to an individual when he/she was a member of an organization, a score of two was given to the respondent who was an office bearer of an organization, and zero score was given to the respondent who was not a member of any organization. Further score directly counted the number of times he/she was participated in Gram Panchayath, taluk panchayath, Gilla Panchayath, cooperative society, youth's society.

Category	Score
Member	1
Office bearer	2

3.6.2.10 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 farmers of village in extension activities like Training courses, Krishi mela, Study tours, Demonstrations, Field day programmes, participation in meetings organized for Agriculture development. Further score directly counted the number of times he/she was participated in Training courses, Study tours, Demonstrations, Field days, Krishi mela.

3.6.2.11 Mass media exposure

Mass media exposure is defined as the extent to which farmers used different mass media such as TV (agricultural programmes, news and other programmes), radio (agricultural programmes), and newspaper and farm magazines.

The response of the respondents to mass media exposure utilization was obtained on a scale of three 3 point continuums namely daily, weekly, and monthly. The frequencies and percentage were calculated to find out the extent of mass media utilization by the farmers.

Respondents	Score
Daily	1
Weekly	2
Monthly	3

3.7 Sources and method of data collection

Primary Data: An interview schedule was developed in consultation with experts and pursuing the relevant literature, for collecting the data from the respondents. The schedule was pre-tested with a sample of 30 farmers in non-sample area to modify the contents and forms of the questions/items. The schedule was finalized after making necessary modifications, deletions and additions based on pre-testing.

Using the final schedule the required data was collected by personal interview method. The respondents were interviewed individually using the final schedule by the researcher and the required data were collected. The respondents were contacted at their residence. The data so collected was coded, tabulated, and percentages, averages were calculated.

3.8 Statistical tools used in the study

3.8.1 Frequency and percentage

Frequency and percentage were used to categories the respondents based on socio-economic and personal characters. They were also used for interpreting the findings pertaining to participation of farmers with relation to decision making and sociometry models with regard to agricultural programmes.

4. EXPERIMENTAL RESULTS

The study was conducted on decision making and sociometry models in farming. The results of this study are presented in this chapter under the following major headings in accordance with the objectives of the study.

4.1 Socio economic profile of the farmers.

4.2 Sources of decision making of the farmers.

4.3 Sociometry models of farmers.

4.4 Comparison between decision making and socio-metric models among the farmers

4.1 Socio economic profile of the farmers

The results pertaining to personal and socio-economic characteristics of the farmers are depicted in Table 1 and Fig 2.

4.1.1. Age

Table 1 depicts the classification of the respondents based on their chronological age.

It was revealed from the table that majority (61.67 %) of the respondents were in old age category, whereas 35.00 per cent belonged to middle age group and remaining 3.33 per cent belonged to young age group. This shows that 96.67 per cent of the respondents belonged to old and middle age group.

4.1.2 Education

The respondents are classified according to their level of education as Presented in Table 1. of the 60 respondents 36.67 per cent were illiterate, followed by 16.67 per cent studied up to can read and write, followed by 15.00 per cent of farmers primary school and high school, followed by 11.67 per cent studied up to PUC, followed by 3.33 per cent studied up to middle school and only 1.67 per cent studied up to degree education.

4.1.3 Marital status

An informal discussion with the respondents revealed the distribution of respondents according to marital status is presented in Table 1.

It is observed from the table that majority (95.00 %) of respondents belonged to married group and 5.00 per cent belonged to unmarried group.

4.1.4 Family type

Table 1 depicts that majority (51.66 %) of respondents belonged to nuclear family and 48.33 per cent of the respondents belonged to joint family.

4.1.5 Family size

Table 1 depicts that majority (90.00 %) of respondents belonged to below 5 members category, followed by 6.67 per cent of respondents belonged to medium 5 to 8 members category and only 3.33 per cent of respondents belonged to high (>8) members category.

4.1.6 Farming experience

It's revealed from Table 1 that the majority (48.33 %) of respondents belonged to medium farming experience category, followed by 43.33 per cent of respondents belonged to low farming experience category and only 8.33 per cent of respondents belonged to high farming experience category.

Table 1: Socio-economic profile of the farmers

(n=60)

Sl. No.	Variable	Category	Frequency	Percentage
1.	Age	Young (<30 yrs)	2	3.33
		Middle (>31 to <50 yrs)	21	35.00
		Old (>50 yrs)	37	61.67
2.	Education	Illiterate	22	36.67
		Can read and write	10	16.67
		Primary school (1 st - 4 th std)	9	15.00
		Middle (5 th - 7 th std)	2	3.33
		High school (8 th - 10 th std)	9	15.00
		PUC	7	11.67
		Degree	1	1.67
4.	Marital Status	Unmarried	3	5.00
		Married	57	95.00
5.	Family Type	Nuclear	31	51.66
		Joint	29	48.33
6.	Family Size	Small (< 5)	54	90.00
		Medium (5 to 8)	4	6.67
		Big (>8)	2	3.33
7.	Farming experience	Low (<10)	26	43.33
		Medium (10-20)	29	48.33
		High (>20)	5	8.33
8.	Annual income	Low (up to Rs.11,000)	14	23.33
		Semi Medium(Rs. 11,001-22,000)	22	36.67
		Medium (Rs. 22,001-33,000)	15	25.00
		High (above Rs. 33,000)	9	15.00
9.	Land Holding	Marginal farmers (up to 2.5)	16	26.67
		Small farmers(2.51 to 5.00)	29	48.33
		Semi-medium farmers (5.01 to 10.00)	12	20.00
		Medium farmers (10.01 to 25.00)	2	3.33
		Big farmers (25 acres and above)	1	1.67

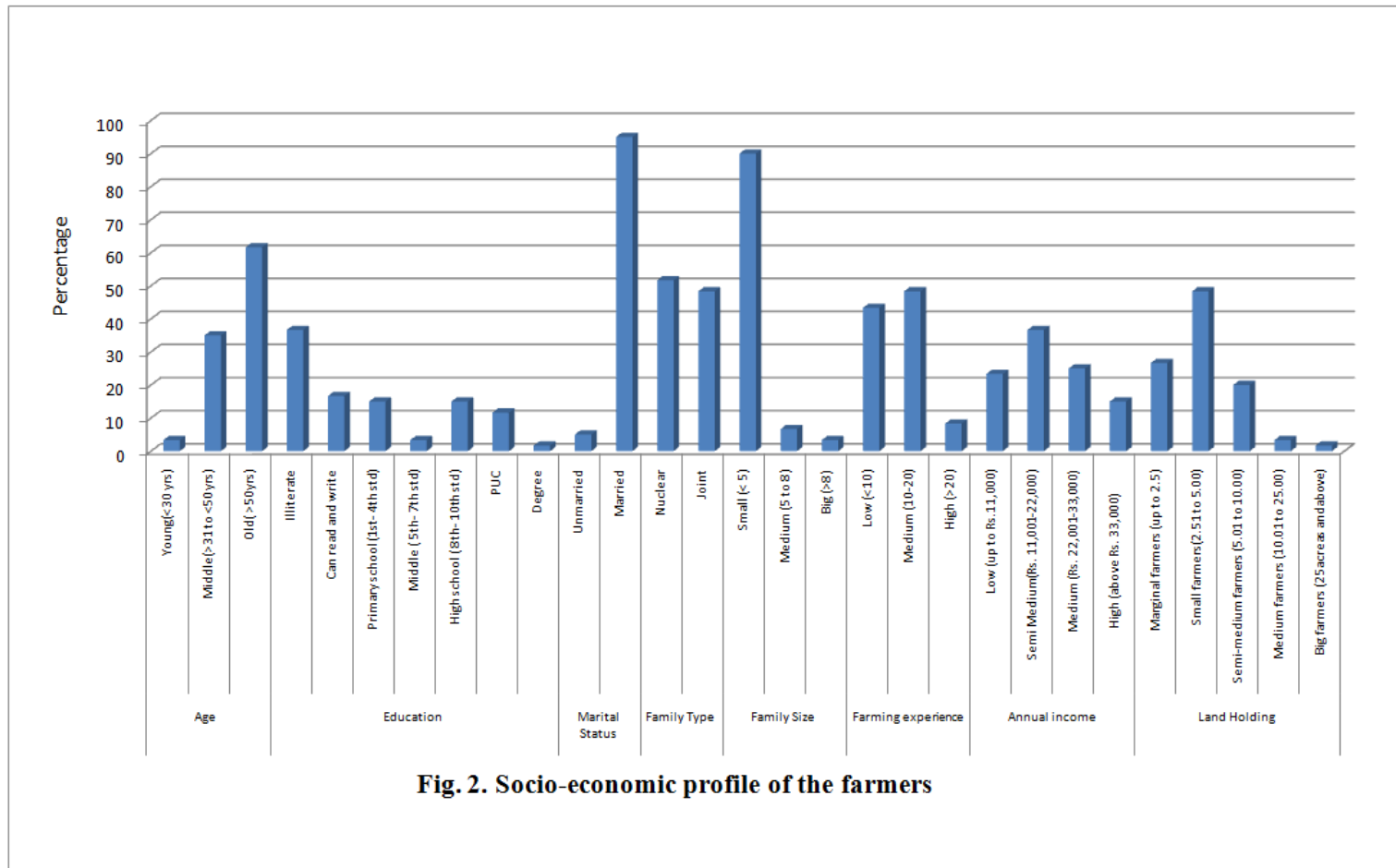


Fig. 2. Socio-economic profile of the farmers

Fig. 2. Socio-economic profile of the farmers

4.1.7 Annual income

It was revealed from table 1 that the majority (36.67 %) of respondents belonged to semi medium category, followed by 25.00 per cent of respondents belonged to medium category, followed by 23.33 per cent of respondents belonged to low category and only 15.00 per cent of respondents belonged to high category.

4.1.8 Land holding

Table 1 depicts that majority (48.33 %) of respondents belonged to small farmers category, followed by 26.67 per cent of respondents belonged to marginal farmers, followed by 20.00 per cent of respondents belonged to semi-medium farmers, 3.33 per cent of respondents belonged by medium farmers and only 1.67 per cent of respondents belonged to big farmers category.

4.1.9 Status of social participation

Table 2 and Fig. 3 revealed that the respondents social participation of farmers. 30.00 per cent of the respondents participated in co-operative society activities and 25.00 per cent of membership followed by only 5.00 per cent of office bearer, Followed by 21.67 per cent of respondents had membership in gram panchayath and participated in gram panchayath activities, followed by 18.33 per cent of the respondents participated in youth club, followed by 6.67 per cent of the respondents participated in taluk panchayath and only 3.33 per cent of the respondents participated in zilla panchayath.

4.1.10 Status of extension participation

Status of extension participation was observed in Table 3 and Fig.4 that the 36.67 per cent of the respondents witnessed Krishi mela on agriculture which was highest for extension participation of the respondents. About 18.33 per cent of respondents attended study tours. 16.67 per cent of respondents participated in training courses, and 15.00 per cent of respondents visited field days. 13.33 per cent of respondents visited demonstration plots of neighbor and had discussion with them

4.1.11 Status of mass media exposure

Table 4 described 33.33 per cent of the respondents possessed radio. 8.33 per cent of the respondents listened to daily weather forecasting programmes and 13.33 per cent listened entertainment programmes on Radio.

Table 4 also showed majority of (100.00 %) the respondents possessed television and viewed television. About 58.33 per cent, 41.67 per cent, and 35.00 of the respondents viewed daily entertainment programmes, News, and Agriculture programmes respectively.

Table 4 also showed 16.67 per cent of the respondents subscribed to newspaper and reading newspaper. Only 10.00 per cent and 1.67 per cent of the respondent daily read politics in newspaper and agricultural information respectively.

Table 2: Status of social participation

(n=60)

Sl. No.	Institutions	Membership				No. of times participated	
		Membership		Office bearer			
		F	Per cent	F	Per cent	F	Per cent
1	Gram panchayat	13	21.67	-	-	13	21.67
2	Co-op. society	15	25.00	3	5.00	18	30.00
3	Youth club	11	18.33	-	-	11	18.33
4	Taluk panchayat	4	6.67	-	-	4	6.67
5	Zilla parishad	2	3.33	-	-	2	3.33

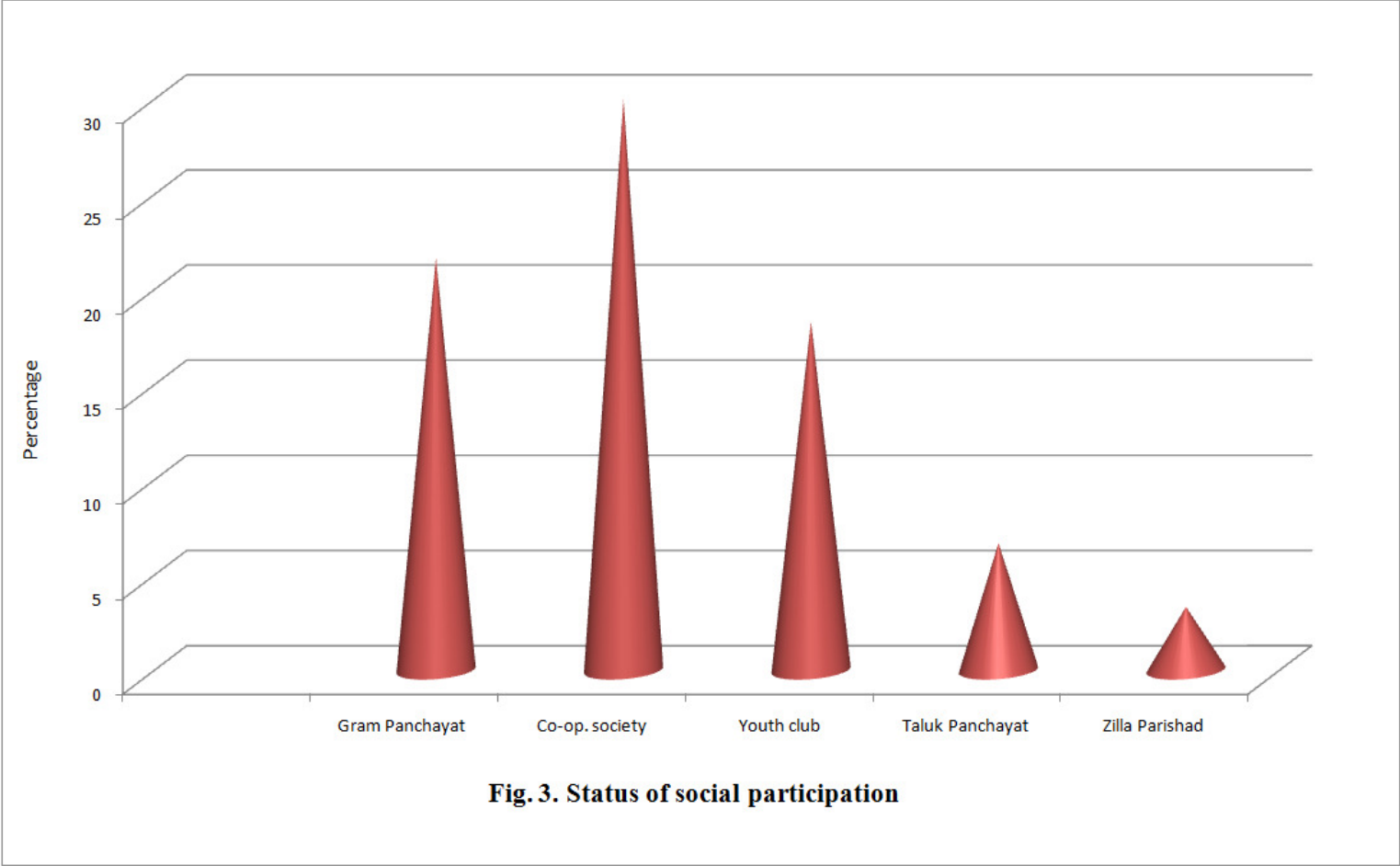


Fig. 3. Status of social participation

Fig. 3. Status of social participation

Table 3: Status of extension participation

(n=60)

