3 Research Methodology

3.1 Problem Definition
3.2 Approach to the Problem
3.3 Research Design
3.4 Data collection
3.5 Data Preparation and Analysis
3.6 Report Preparation
Malhotra (2007) in his book Marketing Research: an applied Orientation describes in detail the objective and process of Market Research. According to him, “Marketing research is the systematic and objective identification, collection, analysis, dissemination, and use of information for the purpose of improving decision making related to the identification and solution of problems and opportunities in marketing.

Marketing research attempts to provide accurate information that reflects a true state of affairs. It is objective and should be conducted impartially.

We identify or define the marketing research problem or opportunity and then determine what information is needed to investigate it. Next, the relevant information sources are identified and a range of data collection methods varying in sophistication and complexity are evaluated for their usefulness. The data are collected using the most appropriate method; they are analyzed and interpreted, and inferences drawn. Finally the findings, implications and recommendations are provided in a format that allows the information to be used for marketing decision making and to be acted upon directly”.

Marketing Research Process

“Marketing research process is a set of six steps that defines the tasks to be accomplished in conducting a marketing research study. These include problem definition, development of an approach to the problem, research design formulation, field work, data preparation and analysis, and report preparation and presentation”

Figure 3.1
Steps followed in Research

Research Methodology Used in this Study

- Problem Definition 3.1
- Approach to the Problem 3.2
- Research Design 3.3
- Data Collection 3.4
- Preparation & Analysis 3.5
- Report & Presentation 3.6
3.1 Problem Definition

Malhotra (2007) describes ‘Problem Definition’ step as “The first step in any marketing research project is to define the problem. In defining the problem, the researcher should take into account the purpose of the study, the relevant background information, the information needed and how it will be used in decision making. Problem definition involves discussion with the decision makers, interviews with industry experts, analysis of secondary data and perhaps some qualitative research such as focus groups. Once the problem has been precisely defined, the research can be designed and conducted properly”.

Numerous studies have been undertaken to understand the potential of microinsurance and the willingness of the poor population to pay for the insurance. But, no product will sell on its own just because there is a need for it, particularly, insurance which Kotler (2001), defines as unsought product. For a product to be accepted in the target market, the target market has to be studied in detail.

This research studied the behavior of the consumer for purchasing (or not purchasing) that product. External and internal factors influence the decision of the consumer. Unless these influences are studied in detail, it is not possible to develop the right product for the right customer. This study tried to explain factors that influence the behavior of the consumer as far as purchase of Microinsurance is concerned. Factors that have been studied as part of this research on consumer’s buying behavior of microinsurance are:

- Marketing influences of the Insurance firms
- The Socio cultural factors and
- The Personal factors

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The Problem that needs to be studied is arrived as follows (figure 3.2):

**Figure 3.2**
*Problem Definition*

The above components lead us to the following marketing questions to meet the goals of the study:

1. **Social Buying Influences**
   1. Social Class influences:
      1. What are the shared beliefs & values of this Social class towards insurance?
      2. The impact of beliefs and values on purchase decision of insurance.
   2. Social Group Influence
      3. What are the existing social groups in which the rural population can be classified?
      4. How much is the influence of the group members on the individual?
   3. Role of Opinion Leaders
      5. Who are the opinion leaders in the target population?
      6. How much is the influence of target population on purchase decision of insurance?
II Psychological Buying Influences

1 Problem recognition:
   i. Is the target customer sufficiently aware of his / her present situation (without insurance)?
   ii. Can the target customer perceive the ideal situation (when he/she might be insured)?
   iii. What is the effect of awareness on purchase decision of insurance?

III Personal Buying Influences

1 Information Search & evaluation:
   i. Now that the customer wants to achieve the ideal situation, where does he get his information from (Opinion Leaders, Local administration like Gram Panchayat, Post office, Advertisements)?

2 Purchasing Process:
   i. Which is the best distribution channel that the customer will depend upon to make the purchase?
   ii. What external stimuli make him come to a purchase decision?
   iii. How much/Where/why do they buy?

The above marketing questions can be transformed into the following research questions

1. What are the marketing efforts of the firm with regard to Product, Price, Place and Promotion that need to be customized for the target market?
2. Is the target market sufficiently aware of the concept of Insurance?
3. Is the target segment sufficiently exposed to marketing communication efforts of the firm?
4. Does the marketing effort of the firm have an impact on the target audience?
5. What socio-cultural factors from amongst Family, Reference groups, urban exposure, Social Class and Culture impact the purchase of insurance in the target group?
6. What personal and Psychological factors from amongst Motivation, Perception, Learning, Personality and Attitude impact the purchase of insurance in the target group?
3.2 **Approach to the Problem**

Development of an approach to the Problem

Malhotra (2007) talks about how to ‘approach the Problem’ in research. Development of an approach to the problem includes, formulating an objective or theoretical framework, analytical models, research questions and hypothesis and identifying the information needed.  

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### 3.2.1 Objectives of the study or theoretical framework

1. To understand factors influencing buying behavior of Microinsurance prospects with regards to Personal influences
   - Motivation
   - Perception
   - Learning
   - Personality
   - Attitude

2. To understand factors influencing buying behavior of Microinsurance prospects with regards to Social influences
   - Reference groups & Opinion Leaders
   - Other non-commercial sources
   - Social Class
   - Cultural influences

3. To suggest marketing strategies that will work effectively for the defined segment.

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3.2.2 Model for the study

The consumer decision making process consists of 3 distinct stages:

1. The Input Stage
2. The Process Stage and
3. The Output Stage

Figure 3.3
Generic Model of Consumer Behavior suggested by Schiffman and Kanuk
Schiffman, Kanuk and Kumar (2010) further explain the decision making model thus:

“The input stage influences the consumer’s recognition of a product need and consists of two major sources of information: the company’s marketing efforts (the product itself, its price, its promotion and where it is sold) and the sociological influences on the consumer (family, friends, neighbors, other informal and non-commercial sources, social class, and cultural and sub-cultural memberships.

The process stage of the model focuses on how consumers make decisions. The psychological factors inherent in each individual (motivation, perception, learning, personality and attitudes) affect how the external inputs from the input stage influence the consumer’s recognition of a need, pre-purchase search for information, and evaluation of alternatives. The experience gained through evaluation of alternatives, in turn, affects the consumer’s existing psychological attributes.

The output stage of the consumer decision making model consists of two closely related postdecision activities: purchase behavior and postpurchase evaluation”. 172

172 Schiffman, LG, Kanuk, LL and Kumar, SR. Consumer Behavior, New Delhi, Dorling Kindersley (India) Pvt. Ltd., 2010, First Impression, pp 18-19
3.2.3 Formulating the Hypothesis
The hypothesis was formed after inputs from the objectives as described in the previous section and qualitative survey (focus groups) as described in the next section.

