

METHODOLOGY

CHAPTER – III

METHODOLOGY

The methodology adopted for the current study on “**Health Status of Working Women in Informal Sector**” is presented and discussed under following heads.

- 3.1 Selection of the Problem
- 3.2 Selection of the Area
- 3.3 Selection of the Sample
- 3.4 Sources of Data Collection
- 3.5 Period of Study
- 3.6 Tools of Analysis and
- 3.7 Limitation of the Study

3.1 Selection of the Problem

Women consist half of the world population. Women in rural areas are equally working with male members of the society in agriculture, animal husbandry and in other sectors too. It is truly said that they have been regarded as backbone of nations economy in general since they play multidimensional role in household as well as in other related activity.

There are 397 million workers in India out of which 124 million are women forming 31.23 per cent. A maximum of 106 million women employees belongs to rural areas forming 26.7 per cent and the remaining 18 million works in the urban area. Approximately 90 per cent of women workers are engaged in the unorganized sector of these 80 per cent are in the agriculture and allied occupation. In the unorganized sector women constitute only 13.3 per cent of all employees (NSSO, 2007). These workers neither have fixed employer-employee relationship nor do they obtain statutory social security benefits. They do not have the bargaining power to fight discrimination and victimization for protecting their right to a minimal standard of living. The persistent poverty and disease syndromes have pushed the families of the unorganized sector workers into debt to meet their day-to-day contingencies, which certainly includes health care. In India it is estimated that only small fraction (less than 9 per cent) workforce is covered by some form of health insurance. Further, the low level of

health insurance coverage is due to the fact that government policies have been designed to provide free health services through the public sector. With this view the data were collected in Kodumudi block in Erode District where most of the women are engaged in informal sector.

3.2 Selection of the Area

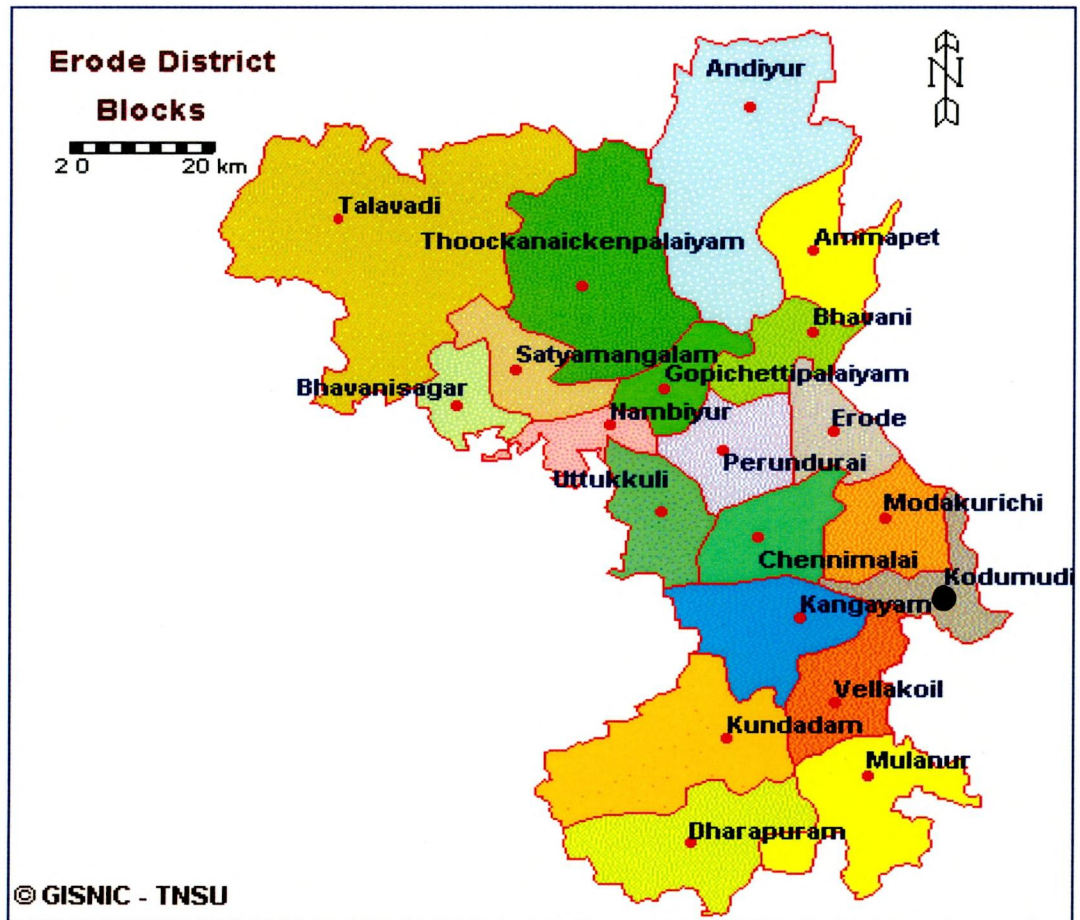
Erode District lies on the extreme north of Tamil Nadu. Erode District situated at between 10 36” and 11 58” North Latitude and between 76 49” and 77 58” East Longitude. This study was carried out in Kodumudi Block in Erode District. According to 2001 census, Erode district had a total population of 2016582 in that 1028983 were in rural areas and remaining 987599 people lived in urban areas. In rural there were 524267 male population and 504716 female populations. Out of total rural population, 617759 were workers. Most of them were engaged in agricultural and allied activities. A large number of workers engaged in the informal sector in both rural and urban areas are illiterate, poor and vulnerable. They live and work in unhygienic conditions and are susceptible to many infectious and chronic diseases. Health is very poor but no proper treatment is taken either due to paucity of funds or negligence on the part of the women and family members.