Sl. No	Activities	No. of times participated	
		Frequency	Percentage
1.	Training courses	10	16.67
2.	Study tours	11	18.33
3.	Demonstration	8	13.33
4.	Field days	9	15.00
5.	Krishi mela	22	36.67

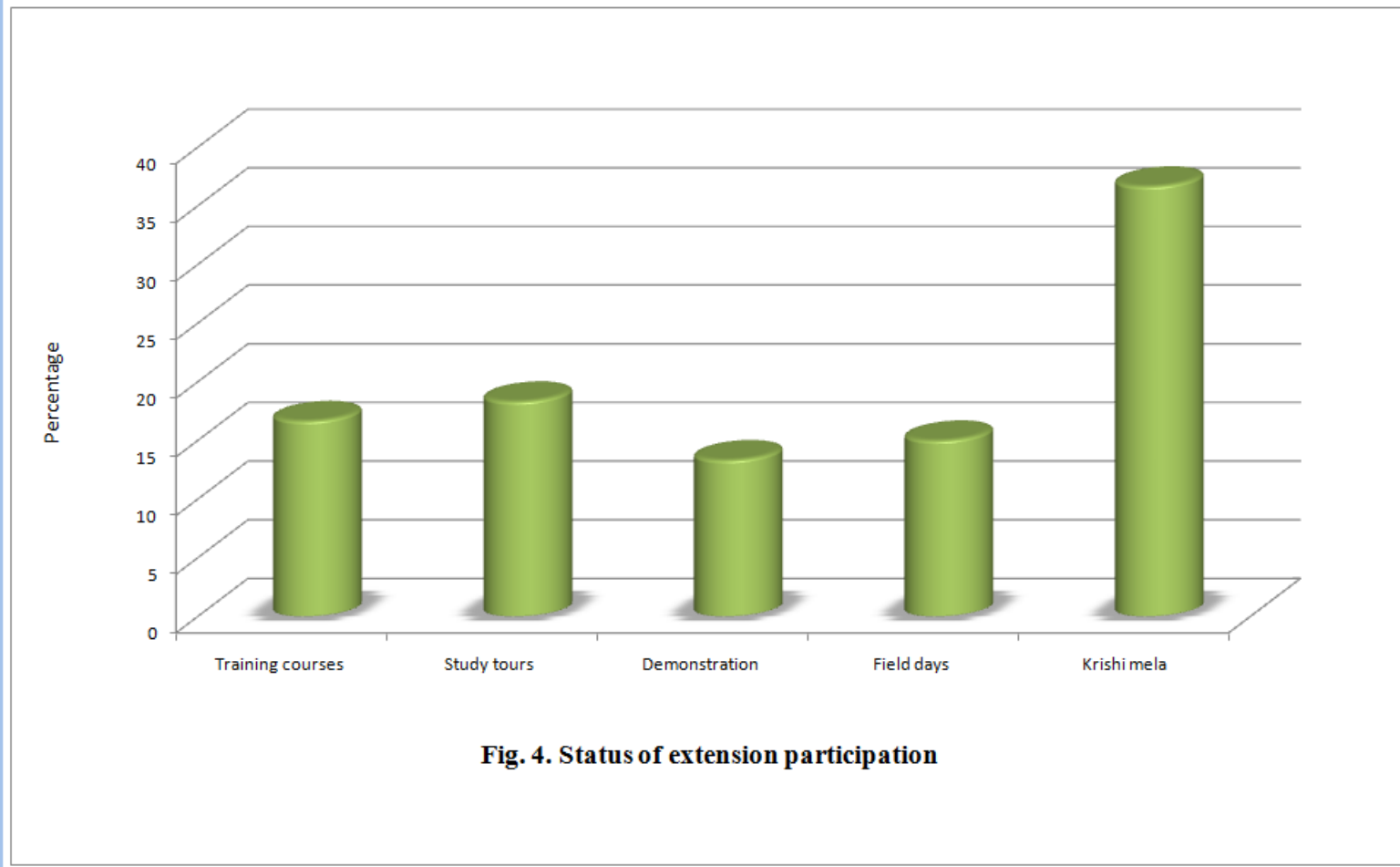


Fig. 4. Status of extension participation

Fig. 4. Status of extension participation

4.2 Sources of decision making of farmers

4.2.1 Sources of consultation for decision making

The results in Table 5 showed that the decision making pattern of farmers with respect to selected farm activities. From the table, it was evident that with regard to the purchase of agricultural inputs, most of (65.00 %) the respondents had taken self-decision and followed by decision by consulting others (35.00 %). In case of choice of crops, majority (58.33 %) of respondents had taken self-decision followed by decision by consulting others (41.67 %). In case of selection of varieties, majority of the respondents had taken self-decision (53.33 %), followed by decision by consulting others (46.67 %). In case of new farm technologies acceptance, few (28.33 %) of the respondents relied on decision by consulting others followed by self-decision (3.33 %). In case of new farm technologies rejectance, 26.67 per cent of the respondents had taken self-decision followed by decision by consulting others (8.33 %). In case of plant protection measures in maize, sorghum, chickpea, green gram, the respondents had taken self-decision (6.00 per cent, 56.67 per cent, 46.67 per cent, 40.00 per cent) respectively, followed by decision by consulting others (40.00 per cent, 43.33 per cent, 65.00 per cent, 60.00 per cent) respectively for the above crops.

In case of taking loan for agriculture activities, majority (93.33 %) of the respondents had taken self-decision followed by decision by consulting others (6.67 %). In case of Soil and water conservation practices, majority (76.67 %) of the respondents had taken decision by consulting others followed by only few 3.33 per cent of the respondents who had taken self-decision. In case of integrated pest management, majority (41.67 %) of the respondents had taken decision by consulting others followed by self-decision making (36.67 %).

In case of organic farming, 16.67 per cent of the respondents had taken decision by consulting others followed by self-decision (3.33 %). In case of purchase and sale of agricultural implements, majority (51.67 %) of the respondents had taken self-decision followed by 48.33 per cent of the respondents by consulting others.

With regard to decision by other members of the village, in case of purchase of agricultural inputs, more number respondents had taken decision by consulting neighbors (16.67 %), followed by agricultural officers (10.00 %), shop keepers and progressive farmer (3.33 %), and, only few (1.67 %) of the respondents had taken decision by consulting family members. In case of choice of crops, 23.33 per cent of the respondents had taken decision by consulting neighbors followed by agricultural officer (8.33 %) family members (6.67 %) and friends (3.33 %). In case of selection of varieties, 20.00 per cent of the respondents had consulted agriculture officer, followed by shop keepers (11.67 %), family member (6.67 %), 3.33 per cent of the respondents had taken decision by consulting neighbors and friends and only few (1.67 %) of the respondents had taken decision by consulting progressive farmers.

In case of new farm technologies acceptance, 8.33 per cent of respondents had taken decision by consulting family members, followed by 6.67 per cent by consulting neighbors and 5.00 per cent of respondents consulting relatives and agricultural officers. In case of new farm technologies rejectance, 5.00 per cent of respondents had taken decision by consulting neighbors and 3.33 per cent of respondents had taken decision by consulting family member.

Table 4: Status of mass media exposure

(n=60)

Sl. No.	Mass media	Possessed		Frequency of use	
		Frequency	percentage	Daily	
				Frequency	Percentage
1.	Radio	20	33.33		
	Agril. Programmes			00	00
	Weather forecast			5	8.33
	Entertaining Programmes			8	13.33
2.	Television	60	100		
	News			25	41.67
	Agril. programme			21	35.00
	Entertaining programmes			35	58.33
3.	News paper	10	16.67		
	Agril. Information			1	1.67
	Politics			6	10.00

Table 5: Sources of consultation for decision making

(n=60)

Sl. No.	Areas of decision making	Self-decision F (%)	Sources of consultation							
			Neighbors F (%)	Relatives F (%)	Friends F (%)	Family members F (%)	Progressive farmers F (%)	Shop keepers F (%)	Agricultural officer F (%)	Total F (%)
1.	Purchase of agricultural inputs	39 (65.00)	10 (16.67)	-	-	1 (1.67)	2 (3.33)	2 (3.33)	6 (10.00)	21 (35.00)
2.	Choice of crops	35 (58.33)	14 (23.33)		2 (3.33)	4 (6.67)	-	-	5 (8.33)	25 (41.67)
3.	Selection of varieties	32 (53.33)	2 (3.33)	-	2 (3.33)	4 (6.67)	1 (1.67)	7 (11.67)	12 (20.00)	28 (46.67)
4.	New farm technologies	2 (3.33)	4 (6.67)	3 (5.00)	-	5 (8.33)	-	-	3 (5.00)	17 (28.33)
	a)Acceptance:	16 (26.67)	3 (5.00)	-	-	2 (3.33)	-	-	-	5 (8.33)
5.	Plant protection measures of	36 (60.00)	11 (18.33)	-	4 (6.67)	-	3 (5.00)	-	6 (10.00)	24 (40.00)
	a. Maize									
	b. Sorghum	34 (56.67)	14 (23.33)	1 (1.67)	3 (5.00)	-	2 (3.33)	-	6 (10.00)	26 (43.33)
	c. Chick pea	28 (46.67)	21 (35.00)	-	4 (6.67)	2 (3.33)	5 (8.33)	-	7 (11.67)	39 (65.00)
	d. Green gram	24 (40.00)	21 (35.00)	1 (1.67)	-	2 (3.33)	5 (8.33)	-	7 (11.67)	36 (60.00)
9.	Taking loan for farm activities	56 (93.33)	2 (3.33)	-	-	2 (3.33)	-	-	-	4 (6.67)
10.	Soil and water conservation practices	2 (3.33)	5 (8.33)	3 (5.00)	7 (11.67)	5 (8.33)	3 (5.00)	-	23 (38.33)	46 (76.67)
11.	Integrated pest management	22 (36.67)	4 (6.67)		-	3 (5.00)	3 (5.00)	-	23 (38.33)	25 (41.67)
12.	Organic farming	2 (3.33)	1 (1.67)	-	-	-		-	9 (15.00)	10 (16.67)
13.	Purchase and sale of Agril. implements	31 (51.67)	5 (8.33)	4 (6.67)	6 (10.00)	7 (11.67)	03 (5.00)	4 (6.67)	-	29 (48.33)

Table 5a. Sources of consultation for marketing decision

Sl. No.	Particulars	Self – Decision F (%)	Sources of consultation					Total F (%)
			Neighbors F (%)	Brokers F (%)	Co-operative society member F (%)	Family member F (%)	Middle Man F (%)	
1.	Selling of pulses	46 (76.67)	4 (23.33)	20 (33.33)	3 (5)	4 (6.67)	3 (5)	34 (56.67)
2.	Selling of oilseeds	38 (63.33)	10 (16.67)	7 (11.67)	-	3 (5.00)	2 (3.33)	22 (36.67)
3.	Selling of cereals	37 (61.67)	6 (10.00)	11 (18.33)	3 (5.00)	3 (5.00)	-	23 (38.33)
4.	Selling of commercial crop	21 (35.00)	7 (11.67)	20 (33.33)	5 (8.33)	4 (6.67)	3 (1.67)	39 (65.00)

In case of plant protection measures of maize, 18.33 per cent of respondents has taken decision by consulting neighbors, followed by agricultural officers (10.00 %), friends (6.67 %) and only few (5.00 %) of the respondents had taken decision by consulting progressive farmers. In case of plant protection measures of sorghum, 23.33 per cent of respondents had taken decision by consulting neighbors, followed by agricultural officers (10.00 %), friends (5.00 %), progressive farmers (3.33 %) and only few (1.67 %) of the respondents had taken decision by consulting relatives.

In case of plant protection measures of chick pea, 35.00 per cent of the respondents had taken decision consulting neighbors, followed by agricultural officers (11.67 %), progressive farmers (8.33 %), friends (6.67 %) and only few (3.33 %) of the respondents had taken decision consulting family members. In case of plant protection measures of green gram, 35.00 per cent of the respondents had taken decision by consulting neighbors, followed by agricultural officers (11.67 %), progressive farmers (8.33 %) and only few (1.67 %) of the respondents has taken decision with the help of relatives.

In case of taking loan for agricultural activities, 6.67 per cent of respondents had taken decision by consulting others and 3.33 per cent of respondents had taken decision by consulting neighbors and family members. In case of soil and water conservation practices, majority (76.67 %) of the respondents had taken decision by consulting others, followed by 38.33 per cent of respondents by consulting agricultural officers, followed by friends (11.67 %) neighbors and family members (8.33 %) and, relatives and progressive farmers (5.00 %).

In case of integrated pest management, 38.33 per cent of the respondents had taken decision by consulting agricultural officers, followed by neighbors (6.67 %), family members and progressive farmers (5.00 %). In case of organic farming, 16.67 per cent of the respondents had taken decision by consulting agricultural officers and only few (1.67 %) of the respondents had taken decision consulting neighbors. In case of purchase and sale of agricultural implements, 11.67 per cent respondents had taken decision by consulting family members, followed by friends (10.00 %), neighbors (8.33 %), relatives and shop keepers (6.67 %) and only 5.00 per cent of respondents had taken decision by consulting progressive farmers.