1. Personal influences affect buying behavior of Microinsurance.
2. Target segment has a negative attitude towards insurance.
3. Social influences affect buying behavior of Microinsurance.
4. Reference groups and Opinion leaders have a strong influence in building opinion towards insurance.
5. Information provided by the insurance companies plays a role in purchase decision of Microinsurance.
6. There is awareness and need for insurance but motivation to act is low.
3.3 Research Design

According to Malhotra (2007), a research design is a framework or blueprint for conducting the marketing research project. It details the procedures necessary for obtaining the required information and its purpose is to design a study that will test the hypothesis of interest, determine possible answer to the research questions, and provide the information needed for decision making. Conducting exploratory research, precisely defining variables, and designing appropriate scales to measure them are also part of the research design. The issue of how the data should be obtained from the respondents (for example, by conducting a survey or an experiment) must be addressed. It is also necessary to design a questionnaire and a sampling plan to select respondents for the study.¹⁷³

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3.3.1 Definition of the information needed

Motivation
(i) Percentage of sample who have savings account
(ii) Savings habit of the sample.
(iii) Loan status of the sample.
(iv) Loan sources of the sample.
(v) Major items of expenditure and amount spent on it.
(vi) Spending of surplus income.

Perception
(i) Understanding of the term insurance.
(ii) Belief that insurance company will settle claim.
(iii) Perception about health insurance.
(iv) Perception that insurance is necessity
(v) Perception that insurance is unaffordable
(vi) Perception that insurance people are untrustworthy
(vii) Perception that insurance brings bad luck.

Learning
(i) First source of knowledge about insurance.
(ii) Percentage of sample who have met insurance agent.
(iii) Awareness about private insurance companies.
(iv) Awareness about marketing communication of private insurance companies.
(v) Marketing communication leads to purchase or not.

Personality/Lifestyle
(i) Savings habit
(ii) Spending habit
(iii) Spare time habit
(iv) Influence of opinion leaders on medical and financial decisions.
(v) Individualistic vs. family values.
(vi) Media habits

Attitude
(i) Positive or negative attitude towards insurance by measuring what insurance means to the sample and what it does to them.
Family
(i) Impact of family size
(ii) Decision maker in the family

Reference Group/Opinion Leader
(i) Opinion leader for medical advice
(ii) Opinion leader for financial advice.
(iii) Reference group for spare time spending.

Urban exposure (other non-commercial sources)
(i) Family members staying in city
(ii) Remittances received from relatives staying in city.

Social Class
(iii) Annual income
(iv) Education
(v) Professional Status
(vi) Landholding

Cultural Influences
(i) Cultural values regarding health/illness/insurance

Classification data (Demographics)
(i) Name
(ii) Age
(iii) Self employed/ Service
(iv) Profession
(v) No of Family Members
(vi) Education
(vii) Land holding
(viii) Annual income
(ix) Household; own/rented
(x) Newspaper
(xi) Television viewing per week
(xii) Television: home or community viewing?
(xiii) Radio listening per week
(xiv) Vehicle
(xv) Rural / Urban
3.3.2 Secondary data analysis
Secondary data analysis has been covered extensively in chapter two – Literature review. Following is the Conclusions from Literature review:
The lives of the poor become more vulnerable due to risk events like ill health, accident and death of a breadwinner. The importance of Microinsurance in changing the lives of the poor is largely accepted. Income is an important criterion but still, the poor are willing to pay for insurance. Experiments of providing Microinsurance with Micro Finance have had some success in terms of quantity but lacks quality in terms of support to the lives of those insured. While the clients look for a better product at cheapest possible price, the insurance companies are looking at viability of reaching out to these very clients. There is enough literature on need, willingness to pay and the quantum of demand. Many studies have focused on the supply side of insurance, i.e. how to make this into a sustainable business for insurance companies.
The demand side of Microinsurance has not been widely explored. There are no studies on the behavior of the consumer in the market. Since the demand is a given, it is essential to find out why, what, where, when and how much does the consumer buy. This study focuses on those elements of microinsurance consumer.
A preliminary study was carried out to understand these very gaps found from the literature review. This broad level study helped analyze the need to do a detailed analysis. It also helped frame hypothesis and to test the same using various statistical tools.

3.3.3 Qualitative research (focus group)
The preliminary research covered attitude studies, which formed basis of inputs for hypothesis framing and testing. During this phase, focus group discussions/in-depth interviews were be carried out on:
- Target customers
- Industry experts
The focus group process with target customers provided qualitative inputs on the
- Emotional & Behavioral reactions to the concept of Insurance.
- Life style relationship to product category.
In-depth interviews with industry experts will bring about:
• Gaps, as perceived by the industry
• Their experiences in dealing with this segment.

**Pilot Study**
4 Focus group discussions with target customers:
2 in rural Maharashtra (Village Deokhop and Nandore in district Palghar)
1 in economically challenged area in Mumbai (Dahisar)
1 in economically challenged area of Pimpri Chinchwad (Dhapodi)

**Methodology**
**Focus group interviews with target customers**
Participant selection: Based on availability
No of Participants: 8 each
Place of Interview: Panchayat office in the village/Local eatery in Mumbai & Pune
Process: Low moderator control with open ended questions to guide discussions.

Data Collection: Focus Group, Exploratory Stage (before hypothesis framing)
Size: 4 from 4 different areas.
Nature: Non probability sampling method
Core Sample Profile: 2 from Rural India and 2 from economically backward section.
Age group: 20 to 40 years
Sampling Unit: Chief bread earner in the family
Units: Group of 10 to 12
Elements: Adult
A Focus Group study was carried out to explore the initial understanding with respect to the following:

**Pilot Study Phase 1 – Discussion points for focus Group Interviews**

<table>
<thead>
<tr>
<th>Discussion Point</th>
<th>Buyer's state of mind</th>
<th>Direction of Focus Group Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Awareness</td>
<td></td>
<td>What do they understand by the term insurance? Is insurance relevant to their lives? How many from the group are insured? Do they know the names of insurance companies? Do they know the difference between various insurance plans?</td>
</tr>
<tr>
<td>2. Current State</td>
<td></td>
<td>How do they spend any surplus income that they may generate in a year? How do they manage their financials in case of ill health of a family member or death of a bread winner? Share some experiences that they have faced.</td>
</tr>
<tr>
<td>3. Personal influences</td>
<td></td>
<td>What is the first thing that comes to their mind when they hear the term ‘insurance’? (perception). Where does his information come from? (Learning). What event made the insured buy the insurance? (Motivation). Do they feel it is a good idea to be insured? Do they believe that the insurance company will return the money when needed? What if they never ever need to claim insurance but keep on paying? (Attitude)</td>
</tr>
<tr>
<td>4. Social influences</td>
<td></td>
<td>Who was the first person amongst their known circle to buy insurance? ? Do they think this person makes sensible financial decisions? Would they also buy insurance because this person has bought it?</td>
</tr>
<tr>
<td>5. Ideal state</td>
<td></td>
<td>What would they most like a policy to cover? What should be extent of coverage in case of hospitalization? Death? How much premium are they ready to pay per month? What would be their cycle of payments?</td>
</tr>
</tbody>
</table>
Based on the results of the Focus group / In-depth interviews, hypothesis was formed.