In Kodumudi Taluk a total of 161760 out-patients were treated and 10393 in-patients were treated. Medical facilities are provided by the District Headquarters Hospital at Erode and taluk hospitals at each taluk headquarters. Public health activities are guided and supervised by the District Health Officers Erode and Joint Director of Medicals at Erode. There are 34 Primary Health Centres under the control of District Health Officer at Erode. These institutions provide succor to the suffering people. Ninety five Beds are available in 12 Primary Health Centres of Erode District there are 12 villages Dispensaries. Around 221 Primary Health Sub-centres functions under the control of District Health Officer at Erode.

3.3 Selection of the Sample

A sample is a collection of observation on a certain variable. The number of observations included in the sample is called the size of the sample. The womenfolk of the Kodumudi block were engaged in agricultural activities, construction work, mill workers, Brick-klin work and SHG. There were 127 households and they constituted the sample size.

Figure 3.1



3.4 Sources of Data Collection

Interview method was used to collect the relevant information for the current study. In the words of Gupta (2009), “An interview schedule refers to a set of settlements on question to be answered by respondents in a face to face situation and filled in by the interviewer himself”. The information regarding the socio economic background of the sample respondents, the health hazards of women in informal sector, dietary intake, food habits, and their nutritional status as anthropometric measurements (BMI), common and chronic illness and health insurance were collected, with the help of the interview schedule.

3.5 Period of Study

The primary data was collected from the beneficiaries during the period December 2011 to February 2012 through a pre tested interview schedule which was administered to the sample to elicit the information about the health status of women in the selected area.

3.6 Tools of Analysis

The collected data were analyzed with reference to the objectives set forth for the study. The analytical techniques employed in this study are explained in this section. We used Statistical Package of Social Science (SPSS) Version 17.0 for the analysis of data.