From the table 5a revealed that majority (76.67 %) of the respondents had taken self decision in case selling of pulses followed by 56.67 per cent of respondents had taken decision based on decision by consulting others including brokers (33.33 %), neighbors (23.33 %), family members (6.67) and Co-operative society member and middle man (5.00 % each). In case of selling oilseeds, 63.33 per cent of respondents had taken self-decision followed by 36.67 per cent of respondents had taken decision by consulting others.

With regard to selling of commercial crops, 65.00 per cent of respondents had taken decision by consulting other members followed by 35.00 per cent of respondents who had taken self-decision, 33.33 per cent of respondents had taken decision by consulting brokers, 11.67 per cent of respondents had taken decision by consulting neighbors, 8.33 per cent of respondents had taken decision by consulting Co-operative society member, 6.67 per cent of respondents had taken decision by consulting family member and only 1.67 per cent of respondents had taken decision by consulting middle man.

In case of Selling of cereals, 61.67 per cent of respondents has taken self-decision followed by 38.33 per cent of respondents had taken decision by consulting other members including 18.33 per cent of respondents had taken decision by consulting brokers, 10.00 per cent of respondents had taken by consulting neighbors, 5.00 per cent of respondents had taken decision by consulting both Co-operative society member and Family.

4.3 Sociometry models of farmers

4.3.1 Frequency matrix on most liked and most disliked relations with ranks

From the Table 6 revealed that popular persons were two, they were Angadi Nagappa and Patil Parthagowda, they were the stars of the group, followed by Kambar Pundappa, Kumbar Hanumanthappa, Kalasad Nagappa, Matapathi Shivayya and Madar Laxman in second rank, followed by Dasar Yankappa, Dhaped Mallappa, Keri Pakkirappa, Gaji Shekappa, Jelly Shivappa, Sunagar Ramappa in third rank, followed by Bajanthri Shivappa, Hanchinal Muttappa, Amarannavar Rudrappa, Badiger Mallappa, Barker Bheemappa, Chared Chandrayya, Thotar Shivappa in fourth rank, Agasar Kalakappa, Gowder Naganagowda, Kulkarni Magundappa, Vaddar Ramappa, Chalvadi Sangappa, Gulagandi Maruthi, Heeremath Shekaryya, Nadaf Moulasab, Pinjar Husensab, Poojar Kalakappa, Thalvar Parasappa, Vaddar Sabanna in fifth rank, followed by Channappagowder Siddanagowda, Marjannavar Balappa, Pattanashetty Shankrappa, Rachannavar Shivappa, Shirol Basappa, Sullad Yamunappa, Bhudihal Mallappa, Dhoolappanavar Ningabasappa , Kali Ningabasappa, Kurahatti Mallappa, Mannapoor Shivappa, Pargannavar Siddappa, Sunkad Mudiyyappa in sixth rank, followed by Bannikoppa Shivanagowda, Chintamani Sangappa, Desai Shekaragowda, Godi Ningabasappa, Hadapad Honekerappa, Huchanavar Hanumantha, Jigaloor Veerupakshagowda, Katharaki Ninganagowda, Kadlimatti Maruthi, Muttinapendi Rachayya, Mushappanavar Nagappa, Mariyappagowder Mallikarjun, Navalagund Hanumantha, Revadi Siddayya and Thimmasagar veeranna in seventh rank.

The isolated or rejected individuals were 15 in number namely Bannikoppa Shivanagowda, Chintamani Sangappa, Desai Shekaragowda, Godi Ningabasappa, Hadapad Honekerappa, Huchanavar Hanumantha, Jigaloor Veerupakshagowda, Katharaki Ninganagowda, Kadlimatti Maruthi, Muttinapendi Rachayya, Mushappanavar Nagappa, Mariyappagowder Mallikarjun, Navalagund Hanumantha, Revadi Siddayya and Thimmasagar veeranna.

4.3.2 Sociogram of sociometry models of farmers

From Fig.5 revealed that common sociogram of 60 respondents depicted that there were 3 sociometry models. The analysis of sociogram indicated that dual pair relation of most liked and most disliked were not direct between the two but it was between other members of the same sociometry model.

From the Fig. 5, 6, 7, and 8 revealed that Amarannavar Rudrappa (1) in the model had most liked relation by Bajanthri Shivappa (7) and most disliked relation by Badiger Mallappa (6), Dhulappanavar Ningabasappa (14). Agasar Kalakappa (2) had most liked relation by Barker Bheemappa (8) and Godi Ningabasappa (17) and no most disliked relation. Angadi Nagappa (3) had most liked by Amarannavar Rudrappa (1), Chalvadi Sangappa (11) And Dhulappanavar

Ningabasappa (14) and most disliked by Bannikoppa Shivanagowda (5), Bajanthri Shivappa (7) and Desai Shekaragowda (13). Bhudihal Mallappa (4) had no most liked relation and most disliked by Amarannavar Rudrappa (1). Bannikoppa Shivanagowda (5) had no most liked and most disliked relation. Badiger Mallappa (6) had most liked by Agasar Kalakappa (2) and most disliked by Angadi Nagappa (3) and Channappagowder Siddanagowda (9). Bajanthri Shivappa (7) had most liked by Chared Chandrayya (10), Dhabed Mallappa (16) and most disliked by Gowder Naganagowda (18).

Followed by Barker Bhemappa (8) had most liked by Bhudihal Mallappa (4) and most disliked by Agasar Kalakappa (2), Dasar Yankappa (15). Channappagowdra Siddanagowda (9) had most liked by Dasar Yankappa (15) and no most disliked relation. Chared Chandrayya (10) had most liked by Angadi Nagappa (3) and Bhudihal Mallappa (4), Godi Ningabasappa (17). Chalvadi Sangappa (11) had most liked by Chinthamani Sangappa (12) and most disliked By Barker Bhemappa (8). Chintamani Sangappa (12) had no most liked and most disliked relation among group of the members of sociometry model. Desai Shekargowd (13) had no most liked and most disliked relation among group of the members of sociometry model. Doolappanavar Ningabasappa (14) had no most liked relation among the members of group and most disliked by Chalavadi Sangappa (11). Dasar Yankappa (15) had most liked by Bannikoppa Shivanagowda (5), Gowder Naganagowda (18) and Kali Ningabasappa (30) and most disliked by Chared Chandrayya (10). Dabbed Mallappa (16) had most liked by Channappagowder Siddanagowda (9), Gulagandi Maruti (19) and Kulkarni Magundappa (27) and most disliked by Hadapad Honekerappa (22).

Followed by Godi Ningabasappa (17) had no most liked and most disliked relation among the members of group of sociometry model. Gowder Nagangowda (18) had most liked by Heeremath Shekarayya (21), Kadlimatti Maruthi (35) and no most liked relation among the members of group og sociometry model. Gowder Naganagowda (18) had most liked by Heeremath Shekarayya (21), Kadlimatti Maruthi (35) and had no most disliked relation among the members of sociometry model. Gulgandi Maruti (19) had most liked by Desai Shekaragowda (13) and most disliked by Huchannavar Hanumantha (24). Gaji Shekappa (20) had most liked by Badiger Mallappa (6), Hadapad Honekerappa (22) and most disliked by Chinthamani Sangappa (12), Dhabed Mallappa (16). Heeremath Shekarya (21) had most liked by Hanchinal Muttappa (23) and most disliked by Jelly Shivappa (25). Hadapad Honakerappa (22) had no most liked and most disliked relation among the members of group of sociometry model. Hanchinal Muttappa (23) had most liked by Jigaloor Veerupakshagowda (26), Kumbar Hanumappa (31) and most disliked by Keri Pakkirappa (29). Huchanavar Hanumant (24) had no most liked and most disliked relation among the members of group of sociometry model. Jelli Shivappa (25) had most liked by Keri Pakkirappa (29) , Kalsad Nagappa (34) and most disliked by Gulagandi Maruthi (19), Kali Ningabasappa (30). Jigalur Virupakshagowda (26) had no most liked and most disliked relation among the members of group of sociometry model.

Table 6. Frequency matrix on most liked and most disliked relations with ranks

(n=60)

Sl. No.	Name	Most liked	Most disliked	Total	Rank
1	Angadi Nagappa	3	3	6	I
2	Patil Parthagowda	1	5	6	
3	Kambar Pundappa	3	2	5	II
4	Kumbar Hanumappa	3	2	5	
5	Kalasad Nagappa	3	2	5	
6	Matapathi Shivayya	1	4	5	
7	Madar Laxman	1	4	5	
8	Dasar Yankappa	3	1	4	III
9	Dhabed Mallappa	3	1	4	
10	Keri Pakkirappa	3	1	4	
11	Gaji Shekappa	2	2	4	
12	Jelly Shivappa	2	2	4	
13	Sunagar Ramappa	1	3	4	
14	Bajanthri Shivappa	2	1	3	IV
15	Hanchinal Muttappa	2	1	3	
16	Amarannavar Rudrappa	1	2	3	
17	Badiger Mallappa	1	2	3	
18	Barker Bheemappa	1	2	3	
19	Chared Chandrayya	1	2	3	
20	Thotar Shivappa	1	2	3	V
21	Agasar Kalakappa	2	-	2	
22	Gowder Naganagowda	2	-	2	
23	Kulkarni Magundappa	2	-	2	
24	Vaddar Ramappa	2	-	2	
25	Chalvadi Sangappa	1	1	2	
26	Gulagandi Maruthi	1	1	2	
27	Heeremath Shekaryya	1	1	2	
28	Nadaf Moulasab	1	1	2	
29	Pinjar Husensab	1	1	2	
30	Poojar Kalakappa	1	1	2	
31	Thalvar Parasappa	1	1	2	
32	Vaddar Sabanna	1	1	2	
33	Kali Ningabasappa	1	1	2	

Table 6. Contd.....

Sl. No.	Name	Most liked	Most disliked	Total	Rank
34	Channappagowder Siddanagowda	1	-	1	VI
35	Marjannavar Balappa	1	-	1	
36	Pattanashetty Shankrappa	1	-	1	
37	Rachannavar Shivappa	1	-	1	
38	Shirol Basappa	1	-	1	
39	Sullad Yamunappa	1	-	1	
40	Bhudihal Mallappa	-	1	1	
41	Dhoolappanavar Ningabasappa	-	1	1	VII
42	Kurahatti Mallappa	-	1	1	
43	Mannapoor Shivappa	-	1	1	
44	Pirgannavar Siddappa	-	1	1	
45	Sunkad Mudiyaappa	-	1	1	
46	Bannikoppa Shivanagowda	-	-	0	
47	Chintamani Sangappa	-	-	0	VII
48	Desai Shekaragowda	-	-	0	
49	Godi Ningabasappa	-	-	0	
50	Hadapad Honekerappa	-	-	0	
51	Huchanavar Hanumantha	-	-	0	
52	Jigaloor Veerupakshagowda	-	-	0	
53	Katharaki Ninganagowda	-	-	0	
54	Kadlimatti Maruthi	-	-	0	
55	Muttinapendi Rachayya	-	-	0	
56	Mushappanavar Nagappa	-	-	0	
57	Mariyappagowder Mallikarjun	-	-	0	
58	Navalagund Hanumantha	-	-	0	
59	Revadi Siddayya	-	-	0	
60	Thimmasagar veeranna	-	-	0	

Kulkarni Magundappa (27) had most liked by Jelly Shivappa (25), Poojar Kalakappa (49) and had no most disliked relation among the members of group of sociometry model. Kambar Pundappa (28) had most liked by Kurahatti Mallappa (33), Mushappanavar Nagappa (36) and Mariyappagowder Mallikarjun (48) and most disliked by Heeremath Shekarayya (21), Katharaki Ranganagowda (32). Keri Pakkirappa (29) had most liked by Huchannavar Hanumantha (24), Katharaki Mallappa (32) and Madar Laxman (39) and most disliked by Kurahatti Mallappa (33). Kali Ningabasappa (30) had most liked by Hanchinal Muttappa (23) and most disliked by Piragannavar Siddappa (48). Kumbar Hanumappa (31) had most liked by Gaji Shekappa (20), Matapathi Shivayya (37) and Mannapoor Shivappa (40) and most disliked by Mushyappanavar Nagappa (36), Mariyappagowder Mallikarjuna (41).

Katharaki Ranganagowda (32) had most liked by had no most liked and most disliked relation among the members of group of sociometry model. Kurahatti Mallappa (33) had no most liked relation and most disliked by Kambar Pundappa (28). Kalasad Nagappa (34) had most liked by Kambar Pundappa (28), Muttinapendi Rachayya (38), Nadaf Moulasab (43) and most disliked by Mushyappanavar Nagappa (36) , Mariyappagowder Mallikarjun (41). Kadlimatti Maruthi (35) had no most liked and most disliked relation among the members of group of sociometry model. Mushyappanavar Nagappa (36) had no most liked and most disliked relation among the members of group of sociometry model. Matapathi Shivayya (37) had most liked by Pinjar Husensab (47) and most disliked by Gaji Shekappa (20), Muttinapendi Rachayya (38), Mannapoor Shivappa (40), Marjannavar Balappa (42). Muttinapendi Rachayya (38) had no most liked and most disliked relation among the members of group of sociometry model. Madar Laxman (39) had most liked by Marjannavar Balappa (42) and most disliked By Kumbar Hanumappa (28), Kalsad Nagappa (34), Matapathi Shivayya (37), Nadaf Moulasab (43). Mannapoor Shivappa (40) had no most liked relation and most disliked by Kadlimatti Maruthi.

Mariyappagowder Mallikarjuna (41) had no most liked and most disliked relation among the members of group of sociometry model. Marjannavar Balappa (42) had most liked by Revadi Siddayya (51) and had no most disliked relation. Nadaf Moulasab (43) had most liked by Piragannavar Siddappa (48) and most disliked by Madar Laxman (39). Navalgund Hanumantha (44) had no most liked and most disliked relation among the members of group of sociometry model. Patil Parthagowda (45) most liked by Navalgunda Hanumantha (44) and most disliked by Poojar Kalakappa (49), Rachannavar Shivappa (50), Thalvar Parasappa (55), Thotar Shivappa (56) and Thimmasagar Veeranna (57). Pattanashetty Shankrappa (46) had most liked by Thalvar Parasappa (55) and had no most disliked relation. Pinjar Husensab (47) had most liked by Rachannavar Shivappa (50) and most disliked by Pattanashetty Shankrappa (46). Piragannavar Siddappa (48) had no most liked relation and most disliked by Patil Parthagowda (45). Poojar Kalakapp (49) had most liked by Sunagara Ramappa (52) and most disliked by Sunkad Mudiayappa (53). Rachannavar Shivappa (50) had most liked by Shirol Basappa (54) and had no most disliked relation.