### 3.3.4 Methods of collecting quantitative data – Survey

**Selection of field workers**
The scope of the project was restricted to Pune district and in particular rural and economically weaker section in urban areas. Jankidevi Bajaj Gram Vikas Sanstha, headquartered in Pune, is one such NGO which has its field workers serving the community in these very areas. These field workers were most suitable for the job since they are close to the target community, deal with them on daily basis, and are qualified enough to understand and fill in the questionnaire.

The researcher (supervisor) conducted field work before handling over the forms to the field workers to get a feel of the survey. This also gave an opportunity to understand the problems that field workers may face. Field workers from Jankidevi Bajaj Gram Vikas Sansthan were chosen because they could reach out to the right respondents, their turnover time was very fast, their sampling error was low and they were within acceptable budget constraints.

**Training the field workers**
The field workers had to undergo half a day training program on the concept of the study, its objectives and how to get the questionnaire filled. They went through mock survey during the training program.

**Supervision of field workers**
Forms were collected from the field workers on alternate day basis. This gave enough time for evaluating the forms for accuracy, mishandling and cheating. All questionnaires were evaluated to make sure that the forms were complete in all respects. Any issues with incomplete forms or illegible handwriting were immediately cross-checked with the interviewer.
3.3.5 Measurement and Scaling procedures

Malhotra (2007) describes measurement and scaling as “measurement means assigning numbers or other symbols to characteristics of objects according to certain pre-specified rules. Scaling involves creating a continuum upon which measured objects are located”. 174

Numbers zero to five were allocated to the pre-fixed options of responses. The interviewer had to ask the question and mark the response from zero to five. Data analysis was done based upon Nominal, Ordinal and Interval properties of the data. A five point Likert scale ranging from “Strongly Disagree” to “Strongly Agree” was used to measure Perception, Attitude and cultural values.

3.3.6 Questionnaire design

On the basis of the information needed and inputs from focus group interviews it was decided to use the face to face survey method of obtaining information. The survey method was chosen as in this case there was no way observation could be used since people make insurance decisions and purchase at their own convenient time. Responses to wide variety of questions on psychological and social influences can be solicited easily by using this method. This method also provides a greater flexibility of data collection since the respondents are located in remote areas and the educational levels are not too high either. Many questions and concepts need to be explained before a response can be elicited. A structured questionnaire was prepared keeping in mind the survey method of data collection and the scientific measuring and scaling procedures defined in the previous sections. The questionnaire was divided in to 10 sections with each section representing the broad information category like motivation, perception etc. In all there were about 50 main questions in all these 10 sections. Few of these main questions also had sub questions. Three of these questions on Perception (Q No 2.4), Attitude (Q No. 5) and Cultural Influence (Q No. 7) were made on Likert scale. All other questions were a combination of nominal and ordinal scale. In addition to above, two sections were added to collect

demographic data – one in the beginning as an introductory icebreaker and one in the end to collect classification data.

The questionnaire was administered by the interviewer, that is the interviewer asked the questions and noted down the details. The questions were asked in a direct, non-disguised manner, that is, the true purpose of the research was revealed to the respondents before the questionnaire was administered. Most of the questions were fixed-alternative questions that required them to select the answers from a pre-determined set of responses. The face to face personal method required field workers to interview people in their homes and record their responses. In home personal interviews offer greater control on who is interviewed and which sample is selected. The questionnaire was translated into marathi for the ease of understanding of the field workers and the respondents. The final instrument arrived at has been attached in annexure B. (Marathi Questionnaire attached in annexure C)

Each individual question was coded right at the time of questionnaire design. This helps in the data entry stage as every individual question is pre-coded. There is no further need to code the questions. The questionnaire was put through a pilot test involving 20 respondents (about 5%) of the sample population. All the comments, issues, lack of clarity were carefully noted. These were incorporated in the newer version of the questionnaire, which was finally administered to the sample.
3.3.7 Sampling Process and Sample Size

According to Malhotra (2007), “The objective of most marketing research projects is to obtain information about the characteristics or parameters of a population. A population is the aggregate of all the elements that share some common set of characteristics and that comprise the universe for the purpose of marketing research problem. Information about population parameters may be obtained by taking a census or a sample. A census involves a complete enumeration of the elements of a population. A sample, on the other hand, is a subgroup of the population selected for participation in the study. Sample characteristics, called statistics, are then used to make inferences about the population parameters. The inferences that link sample characteristics and population parameters are estimation procedures and tests of hypothesis”.

The Sampling Design Process
3.3.7 A Define the Target Population
(The collection of elements or objects that possess the information sought by the researcher and about which inferences are made.)

*Element:* – Objects that possess the information sought by the researcher and about which inferences are to be made. In this research, elements were defined as Individual, “Adult Male or Female head of the household responsible for most of the household earnings.”

*Sampling unit:* – The basic unit that contains the elements of the population to be sampled. In this research, the sampling unit was defined as the “Household”

*Extent:* - Rural areas in Pune district and suburban areas of Pune city.

*Time:* - Year 2009

3.3.7 B Determine the sampling frame
A sampling frame is a representation of the elements of the target population. It consists of a list or set of directions for identifying the target population. Villages were identified from census of India (2000) for the purpose of research as per the IRDA definition of ‘rural’. These villages were listed down and based on convenience, households from those villages were used for the survey. List of villages surveyed is attached in annexure D

3.3.7 C Select a Sampling Technique
Considering the vast spread of the target population and difficulties in accessing them, Non-probability convenience (Judgmental) sampling technique was used gather the data. The convenience was also based on the availability of field workers in that village/area.
3.3.7 D Determine the sample size

The Research Advisors, (2006), explain the method of sample determination as per formula suggested by Krejcie & Morgan in their 1970 article “Determining Sample Size for Research Activities” (Educational and Psychological Measurement, #30, pp. 607-610). Accordingly, the Research Advisors devised a table that suggests the optimal sample size – given a population size, a specific margin of error, and a desired confidence interval.