3.5.1 Chi Square test (χ^2)

3.5.2 Discriminant analysis

3.5.3 Multiple Regression Model

3.6.1 Chi Square test (χ^2)

Chi-square test was calculated to know the relationship between the income and savings, height (in cm) and BMI, weight (in kg) and BMI. The formula used for estimating the chi-square test is

$$\chi^2 = \frac{\sum(O - E)^2}{E}$$

Where, O = Observed Frequency

E = Expected Frequency

To calculate the expected frequency following step as follow

$$E = \frac{RT * CT}{N}$$

Where, RT = The row total for the row containing the cell

CT = The column total for the column containing the cell

N = The total number of observations

To find the degrees of freedom for all the cell frequencies

$$= (c-1)(r-1)$$

Where, c = number of columns

r = number of rows

If the calculated value of the chi-square is less than the table value at a five per cent level of df the sum is said to be no significant difference between the samples. And if calculated value is greater than the table value the sum is said to be significant difference between the samples (Gupta, 2009).

Relationship between Income and Saving

Ho: There was no significant difference between income and saving

Ha: There was a significant difference between income and saving

Relationship between Height and BMI

Ho: There was no significant difference between Height and BMI

Ha: There was a significant difference between Height and BMI

Relationship between Weight and BMI

Ho: There was no significant difference between Weight and BMI

Ha: There was a significant difference between Weight and BMI

3.6.2 Discriminant Analysis

Discriminant analysis involves deriving a variate. The discriminant variate is the linear combination of the two (or more) independent variables that will discriminate best between the objects (persons, firms, etc) in the groups defined a priori. Discrimination is achieved by calculating the variate's weights for each independent variable to maximize the differences between the groups (i.e., between group variance relative to within group variance). The variate for a discriminant analysis, also known as the discriminant function, is derived from an equation much like that seen in multiple regressions. It takes the following form:

$$Z_{jk} = a + W_1X_{1k} + W_2X_{2k} + \dots + W_nX_{nk}$$

Z_{jk} = discriminant Z score of discriminant function j for object k

a = intercept

W_i = discriminant coefficient for independent variable i (i = 1,2,...n)

X_{ik} = independent variable i for object k

To work out the discriminant analysis own houses and rented houses were taken which constitute a total of 127 sample respondents. The total sample was divided into two groups, the first group comprises of the sample respondents belonging to own houses and the second group comprises of the sample respondents of rented houses. The reasons for selecting the two groups were to find the difference between the ways of living of the sample respondents and also the sample size of these two groups was larger (93 and 34 respondents respectively). The investigator has attempted to find out whether two groups can be discriminated and if so, the contribution of the selected factors which discriminate the two groups. The factors included are separate kitchen (X_1), flooring in house (X_2), electricity supply (X_3), source of drinking water (X_4), treatment of water (X_5), separate toilet (X_6) and waste disposal (X_7).

Ho: There was no significant difference between the ownership of household and the factors such as separate kitchen, flooring in house, electricity supply, source of drinking water, treatment of water, separate toilet and waste disposal.

Ha: There was a significant difference between the community and the factors.

3.6.3 Multiple Regression Model

We have applied multiple regression models to find the relationship between the dependent variable was regressed with the explanatory variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu$$

Where, Y = Sum of Insurance;

α, β = Parameter;

X_1 = Income of the Insured;

X_2 = Premium amount;

X_3 = Age of Insured;

X_4 = Occupation;

X_5 = Education;

μ = Error term.

As explained in the empirical models, the dependent variable sum of insurance was regressed with the explanatory variables, viz. Income of the Insurer, Premium amount, Age of the insurer, occupation of the insurer and education of the insurer.

Ho: There was no significant difference between the sum insured and income

Ha: There was a significant difference between the sum insured and income

3.7 Limitation of the study

- The study was done only for the female workers and not for the male workers.
- The study is restricted to rural atmosphere and a single block and only 127 households were selected as sample size.
- The respondents were apprehensive to provide the correct information, on their income.
- Many of the variables are only qualitative, so the measurement of the variable may be impossible.
- Limitation of time and resources, make it generally impossible for empirical research to analyze the complete (or) total health status of women workers in informal sector.