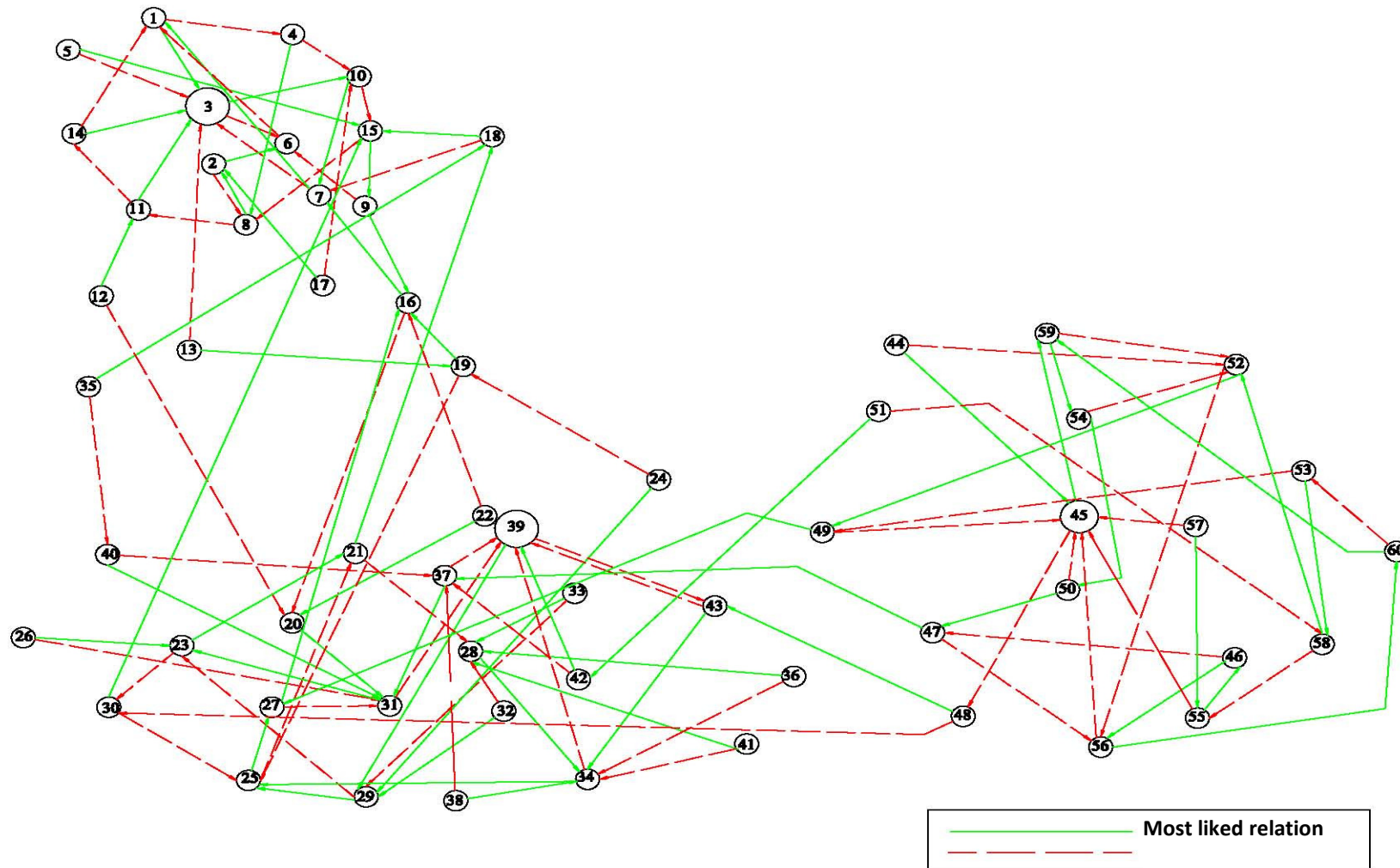


Fig. 5. Sociogram of sociometry model of the farmers

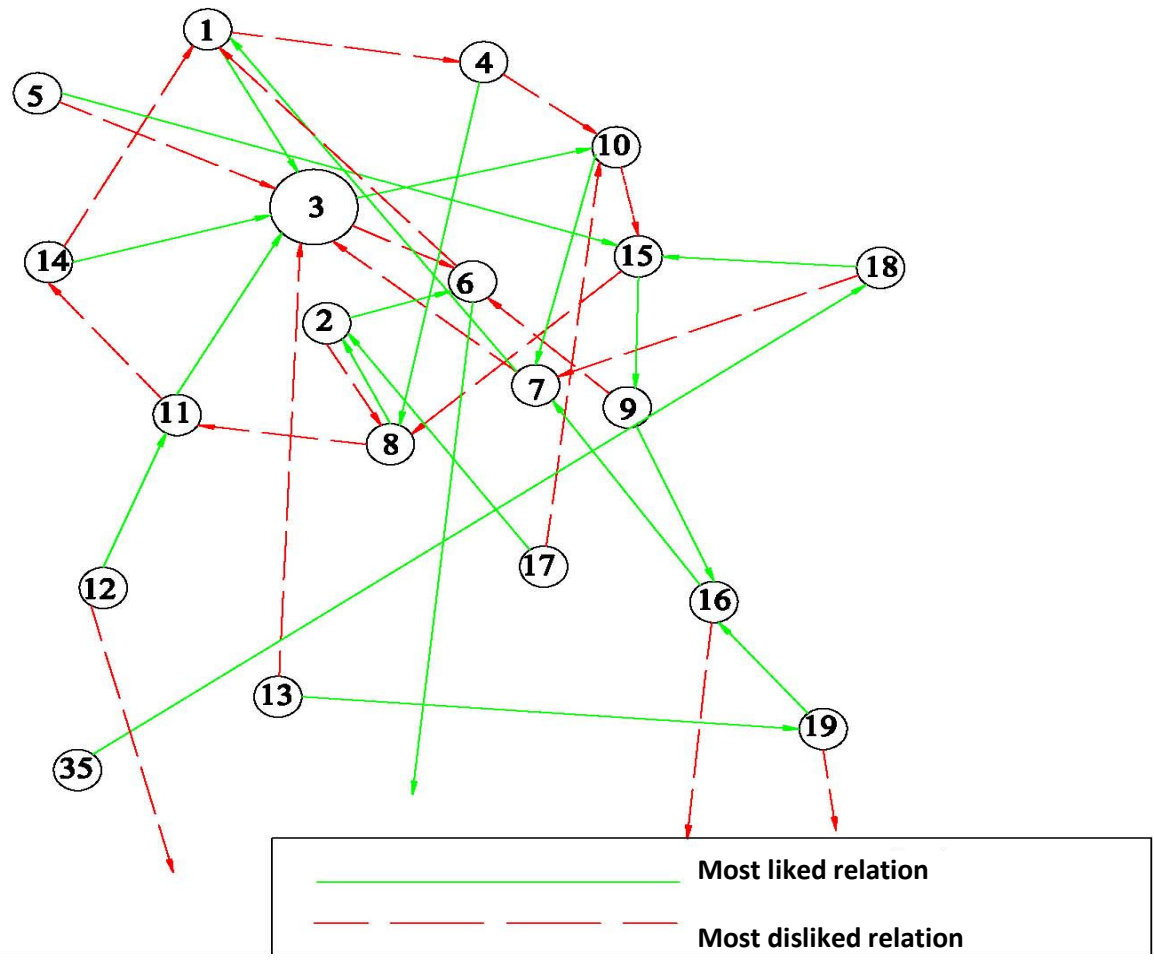


Fig. 6. Sociogram of sociometry model I

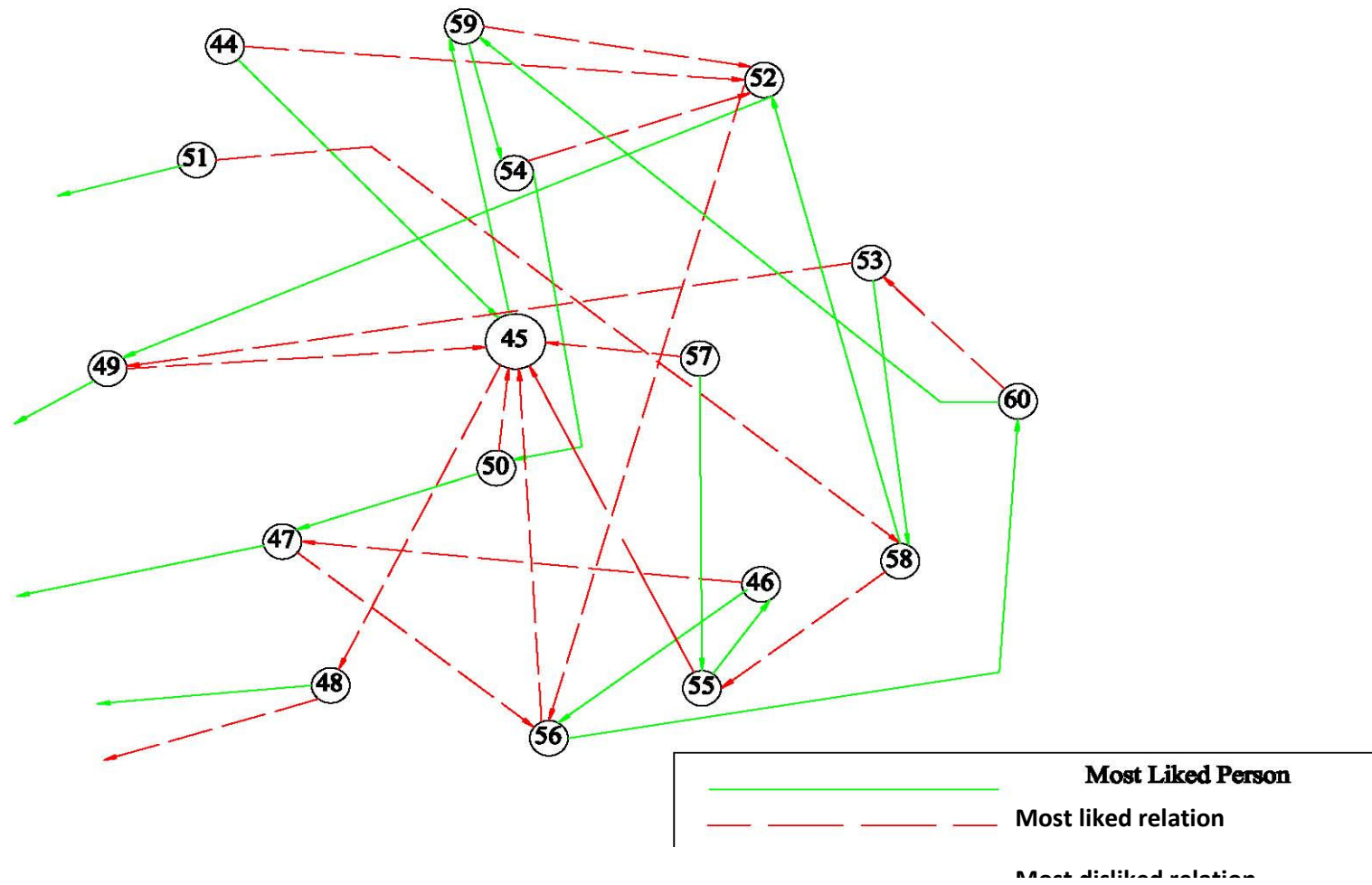


Fig. 7. Sociogram of sociometry model II

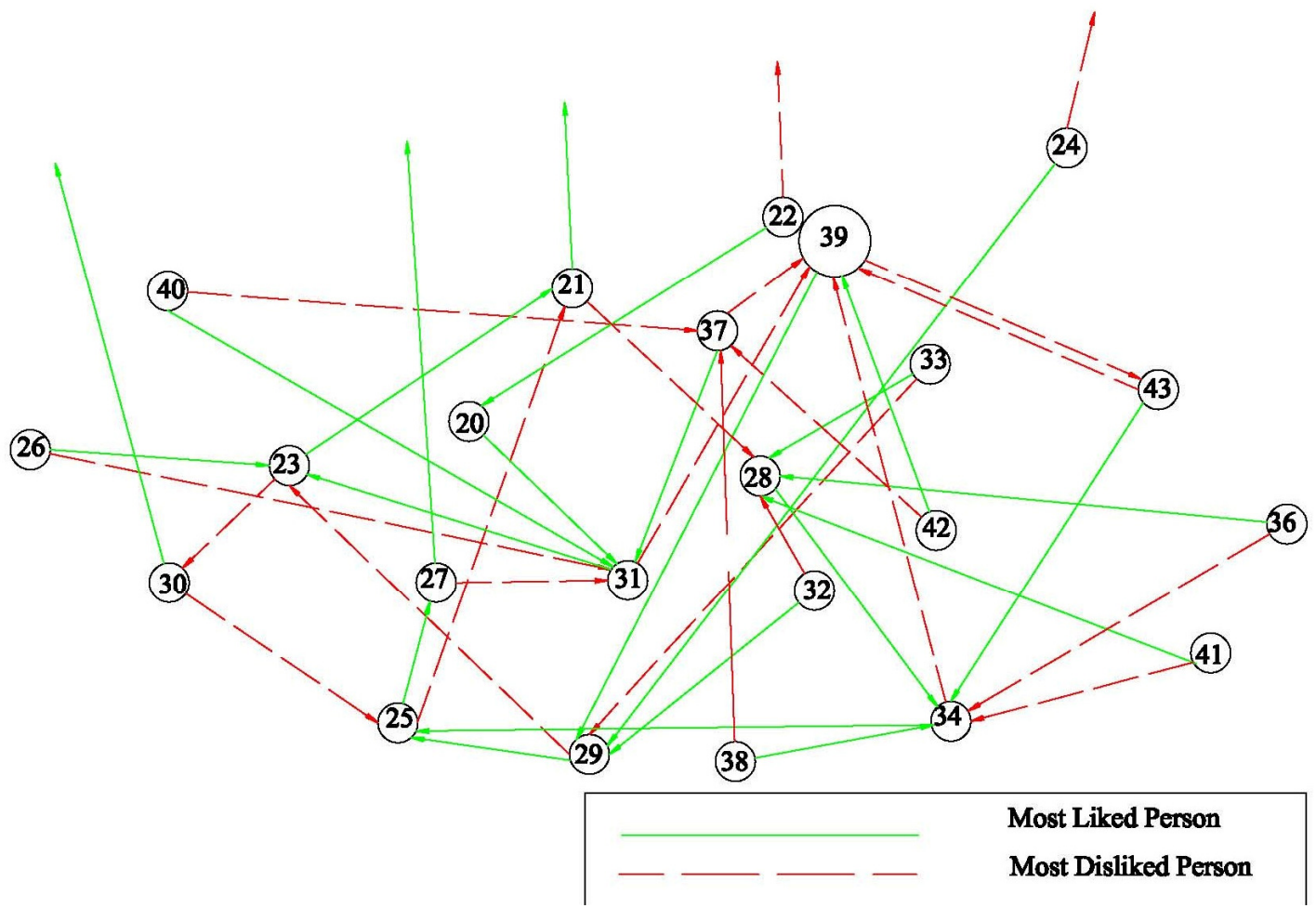


Fig. 8. Sociogram of sociometry model III

Followed by Revadi Siddayya (51) had no most liked and most disliked relation among the members of group of sociometry model. Sunagar Rammapp (52) had most liked by Vaddar Sabanna (58) and most disliked by Navalgund Hanumantha (44), Shirol Basappa (54), Vaddar Ramappa (59). Sunkad Mudiappa (53) had no most liked relation and most disliked by Sullad Yamunappa (60). Shiral Basappa (54) had most liked by Vaddar Ramappa (59) and had no most disliked relation. Thalvar Parasappa (55) had most liked by Thimmasagar Veeranna (57) and most disliked by Vaddar Sabanna (58). Thotar Shivappa (56) had most liked by Pattanashetty Shankrappa (46) and most disliked by Pinjar Husensab (47), Sunagar Ramappa (52). Thimmasagar Veeranna (57) had no most liked and most disliked relation among the members of group of sociometry model. Vaddar Sabanna (58) had most liked by Sunkad Mudiappa (53) and most disliked by Revadi Siddayya (51). Vaddar Ramappa (59) had most liked by Patil Parthagowda (45), Sullad Yamunappa (60) and had no most disliked relation. Sullad Yamunappa (60) had most liked by Thotar Shivappa (56) and had no most disliked relation.