The formula used for these calculations was:

\[
n = \frac{X^2 \times N \times P \times (1-P)}{(ME^2 \times (N-1)) + (X^2 \times P \times (1-P))}
\]

Where:
- \(n\) = sample size
- \(X^2\) = Chi-square for the specified confidence level at 1 degree of freedom
- \(N\) = Population Size
- \(P\) = population proportion (.50 in this table)
- \(ME\) = desired Margin of Error (expressed as a proportion)

This table (attached in Annexure E) was used to arrive at the appropriate sample size for this research.

The Population Size (Number of Persons, Male, Female, in Pune district) was determined from the Census of India 2001. The Population size for the research is 72,32,555.

Using the table (Annexure E) at 95% confidence level considering a 5% margin of error, the appropriate sample size arrived at is 384.

The total respondents planned for this study was 450, keeping in mind a few rejections due to incomplete data in some forms. In all 43 such forms were rejected and the actual sample that was used for statistical analysis was 407. This sample, was in excess of the optimum sample size as suggested by Krejcie & Morgan formula table.
3.3.7 Execute the Sampling Process

Execution of the sampling process requires a detailed specification of how the sampling design decisions with respect to the population, sampling frame, sampling unit, sampling technique and sample size are to be implemented.¹⁷⁵

Sampling Process: - The field workers were instructed to look out for only those profiles who were residents of the village.
Sample size per interviewer: - Each field worker was given a quota for the village under him/her by dividing the total sample by the number of villages taken in to consideration (450 target sample distributed over 56 villages).

3.3.8 Plan of data analysis

The plan for data analysis was divided into four broad segments:
A  Analyzing the marketing influence on buyer behavior
B  Analyzing the Socio-cultural influences on buyer behavior
C  Analyzing the personal influences on buyer behavior and
D  Testing of hypothesis

Figure 3.4
Plan for Data Analysis
3.3.8 A Plan for data analysis: (A) Marketing Influences on buying behavior

Analyzing marketing influences on buyer behavior was further divided into:

3.3.8 A1 Applying statistical tools to determine product preferences
3.3.8 A2 Applying statistical tools to determine price preferences
3.3.8 A3 Applying statistical tools to determine place preferences and
3.3.8 A4 Applying statistical tools to determine promotion preferences

Figure 3.5
Plan for Data Analysis (A) Marketing Influences

A1: Statistical Tools applied to the field data to determine product preferences

(1) Frequency and Percentage was determined from the field data with regards to:
- Consumer’s Preference for Type of Cover (Table 1.1.1)
- Whom do they wish to cover? (Table 1.1.2)
- Amount that Life Insurance should cover (Table 1.1.3)
- Amount that Health Insurance should cover (Table 1.1.4)
- Premium Payment Cycle (Table 1.1.7)

(2) Correlation coefficients of Pearson, CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to:
- Amount that Life Insurance should cover and Annual Income (Table 1.1.6)

### A2: Statistical Tools applied to the field data to determine price preferences

(1) Frequency and Percentage was determined from the field data with regards to:
- Monthly Premium Affordability for Life Insurance (Table 1.2.1)
- Monthly Premium Affordability for Health Insurance (Table 1.2.2)

(2) Correlation coefficients of Pearson, CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to:
- Amount that Life Insurance should cover and Monthly Premium Affordability for Life Insurance (Table 1.2.3)
- Amount that Health Insurance should cover and Monthly Premium Affordability for Health Insurance (Table 1.2.4)
- Monthly Premium Affordability for Life Insurance and Annual Income (Table 1.2.5)
- Monthly Premium Affordability for Health Insurance and Annual Income (Table 1.2.6)

### A3: Statistical Tools applied to the field data to determine place preferences

(1) Frequency and Percentage was determined from the field data with regards to:
- Ever Met an Insurance Agent? (1.3.1)
- First Learn about Insurance (1.3.3)
- First Person/Organization that will be approached when ready to buy (1.3.5)
(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient,
Crammers V and Lambda were determined from the field data with regards to:
- Insured Status and Met an Agent (Table 1.3.2)

(3) Cross tabulation was done for the following variables:
- Insured Status and First learnt about Insurance

A4: Statistical Tools applied to the field data to determine promotion preferences
(1) Frequency and Percentage was determined from the field data with regards to:
- Aware about existence of Private Insurance Companies (Table 1.4.1)
- Recall Names of Private Insurance Companies (Table 1.4.2)
- Ever seen an Insurance Advertisement? (Table 1.4.3)
- Recall Names of Advertiser (Table 1.4.4)
- Ads Influence Buying (Table 1.4.5)
- Newspaper Reading Habit (Table 1.4.7)
- TV Viewing Hours per week (table 1.4.9)
- TV viewing location (1.4.11)
- Radio listening Hours per week (Table1.4.12)
- Best Time to Pay Premium (Table 1.4.14) when ready to buy (1.3.5)

(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient,
Crammers V and Lambda were determined from the field data with regards to:
- Ads Influence Buying Behavior and Insured Status (Table 1.4.6)
- Newspaper Reading Habit and Insured Status (table 1.4.8)
- TV Viewing Habit and Insured Status (Table 1.4.10)
- Radio Listening Habit and Insured Status (Table 1.4.14)
- Premium Payment Cycle and Professional Status (Table 1.4.15)
- Best Time to Pay Premium and Prof Status (Table 1.4.16)

(4) Logistic Regression was carried out to determine the influences of various media habits on buying or not buying of insurance with regards to:
- Insured Status/ Newspaper, Radio, TV, Salesman (Table 1.4.17)
3.3.8 B Plan for data analysis: (B) Socio-Cultural Influences on buying behavior

B Plan for data analysis to determine Socio-cultural influences on buying behavior was further sub divided into:

3.3.8 B1 Applying statistical tools to the field data to determine family influences on buyer behavior

3.3.8 B2 Applying statistical tools to the field data to determine reference group influences on buyer behavior

3.3.8 B3 Applying statistical tools to the field data to determine urban exposure influences on buyer behavior

3.3.8 B4 Applying statistical tools to the field data to determine social class influences on buyer behavior

3.3.8 B5 Applying statistical tools to the field data to determine cultural influences on buyer behavior

Figure 3.6
Plan for Data Analysis (B) Socio-cultural influences
B1 Statistical Tools applied to the field data to determine family influences on buying behavior

(1) Frequency and Percentage was determined from the field data with regards to:
   - Number of Family Members per Household (Table 2.1.1)
   - Influencer in the family (Table 2.1.4)
   - Decision-Maker for new Purchases (Table 2.1.5)
   - Individual Versus Family in choosing Insurance Product (Table 2.1.6)

(2) Logistic Regression was carried out to determine influence of family size on insured status (Table 2.1.3)
B2 Statistical Tools applied to the field data to determine reference group and opinion leader’s influences on buying behavior

(1) Frequency and Percentage was determined from the field data with regards to:
   - Source of Advice on facing illness (Table 2.2.1)
   - Source of Advice to buy Medicines (Table 2.2.2)
   - Free Time Group (Table 2.2.3)
   - Number of People in reference group who have insurance (Table 2.2.4)
   - Reference Group Influence: Desire to buy since others have bought (Table 2.2.5)
   - Reference Group Financial (Table 2.2.7)
   - Desire to buy Insurance on advice of Opinion Leader (Table 2.2.8)

(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to:
   - Insured Status and Insured Status of Ref Group

B3 Statistical Tools applied to the field data to determine influence of urban exposure on buying behavior

(1) Frequency and Percentage was determined from the field data with regards to:
   - Family Member Staying in City (Table 2.3.1)
   - Remittances from City (Table 2.3.4)

(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to:
   - Concept of Insurance and Family Member Staying In City (Table 2.3.2)
   - Insured Status and Family Member staying in city (Table 2.3.3)
   - Insured Status and Remittances from City (Table 2.3.5)
B4 Statistical Tools applied to the field data to determine influence of Social Class on buying behavior

(1) Frequency and Percentage was determined from the field data with regards to the following variables:
   - Professional Status (Table 2.4.1)
   - Education (Table 2.4.2)
   - Annual Income (Table 2.4.3)
   - Landholding (Table 2.4.4)

(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to the following variables:
   - Insured Status and Professional Status (Table 2.4.5)
   - Insured Status and Education (Table 2.4.6)
   - Insured Status and Land holding (Table 2.4.7)
   - Insured status and Annual Income (table 2.4.8)

(3) Logistic Regression was carried out to determine influence of social class variables on insured status (Table 2.4.9)

B5 Statistical Tools applied to the field data to determine influence of Culture on buying behavior

(1) Frequency and Percentage was determined from the field data with regards to the following variables:
   - Cultural Beliefs regarding Insurance (Table 2.5.1)

(2) Correlation Analysis of cultural variables using R square

(3) Correlation between the following variables:
   - Age and Cultural Belief (Table 2.5.3)
   - Education and Cultural Belief (Table 2.5.4)
   - Annual Income and Cultural Belief (Table 2.5.5)
   - Rural/Urbam Location (Table 2.5.6)
3.3.8 C Plan for data analysis: (C) Personal Influences on buying behavior

C Plan for analyzing Personal Influences on buying behavior was further sub-divided into:

3.3.8 C1 Applying statistical tools to the field data to determine motivation variables that influence buyer behavior
3.3.8 C2 Applying statistical tools to the field data to determine perception variables that influence buyer behavior
3.3.8 C3 Applying statistical tools to the field data to determine learning variables that influence buyer behavior
3.3.8 C4 Applying statistical tools to the field data to determine personality variables that influence buyer behavior
3.3.8 C5 Applying statistical tools to the field data to determine attitude variables that influence buyer behavior

Figure 3.6
Plan for Data Analysis (C) Personal Influences
C1 Motivation: Statistical Tools applied to the field data to determine motivation variables that influence to buy insurance

(1) Frequency and Percentage was determined from the field data with regards to the following variables:
   - Own a Savings Account (Table 3.1.1)
   - Savings Amt/year (Table 3.1.3)
   - Current Loan Status (Table 3.1.5)
   - Loan Source (Table 3.1.7)
   - Major Expenditure (Table 3.1.8)
   - Major Expenditure Amount (Table 3.1.9)
   - Spare Income Spending (Table 3.1.10)
   - Buy Health Insurance Irrespective (Table 3.1.11)
   - Believe Insurance is Necessity (Table 3.1.12)
   - Seen anyone suffer (Table 3.1.14)
   - Witnessed claim honored (Table 3.1.17)

(2) Correlation coefficients of Pearson CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to the following variables:
   - Insured Status and Savings A/c (Table 3.1.2)
   - Insured Status and Savings Amt (Table 3.1.4)
   - Insured Status and Current Loan Status (Table 3.1.6)
   - Insured Status and Motivation to Purchase (Table 3.1.13)
   - Insured Status and Motivation to Purchase (Table 3.1.15)
   - Seen anyone suffer and Influenced by them (Table 3.1.16)
   - Insured Status and Motivation (Table 3.1.18)
   - Witnessed claim honored and Influenced by it (Table 3.1.19)
   - Savings Amt/year and Annual Income (Table 3.1.20)
   - Believe Insurance is Necessity and Newspaper habit (Table 3.1.23)
   - Believe Insurance is Necessity and Radio Listening habit (Table 3.1.24)
   - Believe Insurance is Necessity and TV Viewing habit (Table 3.1.25)
C2 Perception: Statistical Tools applied to the field data to determine perception variables that influence to buy insurance

(1) Frequency and Percentage was determined from the field data with regards to the following variables:
- Understand the term Insurance (Table 3.2.1)
- Belief claim will be settled (Table 3.2.2)
- Insurance is Unaffordable (Table 3.2.3)
- Insurance People Untrustworthy (Table 3.2.4)
- Insurance brings bad luck (Table 3.2.5)
- Insurance takes care in bad times (Table 3.2.6)

(2) Analysis of covariance was carried out on all the perception variables regarding insurance to find out if the variables were independent. (Table 3.2.8)

C3 Learning: Statistical Tools applied to the field data to determine learning variables that influence to buy insurance

(1) Correlation coefficients of Pearson CHI Square, Contingency coefficient, Crammers V and Lambda were determined from the field data with regards to the following variables:
- Aware Insurance Ads and Radio Listening (Table 3.3.1)
- Aware Insurance Ads and TV Listening (Table 3.3.2)
- Aware Insurance Ads and Newspaper Habit (Table 3.3.3)

C4 Personality: Statistical Tools applied to the field data to determine Personality variables that influence to buy insurance

- Personality variables and Insured Status (Table 3.4.1)

C5 Attitude: Statistical Tools applied to the field data to determine Attitude variables that influence to buy insurance

(1) Correlation Coefficient was determined from the field data with regards to the following variables:
- Attitude variables (Table 3.5.1)