4.4 Compare between decision making and sociometry models

4.4.1 Comparison of sociometry model I with model II and III on decision making

From the Table 7 revealed that comparison of sociometry model I with model II and III on decision making. From the sociometry model I, Amarannavar (1) Rudrappa had consulted to take decisions by sociometry model I member was Barker Bheemappa, sociometry model II member were Patil Parthagowda and Poojar Kalakappa, sociometry model III member were Gaji Shekappa and Kambar Pundappa.

Agasar kalakappa (2) had consulted to take decisions by sociometry model I member was Bhudihal Mallappa, sociometry model II member were Revadi Siddaya and Pattanashetty Shankrappa and sociometry model III member was Keri Pakkirappa. Anadadi Nagappa (3) had consulted to take decisions by adopting different technologies in sociometry model II members were Shirol Basappa, Thalvar Parasappa, Navalgund Hanumantha, Thotar Shivappa and sullad yamunappa and sociometry model III members were Mushappanavar Nagappa, Kalasad Nagappa, Kali Ningabasappa and Matapati Shivaya and had no consultation with the sociometry model I. Bhudihal Mallappa (4) had consulted to take decisions by sociometry model II member were Navalagund Hanumantha, Sunagar Ramappa and sociometry model III member were Kurahatti Mallappa, Madar Laxman and had no consultation with the sociometry model I.

Bannikoppa shivanagowda (5) had consulted to take decisions by sociometry model I member were Channappagowdra Siddanagowda and Dabbed Mallappa and sociometry model III members were Huchanavar Hanumant, Jelli Shivappa, Jigalur Virupakshagowda and had no consultation with the sociometry model II. Badiger mallappa (6) had consulted to take decisions by sociometry model II member were Sunagar Ramappa and sociometry model III member were Kalasad Nagappa, Kadlimatti Maruti and had no consultation with the sociometry model I. Bajanthri shivappa (7) had consulted to take decisions by sociometry model II member were Pinjar Husensab, Pargannavar Siddappa and sociometry model III member were Heeremath shekarya, Hadapad Honakerappa and Hanchinal Muttappa and had no consultation with the sociometry model I.

Table 7. The frequency of consultation between the members of sociometry models for decision making

Table 7a. Comparison of sociometry model I with model II and III on decision making

(n=60)

Sociometry model I	Sociometry model I	Sociometry model II	Sociometry model III
	Frequency	Frequency	Frequency
Amarannavr Rudrappa	1	3	2
Agasar Kalakappa	1	2	1
Angadi Nagappa	-	5	4
Bhudihal Mallappa		2	2
Bannikoppa Shivangowda	2	-	3
Badiger Mallappa	-	1	2
Bajanthri Shivappa	-	2	3
Barker Bhimappa	-	2	2
Channappagowdra Siddanagowda	1	3	-
Chared Chandrayya	-	2	4
Chalvadi Sangappa	-	3	1
Chintamani Sangappa	1	2	1
Desai Shekargowd	-	2	1
Doolappanavar Ningabasappa	2	-	2
Dasar Yankappa	-	-	2
Dabbed Mallappa	2	2	-
Godi Ningabasappa	-	4	-
Gowder Nagangowda	-	3	-
Gulgandi Maruti	1	3	2
Total	11	41	32

Table 7b. Comparison of sociometry model II with model I and III on decision making

(n=60)

Sociometry model II	Sociometry model I	Sociometry model II	Sociometry model III
	Frequency	Frequency	Frequency
Navalagund Hanumantha	1	2	2
Patil Parthagowda	2	3	2
Pattanashetty Shankrappa	4	2	-
Pinjar Husensab	5	1	-
Pirgannavar Siddappa	3	-	2
Poojar Kalakappa	4	-	-
Rachannavar Shivappa	2	2	1
Revadi Siddaya	3	-	1
Sunagar Ramappa	3	2	-
Sunkad Mudiyyappa	3	-	2
Shirol Basappa	4	-	-
Thalvar Parasappa	5	1	-
Thotar Shivappa	3	2	3
Thimmasagar Veeranna	3	2	1
Vaddar Sabanna	2	-	2
Vaddar Ramappa	2	1	1
Sullad Yamunappa	3	1	2
Total	52	19	19

Table 7c. Comparison of sociometry model III with model I and II on decision making

(n=60)

Sociometry model III	Sociometry model I	Sociometry model II	Sociometry model III
	Frequency	Frequency	Frequency
Gaji Shekappa	3	1	2
Heeremath shekarya	2	-	4
Hadapad Honakerappa	4	2	-
Hanchinal Muttappa	5	-	3
Huchanavar Hanumant	2	1	1
Jelli Shivappa	-	5	3
Jigalur Virupakshagowda	3	-	2
Kulkarni Magundappa	3	2	1
Kambar Pundappa	-	2	2
Keri Pakkirappa	-	3	1
Kali Ningabasappa	3	2	1
Kumbar Hanumappa	-	2	3
Katharaki Ranganagowda	2	-	3
Kurahatti Mallappa	1	2	4
Kalasad Nagappa	1	2	1
Kadlimatti Maruti	-	4	-
Mushappanavar Nagappa	1	-	2
Matapati Shivaya	2	1	1
Muttinpendi Rachaya	3	2	1
Madar Laxman	4	2	2
Mannapoor Shivappa	5	1	-
Mariyappagowder Mallikarjun	3	1	2
Marjannavar Balappa	3	2	-
Nadaf Moulasab	1	1	2
Total	51	38	41
Grand total	112	98	92

Barker Bheemappa (8) had consulted to take decisions by sociometry model II member were Revadi Siddaya , Sunagar Ramappa and sociometry model III members were Kadlimatti Maruti, Mushappanavar Nagappa and had no consultation with the sociometry model I. Channappagowder Siddanagowda (9) had consulted to take decisions by sociometry model I member were Amarannavr Rudrappa and sociometry model II member were Katharaki Ranganagowda, Kurahatti Mallappa and Kalasad Nagappa and had no consultation with sociometry model III. Chared Chandrayya (10) had consulted to take decisions by sociometry model II member were Pargannavar Siddappa, Poojar Kalakappa and sociometry model III members were Gaji Shekappa, Heeremath shekarya, Hadapad Honakerappaand Hanchinal Muttappa and had no consultation with sociometry model I.

Chalvadi Sangappa (11) had consulted to take decisions by sociometry model II member were Revadi Siddaya, Sunagar Ramappa and Sunkad Mudiyyappa and sociometry model III members were Gaji Shekappa and had no consultation with sociometry model I. Chinthamani Sangappa (12) had consulted to take decisions by sociometry model I member were angadi nagappa, sociometry model II member were Pargannavar Siddappa, Poojar Kalakappa and sociometry model III members were Kadlimatti Maruti. Desai Shekaragowda (13) had consulted to take decisions by sociometry model II member were Thotar Shivappa, Thimmasagar Veeranna and sociometry model III members were Kadlimatti Maruti and had no consultation with sociometry model I.

Dhoolappanavar ningabasappa (14) had consulted to take decisions by sociometry model I member were Dasar Yankappa, Dabbed Mallappa and sociometry model III members were Gaji Shekappa, Heeremath shekarya and had no consultation with sociometry model II. Dasar Yankappa (15) had consulted to take decisions by sociometry model III member were Huchanavar Hanumant, Jelli Shivappa and had no consultation with sociometry model I and II. Dhabed Mallappa (16) had consulted to take decisions by sociometry model I member were Bannikoppa Shivangowda, Badiger Mallappa and sociometry model II members were Thotar Shivappa, Thimmasagar Veeranna and had no consultation with sociometry model III.

Godi Ningabasappa (17) had consulted to take decisions by sociometry model II member were Rachannavar Shivappa, Revadi Siddaya, Sunagar Ramappa and Sunkad Mudiyyappa and had no consultation with sociometry model I and III. Gowder Naganagowda (18) had consulted to take decisions by sociometry model II member were Sunagar Ramappa, Sunkad Mudiyyappa, Shirol Basappa, Thalvar Parasappa and Thotar Shivappa and had no consultation with sociometry model I and III. Gulagandi Maruthi (19) had consulted to take decisions by sociometry model I member were dasar yankappa and sociometry maodel II members were Pargannavar Siddappa, Poojar Kalakappa and Rachannavar Shivappa and sociometry model III members were Keri Pakkirappa, Kali Ningabasappa.

4.4.2 Comparison of sociometry model II with model I and III on decision making

The sociometry model II revealed that from sociometry model II Navalgund Hanumantha (1) had consulted to take decision by sociometry model I member were Gowder Nagangowda, followed by sociometry model II members were Navalagund Hanumantha, Patil Parthagowda and sociometry model III members were Kali Ningabasappa, Kumbar Hanumappa. Patil Parthagowda (2) had consulted to take decision by memebhrs of sociometry model I were Angadi Nagappa, Bajanthri

Shivappa, followed by sociometry model II member were Pirgannavar Siddappa, Poojar Kalakappa and Thalvar Parasappa followed by sociometry model III members were Kali Ningabasappa, Kumbar Hanumappa, Katharaki Ranganagowda and. Pattanashetty Shankrappa (3) had consulted to take decision by sociometry model I member were Bajanthri Shivappa, Barker Bhimappa and Channappagowdra Siddanagowda followed by sociometry model II members were Chared Chandrayya, Chalvadi Sangappa, Chintamani Sangappa and Desai Shekargowd and had no consultation with sociometry model III.

Pinjar Husenasab (4) had consulted to take decision by sociometry model I member were Bhudihal Mallappa, Bannikoppa Shivangowda, Badiger Mallappa and Bajanthri Shivappa, followed by sociometry model II members were Thotar Shivappa and had no consultation with sociometry model III. Pirgannavr Siddappa (5) had consulted to take decision by sociometry model I member were Channappagowdra Siddanagowda, Chared Chandrayya, Chalvadi Sangappa, followed by sociometry model III members were Heeremath shekarya, Hadapad Honakerappa and had no consultation with sociometry model II. Poojar kalakappa (6) had consulted to take decision by sociometry model I member were Chintamani Sangappa, Desai Shekargowd, Doolappanavar Ningabasappa and Dasar Yankappa and had no consultation with sociometry model II and III.

Rachannavar Shivappa (7) had consulted to take decision by sociometry model I members were Bhudihal Mallappa, Godi Ningabasappa, followed by sociometry model II members were Pirgannavar Siddappa, Sunagar Ramappa and sociometry model III member were Jelli Shivappa. Revadi Siddayya (8) had consulted to take decision by sociometry model I member were Channappagowdra Siddanagowda, Chared Chandrayya and Dabbed Mallappa, followed by sociometry model III member were Huchanavar Hanumant and had no consultation with sociometry model II. Sunagar Ramappa (9) had consulted to take decision by sociometry model I members were Dabbed Mallappa, Godi Ningabasappa, Gowder Nagangowda, followed by sociometry model II members were Pattanashetty Shankrappa, Sullad Yamunappa and had no consultation with sociometry model III.

Sunkad Mudiya (10) had consulted to take decision by sociometry model I members were Dabbed Mallappa, Angadi Nagappa, Bhudihal Mallappa and sociometry model III members were Huchanavar Hanumant, Jelli Shivappa and had no consultation with sociometry model II. Shirol Basappa (11) had consulted to take decision by sociometry model I members were Bajanthri Shivappa, Barker Bhimappa, Channappagowdra Siddanagowda, Chared Chandrayya, followed by sociometry model II members were Navalagund Hanumantha, Patil Parthagowda and sociometry model III member were Jigalur Virupakshagowda .

Thalvar Parasappa (12) had consulted to take decision by sociometry model I members were Chintamani Sangappa, Desai Shekargowd, Doolappanavar Ningabasappa, Angadi Nagappa, Bhudihal Mallappa, followed by sociometry model II members were Patil Parthagowda and had no consultation with sociometry model III. Thotar Shivappa (13) had consulted to take decision by sociometry model I members were Bajanthri Shivappa, Barker Bhimappa, Channappagowdra Siddanagowda, followed by sociometry model II members were Shirol Basappa, Thalvar Parasappa and sociometry model III members were Kali Ningabasappa, Kumbar Hanumappa and Katharaki Ranganagowda.

Thimmasagar Veeranna (14) had consulted to take decision by sociometry model I members were Bajanthri Shivappa, Channappagowdra Siddanagowda, Chared Chandrayya, followed by sociometry model II members were Revadi Siddaya, Sunagar Ramappa and sociometry model III member were Heeremath shekarya. Vaddar Sabanna (15) had consulted to take decision by sociometry model I members were Angadi Nagappa, Bhudihal Mallappa, followed by sociometry model III member were Huchanavar Hanumant , Jelli Shivappa and had no consultation with sociometry model II.

Vaddar Ramappa (16) had consulted to take decision by sociometry model I members were Agasar Kalakappa, Angadi Nagappa, followed by sociometry model II member were Pargannavar Siddappa and sociometry model III member were Hanchinal Muttappa. Sullad Yamunappa (17) had consulted to take decision by sociometry model I members were Chalvadi Sangappa, Chintamani Sangappa and Desai Shekargowd, followed by sociometry model II members were Shirol Basappa, Thalvar Parasappa and sociometry model II member were Gaji Shekappa.

4.4.3 Comparison of sociometry model III with model I and II on decision making

The sociometry model III revealed that from the model gaji shekappa (1) had consulted to take decision by sociometry model I members were Angadi Nagappa, Bhudihal Mallappa, Bannikoppa Shivangowda, followed by sociometry model II member were Patil Parthagowda and sociometry model II member were Kambar Pundappa, Keri Pakkirappa. Heeremath shekarayya (2) had consulted to take decision by sociometry model I members were Doolappanavar Ningabasappa, Dasar Yankappa, followed by sociometry model III members were Hadapad Honakerappa, Hanchinal Muttappa, Huchanavar Hanumant, Jelli Shivappa and had no consultation with sociometry model II.

Hadapad Honekerappa (3) had consulted to take decision by sociometry model I members were Dabbed Mallappa, Godi Ningabasappa, Gowder Nagangowda, Gulgandi Maruti, followed by sociometry model III members were Hadapad Honakerappa, Hanchinal Muttappa and had no consultation with sociometry model III. Hanchinal muttappa (4) had consulted to take decision by sociometry model I members were Angadi Nagappa, Bhudihal Mallappa, Bannikoppa Shivangowda, Badiger Mallappa, Bajanthri Shivappa followed by sociometry model III members were Hanchinal Muttappa, Huchanavar Hanumant , Jelli Shivappa and had no consultation with sociometry model II.

Huchanavar hanumantha (5) had consulted to take decision by sociometry model I members were Barker Bhimappa, Channappagowdra Siddanagowda followed by sociometry model II member were Poojar Kalakappa and sociometry model III member were Barker Bhimappa. Jelly shivappa (6) had consulted to take decision by sociometry model II members were Navalagund Hanumantha, Patil Parthagowda, Pattanashetty Shankrappa, Pinjar Husensab and Pargannavar Siddappa followed by sociometry model III member were Gaji Shekappa, Heeremath shekarya, Hadapad Honakerappa and had no consultation with sociometry model I.

Jigalur Virupakshagowda (7) had consulted to take decision by sociometry model I members were Dasar Yankappa , Dabbed Mallappa, Godi Ningabasappa followed by sociometry model III member were Gaji Shekappa, Heeremath shekarya and had no consultation with sociometry model II. Kulkarni magundappa (8) had consulted to take decision by sociometry model I members were Bannikoppa Shivangowda, Badiger Mallappa, Bajanthri Shivappa followed by sociometry model II

members were Navalagund Hanumantha, Patil Parthagowda and sociometry model I members were Dasar Yankappa. Kambar pundappa (9) had consulted to take decision by sociometry model II members were Navalagund Hanumantha, Patil Parthagowda, followed by sociometry model III member were Heeremath shekarya and had no consultation with sociometry model I.

Keri pakkirappa (10) had consulted to take decision by sociometry model II members were Revadi Siddaya, Sunagar Ramappa, Sunkad Mudiyaappa followed by sociometry model III member were Kurahatti Mallappa and had no consultation with sociometry model I. Kali nigabasappa (11) had consulted to take decision by sociometry model I members were Chintamani Sangappa, Desai Shekargowd, Doolappanavar Ningabasappa followed by sociometry model II members were Revadi Siddaya, Sunagar Ramappa and sociometry model III member were Kulkarni Magundappa.

Kumbar Hanumappa (12) had consulted to take decision by sociometry model II members were Sunkad Mudiyaappa, Shirol Basappa followed by sociometry model III member were Mushappanavar Nagappa, Matapati Shivaya, Muttinpendi Rachaya and had no consultation with sociometry model I. Katharaki ranganagowda (13) had consulted to take decision by sociometry model I member were Dabbed Mallappa, Godi Ningabasappa followed by sociometry model III member were Mushappanavar Nagappa, Gaji Shekappa, Heeremath shekarya and had no consultation with sociometry model II. Kurahatti mallappa (14) had consulted to take decision by sociometry model I member were Dabbed Mallappa followed by sociometry model II member were Sunkad Mudiyaappa, Shirol Basappa and sociometry model III member were Mushappanavar Nagappa, Jelli Shivappa, Jigalur Virupakshagowda and Kulkarni Magundappa.

Kalasad nagappa (15) had consulted to take decision by sociometry model I member were Badiger Mallappa followed by sociometry model II member were Sunkad Mudiyaappa, Thalvar Parasappa and sociometry model III member were Mushappanavar Nagappa. Kadlimatti maruthi (16) had consulted to take decision by sociometry model II member were Rachannavar Shivappa, Revadi Siddaya, Sunagar Ramappa and Sunkad Mudiyaappa and had no consultation with sociometry model I and III. Mushappanavar nagappa (17) had consulted to take decision by sociometry model I member were Amarannavr Rudrappa followed by sociometry model III member were Heeremath shekarya, Hadapad Honakerappa and had no consultation with sociometry model I and II.

Matapathi Shivayya (18) had consulted to take decision by sociometry model I member were Amarannavr Rudrappa, Angadi Nagappa followed by sociometry model II member were Rachannavar Shivappa and sociometry model III member were Heeremath Shekarya. Muttinapendy rachayya (19) had consulted to take decision by sociometry model I member were Badiger Mallappa, Bajanthri Shivappa, Barker Bhimappa followed by sociometry model II member were Navalagund Hanumantha, Patil Parthagowda and sociometry model III member were Hanchinal Muttappa.

Madar laxman (20) had consulted to take decision by sociometry model I member were Doolappanavar Ningabasappa, Dasar Yankappa, Dabbed Mallappa and Godi Ningabasappa followed by sociometry model II member were Navalagund Hanumantha, Pattanashetty Shankrappa and had consulted to the members of sociometry model III were kaumba hanumappa, gaji shekappa. Mannapoor shivappa (21) had consulted to take decision by sociometry model I members were Barker Bhimappa, Channappagowdra Siddanagowda, Amarannavr Rudrappa, Agasar Kalakappa and

Barker Bhimappa followed by sociometry model II member were Pattanashetty Shankrappa and had no consultation with sociometry model III.

Mariyappagowder Mallikarjun (22) had consulted to take decision by sociometry model I members were Barker Bhimappa, Channappagowdra Siddanagowda, Amarannavr Rudrappa followed by sociometry model II member were Navalagund Hanumantha and sociometry model III member were Kulkarni Magundappa, Kambar Pundappa. Marjannavar balappa (23) had consulted to take decision by sociometry model I members were Barker Bhimappa, Channappagowdra Siddanagowda, Dabbed Mallappa followed by sociometry model II member were Pirgannavar Siddappa, Poojar Kalakappa and had no consultation with sociometry model III. Nadaf moulasab (24) had consulted to take decision by sociometry model I members were Barker Bhimappa followed by sociometry model II member were Thotar Shivappa and sociometry model III member were Jelli Shivappa, Jigalur Virupakshagowda.

5. DISCUSSION

The results of the present study are discussed in this chapter under the following headings.

5.1 Socio economic profile of the farmers.

5.2 Sources of decision making of the farmers.

5.3 Sociometry models of farmers.

5.4 Compare between decision making and socio-metric models among the farmers.

5.1 Socio economic profile of the farmers.

5.1.1 Age

Table 1 depicts the classification of the respondents based on their chronological age.

It was revealed from the table that majority (61.67 %) of the respondents were in old age category, whereas 35.00 per cent belonged to middle age group and remaining 3.33 per cent belonged to young age group. This shows that 96.67 per cent of the respondents belonged to old and middle age group.

This study line with the findings of Mahadik (1995), Gajre (1997), Kuraria *et al.* (1997), Patil (1999), Santha (1999), Rani (2000), Shanthasheela (2002), Mankar (2004), Mohanty (2005) and Belli (2008).

5.1.2 Education

The data presented in Table 1, revealed that majority of the respondents (36.67 %) were illiterate and only 4.16 and 1.67 per cent of the respondents were having education up to middle school level and graduate level, respectively. The reasons for the above findings might be due to the fact that respondent families have realized the importance and use of formal schooling, which promoted their parents to send them to schools. However, for the economic reasons and as the distance of higher study center from the villages were at farther places, therefore, they might not had been able to get higher education.

The above findings got support from the studies conducted by Hanumanaikar (1995) and Sakharkar (1995).

5.1.3 Family Type

The results in Table 1 indicated that 51.66 per cent of the respondents belonged to nuclear families and 48.33 per cent of the respondents belonged to joint family. The unsatisfied needs and due importance not being given to every member of the joint family system may be the reason for majority of the respondents to be in the nuclear families.

The findings were in line with the observation of Balamatti (1993), Channel (1995) and Patil (1995).

5.1.4 Family Size

The findings of the Table 1 indicated that 90.00 per cent of the respondents belonged to small families (up to 5 members) and only few (3.33 %) respondents belonged to big size families (more than 8 members).

The realization of advantages of nuclear set up over joint family set up in the present age of economic crisis and advantages of small families might have made the respondents to go for small family norms than being members of bigger family.

5.1.5 Marital status

The distribution of respondents according to marital status is presented in Table 1. It is observed from the table that majority (95.00 %) of respondents belonged to married group and 5.00 per cent belonged to unmarried group.

The findings of the study are in line with the findings of the Ramaparvathy (1996), Shanta (1999), Shantha Sheela (2002), Doddahanumaiah (2005) and Mohanty (2006).

5.1.6 Farming experience

Majority (48.33 %) of the respondents had medium experience in farming and only 8.33 per cent of the respondents had high experience in farming. This might be due to motivation by the farmers club formed in the area. Socio-economic and psychological characteristics and also the tendency of family towards farming sectors might be the reason for continuing in the farming.

5.1.7 Annual income

The results in Table 1 revealed that 36.67 per cent of the farmers had annual income of Rs. 11,001-22,000 and only 15.00 per cent of the farmers had annual income of Above Rs. 33,000.

Due to the small sized and uneconomical land holdings, farmers might have less income. Moreover, prevailing drought situation in the area for the past one-year and the higher dependency on rainfall as majority of the sample farmers were following rain fed agriculture might have been reasons for such low income.

The findings were in line with the findings of Naik (1994), Hanumanaikar (1995) and Sakharkar (1995).

5.1.8 Land holding

The results presented in Table 1 showed that 48.33 per cent of the farmers had small land holding (2.51 to 5.00 acres). Fragmentation of ancestral land from generation to generation might have led to smaller land holdings.

This finding was in line with the results of Patil (1990), Balamatti (1993), Channal (1995) and Hanumanaikar (1995).

5.1.9 Social participation

The results of Table 2 revealed that among the members / office bearers of different organizations only one-fourth (25.00 %) of the respondents were members of co-operative society and only few (5.00 %) of them were office bearers, correspondingly, some of them were the members of (21.67 %) of gram panchayath, few of them (6.67 % and 3.33 %) were members of taluk panchayath and zilla panchayath. The members and office bearers, all of them, had participated in annual meeting. All the office bearers and members of five institutions had participated in annual meeting of the institutions.

The lack of awareness of the farmers regarding the benefits of different social organizations might be the reason for the low social participation of the farmers. The co-operative societies provide numerous benefits to the farmers directly than village panchayath or other social organizations. This might be the reason for majority of the farmers to be its members. The farmers although become members or office bearers of one or the other social organizations their participation would be usually restricted to obtaining benefits from those organizations rather than regular participation in the meetings or other activities of such organizations. Because the farmers feel that such meetings will not serve any purpose for their benefits.

5.1.10 Extension participation

It was observed in Table 3 that many of (36.67 %) the respondents participated Krishi mela on agriculture which was highest among extension participation of the respondents this might be reason for respondents had acquired knowledge regarding innovative ideas about new varieties of different seeds, labour saving harvesting and weeding equipment. some of them (18.33 %) were involved Study tours through study tours they had improve their knowledge regarding marketing export, import transportation available to them. The respondents (16.67 %) visited training courses, so that they improved their knowledge and awareness regarding farming skills. The respondents (15.00 %) had visited Field days and the respondents (13.33 %) participated in demonstration plots of neighbor and had discussion with them this may be because demonstration methods were time consuming.

5.1.11 Mass media exposure

The results depicted that all the respondents (100 %) possessed television and only some of them (35.00 %) had viewed agricultural programmes and majority had viewed other programmes. The reason may be that they were more interested in entertaining programmes and it had become their daily routine to watch the daily shows without missing.

The findings of the study are in line with findings of Moulasab (2004), Kalakanavar (1999), Shantha sheela (2002), and Mohanty (2005).

5.2 Sources of decision making of farmers

5.2.1 Sources of consultation for decision making

The decision making pattern of farmers in farm activities presented in Table 5. indicated that the in case of decision making regarding taking loan for farm activities, purchase of agriculture inputs, choices of crops and selection of varieties (93.33 %, 65.00 %, 58.33 %, and 53.33 %), majority of the respondents were involved in self-decision. The taking loan for farm activities, choices of crops, purchase of agriculture inputs, selection of varieties, are the critical decisions making areas as considered by the respondents since long. This might be the reason, for majority of the respondent farmers to make self-decision in these areas than decision by others. Also the tendency of the farmers to rely more on his experience makes him to go for self-decision.

Correspondingly, many of the respondents (76.67 %) had consulted agriculture officer, friends, neighbors, relatives and progressive farmers for taking decision on soil and water conservation practices. Whereas, more than half of the respondents (65.00 % and 60.00 %) had consulted neighbors, agriculture officer, progressive farmers, friends and family members to take decisions on Plant protection measures of Chickpea, green gram.

The probable reasons for the above findings might be that generally majority of the heads of the families were of middle or above age group and hence they are not as confident as young generation with regard to the knowledge about these areas and their usage. Hence, they might have preferred to go for consultation with others for decision rather than taking own decision.

The result of the Table 5a revealed that majority of the respondents involved in self-decision making in the case of selling of pulses, selling of cereals and Selling of oilseeds (76.67 %, 61.67 % and 63.33 %) and some of the (65.00 %) respondents were found to be involved in decisions in consultation with others in case of commercial crops with outsiders especially market brokers and neighbors, This might be due the lack of knowledge of respondents about marketing of commercial crops.