(2) Correlation between the following variables:
- Take care of bad times (Table 3.5.2)
- Attitude Variables and Annual Income (Table 3.5.3)
- Attitude Variables and Landholding (Table 3.5.4)
- Attitude Variables and Education (Table 3.5.5)
- Attitude Variables and Professional Status (Table 3.5.6)
- Attitude Variables and Family Size (Table 3.5.7)
- Attitude Variables and TV Viewing (Table 3.5.8)
- Attitude Variables and Newspaper (Table 3.5.9)
- Attitude Variables and Age (Table 3.5.10)
- Attitude Variables and Insured Status (Table 3.5.11)

(3) Logistic Regression was carried out to find out the influence of attitude variables on insured status. (Table 3.5.12)

(4) Analysis of covariance was done to find out the direction of attitude variables. (Table 3.5.13)
3.3.8 D Plan for Data Analysis: Testing of hypothesis

Testing of hypothesis was achieved by applying statistical tools to the field data to test all hypotheses from one to six as given below:

Figure 3.8
Plan for Data Analysis (D) Hypothesis Testing
HYP 1 Statistical Tools applied to the field data to test Hypothesis 1

There is awareness and need for insurance but motivation to act is low

H0  Motivation affects buying behavior of Microinsurance
H1  Motivation does not affect buying behavior of Microinsurance

The impact of motivation is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between:

- Insured status and Savings Account
- Insured Status and Motivation to Purchase (Insurance is a necessity)
- Those who have seen others suffer due to no Insurance and those who got influenced by seeing so.
- Insured Status and motivation (Influenced by seeing others suffer because of no Insurance).
- Those who have seen others get their claim and those who got motivated by seeing so.
- Insured Status and motivation (due to seeing others get their claim).

To understand the most important predictors of motivating factors that affects the outcome of Insured status a Logistic Regression Test was carried out with the highly correlated variables from above viz:

- Having a savings account
- Belief that insurance is a necessity
- Seeing others suffer due to lack of Insurance
- Seeing others get back their claims

HYP 2 Statistical Tools applied to the field data to test Hypothesis 2

Information provided by the insurance companies plays a role in purchase decision of Microinsurance.

This hypothesis is divided into two parts based on type of information:

1. Non-personalized media (TV/Radio/Newspaper)
2. Personalized media (agent)
Non-Personalized media
Marketing efforts of the organization in the media helps a great deal in learning about a product or a service. Learning of insurance was measured with respect to people's awareness of insurance advertisements and their media consuming habits. The overall impact of media habit is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between Radio, TV, Newspaper habit and contact with agent with insured status.

Radio listening habit and awareness of insurance advertisements:
Ho-There exists no relationship between Awareness of Insurance Advertisements and Radio listening habit

H1- There exists a relationship between Awareness of Insurance Advertisements and Radio listening habit

TV viewing habit and awareness about insurance advertisements:
Ho-There exists no relationship between Awareness of Insurance Advertisements and TV Viewing habit

H1-There exists a relationship between Awareness of Insurance Advertisements and TV Viewing habit

Newspaper reading habit and awareness about insurance advertisements:
Ho-There exists no relationship between Awareness of Insurance Advertisements and Newspaper Habit

H1- There exists a relationship between Awareness of Insurance Advertisements and Newspaper Habit

Results of the above tests were used to find the impact of non-personal media on buying behavior.
**Personalized Media**

Ho-There exists no relationship between ‘Insured Status’ and ‘Meeting an Insurance Agent’

H1- There exists a relationship between ‘Insured Status’ and ‘Meeting an Insurance Agent’

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**HYP 3 Statistical Tools applied to the field data to test Hypothesis 3**

Target segment has a negative attitude towards insurance

Analysis of covariance was done with regards to all the attitude variables. (P5). The results of this analysis were used to prove or disprove Hypothesis 3.

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**HYP 4 Statistical Tools applied to the field data to test Hypothesis 4**

Personal influences affect buying behavior of Microinsurance

![Figure 3.9 Variables of Personal Influences]

Components of Personal influences are motivation, perception, learning, personality and attitude.

This hypothesis is further divided into the following sub-hypothesis:

Motivation affects buying behavior of Microinsurance (P1)
Perceptions regarding insurance are positive (P2)
Learning from insurance agent has an influence on Purchase behavior (P3)
Personality influences Insurance buying decision (P4)
Attitude towards Insurance is very positive (P5)

To test the hypothesis that personal influences affect buying behavior of microinsurance, it was felt necessary to see the impact of all these components on the buying behavior (insured/not insured).

**Personal influences on buying behavior of Microinsurance / Motivation (P1)**

H0 Motivation affects buying behavior of Microinsurance
H1 Motivation does not affect buying behavior of Microinsurance

The impact of motivation is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between:
- Insured status and Savings Account
- Insured Status and Motivation to Purchase (Insurance is a necessity)
- Those who have seen others suffer due to no Insurance and those who got influenced by seeing so.
- Insured Status and motivation (Influenced by seeing others suffer because of no Insurance).
- Those who have seen others get their claim and those who got motivated by seeing so.
- Insured Status and motivation (due to seeing others get their claim).

To understand the most important predictors of motivating factors that affects the outcome of Insured status a Logistic Regression Test was carried out with the highly correlated variables from above viz:
- Having a savings account
- Belief that insurance is a necessity
- Seeing others suffer due to lack of Insurance
- Seeing others get back their claims
Personal influences on buying behavior of Microinsurance / Perception (P2)

H0 Perception affects buying behavior of Microinsurance
H1 Perception does not affect buying behavior of Microinsurance

Perception was measured using analysis of covariance on 5 point scale with 4 items. (P2)

Personal influences on buying behavior of Microinsurance / Learning (P3)

The marketing efforts of a company play a big role in ensuring ‘Learning’ about a product or a service. Learning of insurance was measured with respect to people’s awareness of insurance advertisements and their media consuming habits. The overall impact of media habit is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between Radio, TV, Newspaper habit and contact with agent with insured status.

H0 Learning affects buying behavior of Microinsurance
H1 Learning does not affect buying behavior of Microinsurance

Radio listening habit and awareness of insurance advertisements:

H0-There exists no relationship between Aware Insurance Ads and Radio listening habit
H1-There exists a relationship between Aware Insurance Ads and Radio listening habit

TV viewing habit and awareness about insurance advertisements:

Ho-There exists no relationship between Aware Insurance Ads and TV Viewing habit
H1-There exists a relationship between Aware Insurance Ads and TV Viewing habit

Newspaper reading habit and awareness about insurance advertisements:

Ho-There exists no relationship between Aware Insurance Ads and Newspaper Habit

H1-There exists a relationship between Aware Insurance Ads and Newspaper Habit

Personal influences on buying behavior of Microinsurance / Personality (P4)
Statistical tools applied to understand the personality of the target customer are cross tabulations, frequency and percentages.