5.3 Sociometry models of farmers

5.3.1 Frequency matrix on most liked and most disliked relations with ranks

Table 6 revealed that popular persons were two they were, Angadi Nagappa in the group having 3 most liked and most disliked relations. The analysis of personal characters revealed that he had completed PUC, having leadership qualities and more exposure to social participation and institutional relationship, were having rich agricultural knowledge, always accessible to the farmers to share knowledge. In sociometry model Patil Parthagowda, was the most popular in the group having 5 most disliked and only 1 most liked relation. The analysis of personal characters revealed that he had completed degree with large land holding, having leadership qualities, more exposure to social participation and institutional relationship.

The isolated or rejected individuals were 15 in numbers, these respondents was always not responsive to the other members and all the isolated individuals were small farmers and less exposure to social participation and institutional relationship

5.3.2 Sociogram of sociometry models of farmers

The sociogram and fig. 5 depicted that there were three sociometry models.

5.3.2.1 Sociometry model I

Sociometry model I (Fig. 6) consisting of 20 members having most liking and most disliking relationship within the group but there was only in one pair liking and disliking between each other. On the basis of balance theory this sociometry model is balanced because there were 19 most liked and 16 most disliked relationships were expressed by the members of this sociometry model. This might be due to the analyses of demographic variable of the member of this group revealed that these members belonged to low socioeconomic group because majority of the farmers belonged to marginal farmers (up to 2.5 acre) and low annual income and 10-15 years farming experience, so, it is sociometry model I.

Sociogram of sociometry model I depicted that the direction of negativity and positivity was not direct between two respondents but there was maximum number of positive relationships than negative relationships, therefore the structure of this group is balanced positively.

In this sociometry model I, respondent number 3 was the most popular person in the group having 3 most liked and most disliked relations. The analysis of personal characters revealed that he had completed PUC, having leadership qualities and more exposure to social participation and institutional relationship.

In sociometry model I, respondent numbers 5, 4, 12, 13, 14, 17 and 35 were isolated persons in the group having no most liked and most disliked relations. The analysis of personal characters revealed that 5 persons were illiterates but only one respondent had completed degree and this respondent was always not responsive to the other members and all the respondents of this model were small farmers and less exposure to social participation and institutional relationship except one.

The analysis of relationship between the members of sociometry model I, II and III justified that the members of sociometry model I had no liking and disliking relationship with the members of sociometry model II, but the members of sociometry model I had more negative relations with the members of sociometry model III.

5.3.2.2 Sociometry model II

The sociogram (Fig. 7) indicated that sociometry model II included 17 members among them there was no mutual liking and disliking but 16 members disliked among the members of the group and 13 members of the group liked among the members of the group. On the basis of balanced theory this group is negatively balanced structured group but having disliked relationships. The members of this model would be more receptive to the external sources of information. The analyses of socioeconomic factors revealed that these farmers were belonged to medium category with respect to medium annual income, small farmers to semi medium farmers (2.5 to 10 acre) and 15 to 18 years farming experience, so it is a socio economically medium sociometry model second.

In sociometry model II, respondent number 45 was the most popular in the group having 5 most disliked and only 1 most liked relation. The analysis of personal characters revealed that he had completed degree with large land holding, having leadership qualities, more exposure to social participation and institutional relationship.

In this sociometry model, respondent number 44, 51, 57 (sociogram model II) they were isolated persons in the group having no most liked and most disliked relations. The analysis of personal characters revealed that all the 3 persons had completed up to primary school, all were small and marginal farmers and no leadership qualities and lack of exposure to social participation and institutional relationship even then, and he was most disliked by the respondents.

The comparison of sociometry model I and sociometry model III had demonstrated that the members of sociometry model II had more positive relation with the members of sociometry model III but the members of sociometry model III had no relation with the members of sociometry model II this may be due to the fact that most of the members of sociometry model III belonged to high socio economic group and they might have thought that the members of sociometry model II had higher level of negativity between its member, therefore it is the tendency of the human being to be away from people possessed with negativity.

5.3.2.3 Sociometry model III

Fig. 8 revealed that the third sociometry model consisted of 23 members. This model sociogram indicated that among the members 22 most disliked and 19 members most liked within the member of the group except one pair of farmers most disliked each other.

The analysis of sociogram of sociometry model III, on the basis of balanced theory this sociometry model is imbalanced even though possessed with high magnitude of negativity among the members. The members of sociometry model III would be highly receptive to divide and rule policy. Members of this group would be deceptive to receive external information.

The analyses of demographic variables of this group revealed that the members were belonged to high category with respect to median land holding (10 to 25 acre) and high annual income and high farming experience (above 20 years).

In sociometry model III, respondent number 31 and 34 were most popular persons in this group having 3 most liked and 2 most disliked relations. The analysis of personal characters revealed that these 2 persons were having rich agricultural knowledge, always accessible to the farmers to share knowledge and had the concern to solve difficulties and problems regarding agriculture management even though they were illiterates and having small land holding.

In sociometry model III, respondent number 22, 24, 26, 32, 35, 36, 38, and 41 were isolated persons. The analysis of personal characters revealed that 8 persons were illiterates, belonged to small and marginal land holding, with no leadership qualities and less exposure to social participation and institutional relationship.

The analysis of sociogram/s conformed that The members of sociometry model III had more positive relations with the members of sociometry model I even though the members of sociometry model I had more negative relations. This may be due to the fact that the members each group was interdependent in their economic and agricultural activities relationships.

5.4 Compare between decision making and socio-metric models among the farmers

5.4.1 Comparison of sociometry model I with model II and III on decision making

The comparison between sociometry models and decision making (Table 7) revealed that the members of sociometry model I had taken their decision for adopting different technologies in consultation with the members of sociometry model II (41) compare to the members of sociometry model III (32) and few members (11) of sociometry model I had consulted the members of their own group. This may be due to the fact that the members of sociometry model I and II were neither most disliked nor most liked in their personal relationship.

5.4.2 Comparison of sociometry model II with model I and III on decision making

Comparison of the members of sociometry model II with members of sociometry model I and III conformed that most of the members of sociometry model II had consulted more number of times with the members of sociometry model I (52) for adopting technologies in agriculture but sort more or less similar number of times suggestions from the members of sociometry model III (19) and sociometry model II (19). It may be due to the fact that the members of sociometry model II and I had no sociometry relationship of most liking and most disliking, which might have provided no hesitation in getting the consultation with regard to adoption of technologies in the farming.

5.4.3 Comparison of sociometry model III with model I and II on decision making

The results of sociometry model III connoted that the members of sociometry model III had sort suggestions more number of times from the members of sociometry model I (51) for adopting technologies in agriculture compared to the sociometry model III (41) and the member of sociometry model II (38). These results confirmed that the members of sociometry model considered the members of sociometry model I as having better knowledge in adoption of technologies of farming compared to the members of sociometry model III.

The analysis of sociogram of all the 3 sociometry models and frequency of consultancy by the respondents of each sociometry model revealed that the respondents who were stars of popular individuals were consulted by more number of respondents within each group for decision making. Therefore, there was positive relation between sociometry model dynamics and decisions making of the respondents.

6. SUMMARY AND CONCLUSIONS

Decision making is the most vital aspect of every individual's life at every point of time. The question of decision making, a choice among the alternatives arises because man is always influenced by the unlimited wants and limited resources at his disposal. Like all other individuals, farmers too are often faced with the problem of choosing the right decision/action to reach a desired end. Decision making being a complex process, involves various inter related stages and patterns. To balance farm activities at stretch farmers had to go in for a multi-pronged strategy in decision making.

Farmers make decisions in different patterns based on significance of a decision and information availability in the process of decision. Farmer's decision making involve studied or researched decision, those influenced by neighbors, friends, peers and decisions made by past experiences of the farmers. In studied decision the farmers follow a defined procedure, which includes problem identification, information collection, analysis of alternatives, implementation and evaluation of the decision correspondingly another category of decision are made by using information obtained from experience or experience of the fore fathers. Subsequently some other farmers make decision by observing farming practices and management of friends and neighbors.

The researches on adoption have given much importance for individual farmers for analysis but the importance of interpersonal relationships with respect to social relations, emotional relations and information seeking pattern are not given much emphasis. Social relationship analysis is invariably to identify social structure and social network about a person, a group and organization which affects decision making of the farmers.

The present study has been designed with the following specific objectives.

1. To study the socio-economic profile of the farmers.
2. To identify the sources of decision making of farmers.
3. To study the sociometry models of farmers.
4. To compare between decision making and sociometry models among the farmers.

The study was conducted in Sulla village of Badami taluk in Bagalkot district of Karnataka state during 2015-16. Sulla village consisted of 227 families. Among 60 families were selected because those families are exclusively involved in agriculture. This sample is purposively selected for the study. The data was collected using structured interview schedule through personal interview method. The data was analyzed using simple statistical tools and tests such as frequency and percentage.

FINDINGS

Major findings of the study are as follows:

1. Socio-economic profile of the farmers

- Nearly two-third (61.67 %) of respondents belonged to the age group of above 50 years.
- Nearly one one-third (36.67 %) of respondents had illiterate education level.
- Majority (95.00 %) of the respondents were married.
- Around half of (51.67 %) the respondents belonged to nuclear family.
- Majority (90.00 %) of respondents had up to 5 members in their families.

- Around half of (48.33 %) the respondents had up to (10 to 20years) medium farming experience.
- One-third of the respondents (36.67 %) had semi medium income.
- Around half of (48.33 %) the respondents had small land holding (2.51 to 5 acres).
- About one –fourth of (25.00 %) the respondents were member and only few (5.00 %) of the respondents were office bearers of institutions.
- Around one-third of the respondents (30.00 %) participated in co-operative society activities, followed by gram panchayath (21.67 %)
- Some of the respondents (28.33 %) participated in krishi mela and study tours (18.33 %).
- Television was the most accepted mass media by the majority of respondents, who viewed daily programmes (58.33 %).

2. Sources of decision making of the farmers

- Majority of the respondents had taken self -decision than other sources of decision making in case of taking loan for agricultural activities (93.33 %) and purchase of agricultural inputs (65.00 %).
- Majority of the respondents had taken decision with the help of others than self-decision in case of soil and water conservation practices (76.67 %), and plant protection measures in chickpea (65.00 %).
- New farm technologies rejeactance was (8.33 %) dependent on others suggestions with regard to decision making.
- Majority of the respondents had taken self-decision in case of marketing of produce, such as selling of pulses (76.67 %) and selling of cereals (61.67 %). And majority of the respondents had taken decision with the suggestions from others in case of selling of commercial crops (65.00 %).
- Scientists of Krishi Vigyana Kendra and neighbors were major sources of consultation for taking decision.

3. Sociometry models of the farmers

- In sociogram of sociometry model of 60 respondents, there were two popular persons, they were the stars of the group and 15 respondents were isolated members. Three sociometry models were identified among the respondents.
- Socio economic status factors were the basis for the development of 3 sociometry models among the respondents.
- The sociometry model I consisted of 20 respondents and this model was balanced in social system with 19 most liked and 16 most disliked relationships. The respondent number 3 was the popular individual and he was the star and the respondent bearing number 5, 12, 13, 17 and 35 were isolated members.
- There was no dual pair most positive and most negative relationship between the members but it was within the members of the group except in one dual pair expressed most liked and most disliked relation (2 and 8).

- The Sociometry model II consisted of 17 respondents and this model was balanced in social system with 16 most disliked and 13 most liked relationships with high negativity magnitude within the members of group. The respondent number forty-five was the popular individual and he was the star and the respondent number bearing number 44, 51 and 57 were isolated members.
- There was no dual pair most positive and most negative relationship between the each other but it was within the members of the group.
- The Sociometry model III consisted of 23 respondents and this model was balanced in social system with 19 most liked and 22 most disliked relationships. The respondent number was 39 the popular individual with most disliked relations and he was the star. The respondent bearing numbers 24, 26, 32, 36, 38 and 41 were isolated members.
- There was no dual pair most positive and most negative relationship between two members but it was within the members of the group except in dual pair with most disliked relations between two respondents.

4. Compare between decision making and sociometry models among the farmers

- The members of Sociometry model I had taken their decision for adopting different technologies in consultation with the members of sociometry model II (41) compared to the sociometry model III (32) and I (11).
- The members of Sociometry model II had taken their decision for adopting different technologies in consultation with the members of sociometry model I(52) but sort more or less similar number of times suggestions from the members of sociometry model II (19) and sociometry model III (19).
- The members of sociometry model III had taken their decision for adopting different technologies in consultation with the members of sociometry model I (51) for adopting technologies in agriculture compared to the sociometry model III (41) and the member of sociometry model II (38).
- The analyses of 3 sociometry models' sociograms and interpersonal help with regard to decision making revealed that the farmers of sulla village were more inclined to take their decision with the help of the members of sociometry model I compared to members of sociometry II and III.

Implications of the Study

Following implications recommendation could be made based on the findings of the present study.

1. The scientist of Krishi Vigyana Kendra (KVK) and neighbors were measure sources for consultation in decision making by the farmers. About (40.00 %) of respondents consulted the scientists of KVK in decision making of soil and water conservation practices and integrated pest management of maize, sorghum, chickpea and green gram but less than (20.00 %) of respondents had consulted the scientist of KVK in decision making of new farm technologies acceptance, purchase of agricultural inputs, choice of crop, selection of varieties, plant protection measures and organic farming. there is lot of scope for agricultural extension scientist to impart information with regard to educating the respondents for adoption of different technologies to a maximum extent in farming.

2. Majority of farmers had taken self-decisions in taking loan for farm activities, purchase of agricultural inputs, selection of varieties and crop selection, but, most of the farmers consulted others to take decision about soil and water conservation practices, integrated pest management, plant protection measures of chickpea and green gram, so, there is necessity to provide information and training to become competent for taking self -decision in the areas of where the respondents depended on others to take the decision in adoption of technologies.
3. There are three sociometry models in the village. The special results of sociograms analysis are; (a) In all most all of the respondents of each sociometry model the most liked and most disliked relationship is not mutual. This type of relationship is balanced in the social system. (b) The members of lower socio economic status of (sociometry model I) have neither most disliked nor most liked relationship with the members of middle socio economic status (sociometry model II) but have most disliked relation with high socio economic status group (sociometry model III), but the members of high socio economic status (sociometry model III) have most liked relation with the members of low socio economic status (sociometry model I) whereas neither most disliked and most liked relation with middle socio economic status group (sociometry model II) these results interdependency even in the concealed most liked and most disliked relations. Such social dynamics system is receptive to the external influences. It means the members such system receive information of technologies positively.
4. Relatively, lower socio-economic status members were consulted by other farmers, so, it is recommended that in the process of transfer of technology, the extension workers need to use the socio dynamics of small farmers for effective transfer of technologies.

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APPENDIX

Interview schedule

Decision making and socio-metric models in farming

Respondent no: _____

PART -1: General information

1. Name of the farmer: _____ Gender: _____
2. Name of the Village: _____

PART – II: Socio-Economic Characteristics of Farmers

1. Age: _____
2. Education: _____
- a. Illiterate
- b. can read and write
- b. Primary School
- c. Middle School
- d. SSLC /PUC / Degree
3. Marital status: Married / Unmarried
4. Family type: nuclear / joint
5. Family size:

Sl. No.	Name	Age	Gender

6. Farming experience: _____
7. Annual income (in rupee): _____
- a. Main source: _____
- b. Subsidiary source: _____
8. Land holding (in Acre): Total: _____
- a. Dry land : _____ b. Irrigated land: _____

9. Social participation: (During last year)

Sl.no.	Institutions	Membership/ office bearer	No. of times participated
1	Gram panchayat		
2	Co-op. society		
3	Youth club		
4	Taluk panchayat		
5	Zilla Parishad		

10. Extension participation: (During last year)

Sl. No	Activities	No. of times Participated
1.	Training courses	
2.	Study tours	
3.	Demonstrations	
4.	Field day	
5.	Krishi mela	

11.	Integrated pest management								
12	Organic farming								
13.	Purchase of Agril. implements								

12a. Marketing crop produce:

Sl. No	Marketing produce	Self decision	Sources of decision			
			Neighbors	Brokers	Co-operative society member	Middle man
1.	Selling of cereals					
2.	Selling of pulses					
3.	Selling of commercial crop					
4.	Selling of oilseeds					

ಸಂಧರ್ಶನ ಪ್ರಶ್ನಾವಳಿ

ನಿರ್ದಾರಕ ಮತ್ತು ಕೃಷಿಯಲ್ಲಿ ಸೋಸಿಯೋಮೆಟ್ರಿಕ ಮಾದರಿಗಳು

ಪ್ರತಿಕ್ರಿಯಿಸಿದವರ ಸಂಖ್ಯೆ:

ಭಾಗ-೧ ಸಾಮಾನ್ಯ ಮಾಹಿತಿ

೧) ರೈತ ಹೆಸರು :

೨) ಹಳ್ಳಿಯ ಹೆಸರು :

೩) ಲಿಂಗ :

ಭಾಗ- ೨ ರೈತರ ಸಾಮಾಜಿಕ ಆರ್ಥಿಕ ಗುಣಧರ್ಮಗಳು

೧) ವಯಸ್ಸು:-----

೨) ವಿದ್ಯಾಭ್ಯಾಸ:-----

ಅ: ಅನಕ್ಷರಸ್ಥ

ಆ: ಓದಲು ಮತ್ತು ಬರೆಯಲು ಮಾಡಬಹುದು

ಇ: ಪ್ರಾಥಮಿಕ ಶಾಲೆ

ಈ: ಮಧ್ಯಮ/ ಎಸ್. ಎಸ್. ಎಲ್.ಸಿ./ ಪಿ. ಯು.ಸಿ./ ಪದವಿ

೩) ವೈವಾಹಿಕ ಸಂಬಂಧ: ವಿವಾಹಿತ / ಅವಿವಾಹಿತ

೪) ಕುಟುಂಬ ವಿಧ: ವಿಭಕ್ತ/ಅವಿಭಕ್ತ

೫) ಕುಟುಂಬ ಸಂಯೋಜನೆ:

ಕ್ರಮ ಸಂಖ್ಯೆ	ಹೆಸರು	ವಯಸ್ಸು	ಲಿಂಗ

೬) ಕೃಷಿ ಅನುಭವ:-----

೭) ವಾರ್ಷಿಕ ಆದಾಯ: ಅ) ಮುಖ್ಯ ಉದ್ಯೋಗ

ಆ) ಇತರೆ

೮) ಭೂ ಹಿಡುವಳಿ(ಎಕರೆ) : ಒಟ್ಟು: _____ಎಕರೆ

ಅ) ಋಷಿ ಭೂಮಿ: _____ಎಕರೆ

ಆ) ನೀರಾವರಿ ಭೂಮಿ: _____ಎಕರೆ

೯) ಸಾಮಾಜಿಕ ಭಾಗವಹಿಸುವಿಕೆ (ಹಿಂದಿನ ವರ್ಷ)

ಕ್ರ. ಸಂ	ಸಂಸ್ಥೆಗಳು	ಸದಸ್ಯತ್ವ/ಅಧಿಕಾರಿಗಳು	ಎಷ್ಟು ಬಾರಿ ಭಾಗವಹಿಸುವಿಕೆ
	ಗ್ರಾ.ಪಂ		
	ಸಹಕಾರಿ ಸಂಘಗಳು		
	ಯುವಕರ ಸಂಘ		
	ತಾ.ಪಂ		
	ಜಿ.ಪಂ		

೧೦) ವಿಸ್ತಾರಣೆ ಭಾಗವಹಿಸುವಿಕೆ (ಹಿಂದಿನ ವರ್ಷ)

ಕ್ರ.ಸಂ	ಚಟುವಟಿಕೆಗಳು	ಎಷ್ಟು ಬಾರಿ ಭಾಗವಹಿಸುವಿಕೆ
	ತರಬೇತಿ ಶಿಕ್ಷಣ	
	ಅಧ್ಯಯನ ಪ್ರವಾಸ	
	ಕ್ಷೇತ್ರ ದಿನಗಳು	
	ಪ್ರದರ್ಶನ	

೧೧) ಸಮೂಹ ಮಾಧ್ಯಮದ ಬಳಕೆ

ಕ್ರ.ಸಂ	ಸಮೂಹ ಮಾಧ್ಯಮಗಳು	ಹೊಂದಿದ್ದಿರಾ	ಕಾರ್ಯಕ್ರಮಗಳು	ಕೇಳುತ್ತೀರಾ/ನೋಡುತ್ತೀರಾ/ಓದುತ್ತೀರಾ		
				ದಿನವೂ	ವಾರಕ್ಕೊಮ್ಮೆ	ಮಾಸಿಕ
೧.	ರೇಡಿಯೋ		ಕೃಷಿ/ಹವಾಮಾನ/ ಇತರೆ			
೨.	ದೂರದರ್ಶನ		ಕೃಷಿ/ವಾರ್ತೆ/ಇತರೆ			
೩.	ದಿನಪತ್ರಿಕೆ		ಕೃಷಿ/ಹವಾಮಾನ/ ಇತರೆ			

೧೦.	ನೀರು ಮತ್ತು ಮಣ್ಣು ಸಂರಕ್ಷಣೆ ಅ) ಮಳೆ ನೀರು ಕೊಯ್ಲು ಆ) ಜಲಾನಯನ ಅಭಿವೃದ್ಧಿ (ಸಮಪಾತಳಿ ಬದುಗಳು, ತಟ್ಟೆಯಾಕಾರದ ಗುಣಿಗಳು, ಕೃಷಿ ಹೊಂಡಾ) ಇ) ನೀರು ನಿರ್ವಹಣೆ(ಹನಿ ನೀರಾವರಿ, ತುಂತುರು ನೀರಾವರಿ)								
೧೧.	ಸಮಗ್ರ ಪೀಡೆ ನಿರ್ವಹಣೆ ಅ) ಗದ್ದಲು ಹುಳುವಿನ ನಿರ್ವಹಣೆ ಆ) ಹೆಲಿಕೋವರ್ಪಾ ಆರ್ಮಿಚೆರಾ ಕೀಟದ ನಿರ್ವಹಣೆ ಇ) ಇಲಿಗಳ ನಿರ್ವಹಣೆ ಈ) ಉಗ್ರಾಣದ ಕೀಟಗಳ ನಿರ್ವಹಣೆ ಉ) ಗೊಣ್ಣೆ ಹುಳುವಿನ ನಿರ್ವಹಣೆ								
೧೨.	ಸಾವಯವ ಕೃಷಿ ಅ) ಎರೆಹುಳು ಕೃಷಿ ಆ) ಹಸಿರು ಗೊಬ್ಬರಗಳು ಇ) ಜೈಯವಿಕ ಗೊಬ್ಬರಗಳು								
೧೩.	ಕೃಷಿ ಸಲಕರಣೆಗಳು ಅ) ಟ್ರಾಕ್ಟರ್ ಆ) ಮರದ ನೇಗಿಲು ಇ) ಕುಂಟೆ ಈ) ನೇಗಿಲ ಸಾಲು ಉ) ಬೀಜ ಕಮ್ ರಸಗೊಬ್ಬರ ಡ್ರಿಲ್ ಊ) ಕಲ್ಟಿವೇಶರ್ ಋ) ಎತ್ತಿನ ಗಾಡಿ ಎ) ದ್ವಿಚಕ್ರ ವಾಹನ ಐ) ನ್ಯಾಪಸಕ್ ಸ್ಪೆಯರ್ ಐ) ಪಮ್ ಸೆಟ್ಟಿ ಬ) ಕಬ್ಬಿಣದ ನೇಗಿಲು								

೧೨ ಅ. ಮಾರುಕಟ್ಟೆ ವ್ಯವಸ್ಥೆ :

ಕ್ರಮ. ಸಂ.	ಹೇಳಿಕೆ	ಸ್ವಂತ ನಿರ್ಧಾರ	ಬೇರೆಯವರ ಸಲಹೆ				
			ನಬ	ದಲ್ಲಾಳಿ	ಸಸಸ	ಮಸ	ಮಮ
೧.	ದಾನ್ಯಗಳ ಮಾರಾಟ						
೨.	ದ್ವಿದಳ ಮಾರಾಟ						
೩.	ತೈಲದ ಬೆಳೆಗಳ ಮಾರಾಟ						
೪.	ವಾಣಿಜ್ಯ ಬೆಳೆಗಳ ಮಾರಾಟ						

Interview schedule
Decision making and sociometry models in farming

Name of the farmer:

Respondent no:

Name of the village:

Sl. No.	Farmers Name	Most Liked Person	Most Disliked Person
1.	Amarannavr Rudrappa G.		
2.	Agasar Kalakappa		
3.	Angadi Nagappa S.		
4.	Bhudihal Mallappa V.		
5.	Bannikoppa Shivangowda Y.		
6.	Badiger Mallappa M.		
7.	Bajanthri Shivappa R.		
8.	Barker Bhimappa S.		
9.	Channappagowdra Siddanagowda D.		
10.	Chared Chandrayya B.		
11.	Chalvadi Sangappa P.		
12.	Chintamani Sangappa H.		
13.	Desai Shekargowd M.		
14.	Doolappanavar Ningabasappa M.		
15.	Dasar Yankappa H.		
16.	Dabbed Mallappa A.		
17.	Godi Ningabasappa H.		
18.	Gowder Nagangowda B.		
19.	Gulgandi Maruti B.		
20.	Gaji Shekappa D.		
21.	Heeremath shekarya K.		
22.	Hadapad Honakerappa R.		
23.	Hanchinal Muttappa S.		
24.	Huchanavar Hanumant N.		
25.	Jelli Shivappa M.		
26.	Jigalur Virupakshagowda B.		
27.	Kulkarni Magundappa P.		
28.	Kambar Pundappa M.		
29.	Keri Pakkirappa M.		
30.	Kali Ningabasappa B.		
31.	Kumbar Hanumappa N.		
32.	Katharaki Ranganagowda Y.		
33.	Kurahatti Mallappa Y.		
34.	Kalasad Nagappa Y.		
35.	Kadlimatti Maruti H.		
36.	Mushappanavar Nagappa M.		
37.	Matapati Shivaya B.		
38.	Muttinpendi Rachaya S.		
39.	Madar Laxman B.		
40.	Mannapoor Shivappa M.		
41.	Mariyappagowder Mallikarjun		
42.	Marjannavar Balappa N.		
43.	Nadaf Moulasab M.		
44.	Navalagund Hanumantha Y.		
45.	Patil Parthagowda S.		
46.	Pattanashetty Shankrappa B.		
47.	Pinjar Husensab F.		
48.	Pirgannavar Siddappa S.		
49.	Poojar Kalakappa H.		
50.	Rachannavar Shivappa B.		

Sl. No.	Farmers Name	Most Liked Person	Most Disliked Person
51.	Revadi Siddaya R.		
52.	Sunagar Ramappa M.		
53.	Sunkad Mudiyyappa Y.		
54.	Shirol Basappa M.		
55.	Thalvar Parasappa H.		
56.	Thotar Shivappa N.		
57.	Thimmasagar Veeranna N.		
58.	Vaddar Sabanna		
59.	Vaddar Ramappa		
60.	Sullad Yamunappa B.		

DECISION MAKING AND SOCIOMETRY MODELS IN FARMING

JYOTI K. KUMBAR

2016

**DR. V. S. YADAV
CHAIRMAN**

ABSTRACT

The study was conducted in Sulla village of Bagalkot district during 2015-16. The sample consisted of 60 farmers selected purposively to identify sources of decision making and sociometry models in farming.

The results revealed that majority of the (61.67 %) respondents were in old age, 36.67 per cent were illiterate farmers, 48.33 per cent of the respondents had up to (10 to 20 years) medium farming experience and small land holding (2.51 to 5 acres) and 30.00 per cent of the respondents participated in co-operative society activities.

Majority (about 53 to 93 %) of the respondents made self- decision on selection of varieties, choices of crops and loan for farm activities. About 75.00 per cent of the respondents had consulted agricultural officers to make decisions on plant protection measures, soil and water conservation practices; 67.00 per cent of farmers made self-decision on marketing on pulses, oilseeds and cereals.

In the analysis of sociogram of the respondents, three sociometry models were identified among the respondents. Sociometry Model I consisted of 20 respondents, 19 most liked and 16 most disliked relationships, sociometry Model II consisted of 17 respondents, 16 most disliked and 13 most liked relationships and sociometry Model III consisted of 23 respondents, 19 most liked and 22 most disliked relationships.

The members of sociometry Model I (11) consulted 41 times the members of sociometry Model II. The members of sociometry Model II (19) consulted the members of sociometry Model I 52 times compared to the members of sociometry Model III 19 times. The members of sociometry Model III (41) consulted 51 times with the members of sociometry Model I compared to the members of sociometry Model II 38 times. There is more interdependency among members of sociometry Model I and II and also sociometry Model III and I.