H0 Personality affects buying behavior of Microinsurance
H1 Personality does not affect buying behavior of Microinsurance

Personal influences on buying behavior of Microinsurance / Attitude (P5)

H0 Attitude affects buying behavior of Microinsurance
H1 Attitude does not affect buying behavior of Microinsurance

Analysis of covariance was done with regards to all the attitude variables. (P5).

Results from P1, P2, P3, P4 and P5 were used to draw conclusions about Hypothesis 4.
HYP 5 Statistical Tools applied to the field data to test Hypothesis 5
Reference groups and Opinion leaders have a strong influence in building opinion towards insurance.

H0 There exists no relationship between Insured Status and Insured Status of Ref Group
H1 There exists a relationship between Insured Status and Insured Status of Ref Group

The reference group influence is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and the insured status of the reference group.

HYP 6 Statistical Tools applied to the field data to test Hypothesis 6
Social influences affect buying behavior of Microinsurance
Components of social influences are family influences, Reference groups and opinion leaders, urban exposure, Social class, and culture.

To test the hypothesis that social influences affect buying behavior of microinsurance, it was felt necessary to see the impact of all these components on the buying behavior (insured/not insured).

Social influences on buying behavior of Microinsurance / Family (S1)
Logistic Regression was used to find out if family size is a predictor of insured status or not.

Social influences on buying behavior of Microinsurance / Reference groups (S2 and S3)

H0 There exists no relationship between Insured Status and Insured Status of Ref Group
H1 There exists a relationship between Insured Status and Insured Status of Ref Group

The reference group influence is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find
relationship between insured status of the respondent and the insured status of the reference group.

**Social influences on buying behavior of Microinsurance / Urban Exposure (S3, S4, S5)**

First, an attempt was made to understand the awareness of insurance due to urban influence.

H0 There exists no relationship between Awareness of Insurance and Influence of Urban Exposure due to Family Member Staying in City.

H1 There exists a relationship between Awareness of Insurance and Influence of Urban Exposure due to Family Member Staying in City

Next, task was to find out the relationship between insured status and urban influence.

H0 There exists no relationship between Insured Status and Influence of Urban Exposure due to Family Member Staying in City.

H1 There exists a relationship between Insured Status and Influence of Urban Exposure due to Family Member Staying in City

Another way to find out the influence of urban exposure is to look for relationship between remittances received from city and insured status.

H0 There exists no relationship between Insured Status and Influence of Urban Exposure due to Remittances from City.

H1 There exists a relationship between Insured Status and Influence of Urban Exposure due to Remittances from City

The urban influence is proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and the above urban influencers.

**Social influences on buying behavior of Microinsurance / Social Class - Professional Status (S6)**

H0: There exists no relationship between Professional status and Insured status
H1: There exists a relationship between Professional status and Insured status

The influence of professional status was proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and their professional status.

Social influences on buying behavior of Microinsurance / Social Class - Education (S7)

H0: There exists no relationship between education and Insured status
H1: There exists a relationship between education and Insured status

The influence of professional status was proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and their education.

Social influences on buying behavior of Microinsurance / Social Class - Landholding (S8)

H0: There exists no relationship between landholding and Insured status
H1: There exists a relationship between landholding and Insured status

The influence of professional status was proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and their landholding.

Social influences on buying behavior of Microinsurance / Social Class - Annual Income (S9)

H0: There exists no relationship between annual income and Insured status
H1: There exists a relationship between annual income and Insured status
The influence of professional status was proved by applying Pearson CHI Square, Contingency coefficient, Crammers V, Lambda tests to field data to find relationship between insured status of the respondent and their annual income.

**Social influences on buying behavior of Microinsurance / Culture (S11 and S12)**

Logistic regression was carried out to find out which are the predictors of culture that cause buying of insurance (insured status, yes or no).

Analysis of covariance was done on cultural variables and result found was used to determine if the cultural beliefs are positively or negatively inclined towards insurance.

Results from S1 to S12 were used to determine hypothesis 6
3.4 Data collection

Malhotra (2007) describes Data Collection as, “Data collection involves a field force or staff that operates either in field as in the case of personal interviewing (in-home, mall intercept or computer assisted telephone interviewing), through mail (traditional mail and mail panel surveys with pre-recruited households), or electronically (e-mail or Internet). Proper selection, training, supervision, and evaluation of the field force help minimize data-collection errors”. 176

3.4.1 Secondary Data Collection

Secondary data was collected through various relevant sources like books and journals on management, marketing, consumer behavior, insurance, IRDA, LIC and microinsurance. Reports from credible institutions like UNDP, World Bank, Planning commission etc were referred. A complete list is available as part of bibliography.

3.4.2 Primary Data Collection

Staff was selected from field workers of Janki Devi Bajaj, an NGO based out of Pune. This organization has its operations in rural and urban areas in and around Pune. It is dedicated to work towards the upliftment of the poor and backword in the region. Its field workers are trained to provide support to the people in need. They have also had some past experience in selling insurance to the poor people in the region. The field workers belong to the same village/area where they operate hence they are very closely associated with the local population. They carryout various programs like literacy campaigns, health checkups, financing for self employment etc. The field workers of Jaki Devi Bajaj are the right profile for carrying out the survey in the target segment.

The workers were selected with minimum education criteria of class ten. They had to have good communication skills and ability to travel in and around the locality.

The field workers underwent half a day training program on
- Concept of the survey
- Questionnaire design
- Whom to ask questions
- How to ask the questions
- How to interpret the responses
- How to fill the response sheets
- Writing a serial number/code number on each response sheet.
- How to handle 'No-Response'
- Daily reporting

Mock interviews were carried out with all the field force to give them a feel of the field experience. Evaluation of the field staff was done based on their performance in the mock interviews. Those who were unable to handle were re-trained and some who could not perform to the expected level were dropped from the team.
3.5 *Data Preparation and Analysis*

According to Malhotra (2007), data preparation includes editing, coding, transcription and verification of data. Each questionnaire or observation form is inspected or edited, and if necessary, corrected. Number or letter codes are assigned to represent each response to each question in the questionnaire. The data from the questionnaires are transcribed or keypunched onto magnetic tape or discs or input directly into the computer. The data are analyzed to derive information related to the components of the marketing research problem and, thus, to provide input into the management decision problem. 177

**Data Preparation**

Completed response sheets were collected from the field workers on a daily basis. Each form was coded based upon the initials of the field worker and the serial number of the form being filled by him/her. For example: Nanda Shinde form number 1 would be coded as NS1.

Data preparation involved entering the data on an excel spread sheet.

Microsoft Excel using windows XP version was used for sorting out data, sequential data arrangement, listing of respondents, sorting the list into categories etc.

After entering the data for descriptive data analysis, advanced package was used for professional data analysis i.e. SPSS 13. Data was entered into this software for selection of variables, their correlations and Logistic Regression analysis.

All the questions (code numbers) were entered in individual columns. All the respondents (code numbers) were listed in the rows. Thus each response corresponded to each question in the spread sheet. Every respondent had a unique cell where response to each question could be entered.

Each response sheet was then transcribed onto this data sheet. While entering the data, every response sheet was inspected for completeness, errors or contradictions. Forms, which were incomplete or where data was manipulated by the field workers were declared invalid and not accepted for data entry. In all forty three such forms (from four hundred and fifty) were rejected.

**Data Analysis**

Data analysis carried out for the research is described in detail in chapter ‘Results and Discussions’ and the workings are described in annexure A.

Following were the statistical tools used for data analysis:

- **Frequency and Percentages**

  In a frequency distribution, one variable is considered at a time. The objective is to obtain a count of the number of responses associated with different values of the variable. The relative occurrence, or frequency, of different values of the variable is expressed in percentages.

  The data analyzed as part of this research is presented in the form of frequency and percentage as well as a graphic representation of the same is done.

- **Cross-tabulations and statistics associated with cross-tabulations like Chi-square, Contingency coefficient, Crammer’s V and lambda co-efficient.**

  A frequency distribution describes one variable at a time, a cross-tabulation describes two or more variables simultaneously. A cross-tabulation is the merging of the frequency distribution of two or more variables in a single table. Cross tabulation results in tables that reflect the joint distribution of two or more variables with a limited number of categories or distinct values.  

Different variables that were sought to be studied as part of this research were cross tabulated. This gave an insight on how one variable is related to another. These cross-tabulations can be seen in Appendix A and its visual representation can be seen in chapter on Results and Discussions

Some of the statistics associated with cross-tabulations like Chi-square, Contingency coefficient, Crammer’s V and Lambda co-efficient were extensively used as part data analysis in this study:

Chi-square is used to test the statistical significance of the observed association in a cross tabulation. It assists us in determining whether a systematic association exists between the two variables. The null hypothesis, $H_0$, is that there is no association between the variables.

Karl Pearson’s coefficient of correlation (or simple correlation) is the most widely used method of measuring the degree of relationship between two variables. This coefficient assumes the following:

(i) that there is linear relationship between two variables;

(ii) that the two variables are causally related which means that one of the variables is independent and the other one is dependent; and

(iii) a large number of independent causes are operating in both variables so as to produce a normal distribution.\(^{179}\)

Contingency Coefficient The contingency coefficient (C) can be used to assess the strength of association in a table of any size. The contingency coefficient varies between 0 and 1. The 0 value occurs in case of no association (i.e. the variables are statistically independent), but the maximum value of 1 is never achieved.\(^{180}\)

Cramer’s V is obtained by adjusting $\phi$ for either the number of rows or the number of columns in a table, based on which of the two is smaller. The adjustment is such that V will range from 0 to 1. A large value of V merely

\(^{179}\) Kothari, CR. *Research Methodology Methods and Techniques*, New Age International (P) Limited, New Delhi, 2004, pp139

indicates a high degree of association. It does not indicate how the variables are associated.

**Lambda Coefficient**

Asymmetric Lambda (used in this study) measures the percentage improvement in predicting the value of the dependent variable, given the value of the independent variable. Lambda also varies between 0 and 1. A value of 0 means no improvement in prediction. A value of 1 indicates that the prediction can be made without error.

- **Product Moment Correlation or Pearson correlation coefficient (r).**

  The product moment correlation (r), is the most widely used statistic, summarizing the strength of association between two metric (interval or ratio scaled) variables, say X and Y. It is an index used to determine whether a linear, or straight-line, relationship exists between X and Y. It indicates the degree to which the variation in one variable, X, is related to the variation in another variable, Y. ¹⁸¹

- **Logistic Regression**

  Logistic regression (or logit analysis) is a specialized form of regression that is formulated to predict and explain a binary (two-group) categorical variable rather than a metric dependent measure. The form of logistic regression variate is similar to the variate in multiple regression. The variate represents a single multivariate relationship with regression-like coefficients indicating the relative impact of each predictor variable. ¹⁸²

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3.6 Report Preparation

The entire project should be documented in a written report that addresses the specific research questions identified; describes the approach, the research design, data collection, and data analysis procedures adopted and presents the results and the major findings. The findings should be presented in a comprehensive format so that the management can readily use them in the decision-making process. In addition, an oral presentation should be made to management using tables, figures and graphs to enhance clarity and impact. 183

This report is a documentation of the entire project carried out as part of the research. Following is the chapter scheme followed in this report:

Introduction
This chapter is an introduction to the topic of microinsurance. It gives a background of what the study is all about and how will it benefit all the stakeholders. The introduction chapter also enumerates the scope of the study and its limitations.

Review of Literature
This chapter looks at the published work on the topic by various authors in books, journals, magazines and reports. This chapter has been further divided into subchapters for quick and easy access of the required topic. Review of literature helped get a better understanding of the topic, the work done on it till now, the gaps that need to be studied and arrive at hypothesis for the study.

Research Methodology
This chapter describes in detail the methodology followed in this research. Every aspect of the research carried out, from problem definition to report preparation has been detailed in this chapter.

Results and discussions
This chapter looks at the results of the study carried out as part of this research. Each and every result from the analysis of data is presented in this

chapter with interpretation of the same. The hypotheses are validated in this chapter.

**Summary and Conclusion**
This chapter tells in a nutshell the findings of the study and what are the implications for all the stakeholders. It summarizes the results of the study and presents them for use by different stakeholders. The chapter ends with a conclusion of the entire study. The conclusion consists of recommendations and suggestions for future research. This chapter also includes the model of consumer’s decision making process as arrived at by the researcher specifically for microinsurance. This model will help policy makers, industry leaders and self help groups to implement a successful microinsurance plan in future

**Bibliography**
This chapter gives in detail, all the references used as part of the study. It has been listed alphabetically for easy reference.

**Annexure**
Annexure A gives all the tables and cross tabulation for the data analysis carried out as part of the study.
Annexure B shows the English questionnaire, the tool that was used as part of the field survey.
Annexure C shows the Marathi translation of the questionnaire, the tool that was used as part of the field survey.
Annexure D enumerates the locations where the survey was carried out as part of the study.
Annexure E gives the table which was used to arrive at the sample size.
Annexure F is the paper which was published during the course of this research.