

CHAPTER 3

Research Methodology

This is a descriptive study as the problems and gender discrimination faced by women construction workers and the reasons for not undertaking masonry work are determined with an aim to empower them.

Objectives of the Study

- 3.1.1 To identify the obstacles and problems faced by women construction workers and study the exploitation of women.
- 3.1.2 To determine the factors that influence the awareness of construction workers of gender discrimination among construction workers.
- 3.1.3 To determine the factors that influence the wages of men and women construction workers.
- 3.1.4 To determine the means of empowering women construction workers.
 - 3.1.4.1 To create awareness and motivate women construction workers to undertake masonry work.
 - 3.1.4.2 To determine the barriers for women construction workers for doing masonry work.
 - 3.1.4.3 To determine the factors influencing willingness of women construction workers to be trained as masons.
 - 3.1.4.4 To determine the factors influencing willingness of women construction workers to become masons.
 - 3.1.4.5 To determine the factors influencing the willingness of men construction workers and contractors to train women masons.

3.1.4.6 To determine the factors influencing the willingness of men construction workers and contractors to employ women masons.

3.1.4.7 To determine the methodology to empower women as masons.

Hypothesis

3.2.1 There is no significant difference among the women construction workers who work in rural and urban area, with respect to wages, age, family income, experience and distance from home.

3.2.2 There is no significant difference among the women construction workers who work on daily basis and project type contract, with respect to family income, and days of work.

3.2.3 There is no significant difference among the women construction workers who are from Trichy and immigrants from other places, with respect to family income and distance from home.

3.2.4 There is no significant difference among the women construction workers who are only earning members and those who are not, with respect to wages, age, family income, experience and distance from home.

3.2.5 There is no significant difference among the women construction workers who are illiterate and literate, with respect to age, family income and experience.

3.2.6 There is no significant difference among the women construction workers who belong to different age groups, with respect to residence, being the only earning member in the family, literacy, experience, education, number of dependants, construction type and area.

- 3.2.7 There is no significant difference among the women construction workers who have different days of work with respect to construction type, contractor, contractor type, other work, residence and transport.
- 3.2.8 There is no significant difference among the women construction workers with different family income, with respect to area, construction type, contract type, dependents, their opinion to earn more, education, entry into construction work, literacy, marital status, native and being only earning member of the family.
- 3.2.9 There is no significant difference among the women construction workers with different distance from home, with respect to area, construction type, contractor, hours of work, native, other work, residence and transport.
- 3.2.10 There is a significant difference between men and women construction workers with respect to wages, family income, education, experience and days of work.
- 3.2.11 The independent variables, literacy, contractor, area, entry why and contract type will not significantly explain the variance in the dependent variable, opinion about inequality by women construction workers.
- 3.2.12 The independent variables, contract type, native, community, dependants and family income will not significantly explain the variance in the dependent variable opinion about inequality by men construction workers.
- 3.2.13 The independent variables, experience, contract type, area, gender, community and only earning will not significantly explain the variance in the dependent variable, wages of men and women construction workers.

- 3.2.14 The independent variables, experience, family income, other work, education, only earning, area and residence will not significantly explain the variance in the dependent variable, wages of women construction workers.
- 3.2.15 The independent variables, Job title, dependants, only earning member, area, community and experience, will not significantly explain the variance in the dependent variable, wages of men construction workers.
- 3.2.16 The independent variables, contract type, age, community, only earning member, residence and contractor type will not significantly explain the variance in the dependent variable willingness of women construction workers to be trained.
- 3.2.17 The independent variables, your wages, contractor, union member, community, only earning, family income, residence and contract type will not significantly explain the variance in the dependent variable mason work tried of women construction workers.
- 3.2.18 The independent variables, literacy, contractor, residence, native and age will not significantly explain the variance in the dependent variable willingness of women construction workers to become skilled masons.
- 3.2.19 The independent variables, contract type, union awareness, education, area, wife working and entry why will not significantly explain the variance in the dependent variable willingness of men construction workers to train women as masons

3.2.20 The independent variables, Job title, entry why, Area, native and community will not significantly explain the variance in the dependent variable Opinion of Men Construction Workers that women can become skilled masons.

3.2.21 The independent variables, Job title, Contractor, Area, Community, Age, and Construction Type will not significantly explain the variance in the dependent variable men workers acceptance of skilled women mason.

Coverage

The aim of this study is to show through econometric analysis the presence of gender discrimination among construction workers and to test the hypotheses about which factors are contributing significantly to emergence of women as masons. From this we can generalise the findings obtained from the sample to the total study population. The study is micro in nature and data were collected from Trichy only. Every effort was taken to make sure that all the areas of Trichy were covered. Data regarding the number of construction workers in Trichy had to be forecasted.

Area of Study

The gender discrimination among construction workers and the ways to empower women construction workers in Tiruchirappalli is studied. Tiruchirappalli, commonly known as Trichy is the fourth largest city of the Indian state of Tamil Nadu (after Chennai, Coimbatore and Madurai) and is also one of the A1 metropolitan cities of Tamil Nadu. It is situated in the centre of the state and on the banks of the River Cauvery. Trichy is a corporation and the administrative headquarters of Tiruchirappalli District.

According to the 2001 Census, Trichy or Tiruchirappalli, had a population of 24,18,366. Males constitute 49.97 per cent of the population and females 50.03 per cent.

Trichy has an average literacy rate of 91.45 per cent. Male literacy is 94.17 per cent and female literacy is 88.73 per cent with 9.59 per cent of the population under six years of age. Of the total female population, 16.7 per cent are scheduled caste and of the total male population, 16.4 per cent are scheduled caste. The total number of workers are 10,64,521, they constitute 6,87,814 male workers (64.6 per cent) and 3,76,707 female workers (35.4 per cent). Tamil is the official language.

Period of Study

The study was carried out for a period of four years – from October 2004 to September 2008. The data was collected in the year 2008.

Design of Study - Descriptive Study

Descriptive studies involve describing the characteristics of a particular situation, event or case. This is a descriptive study as the problems faced by women construction workers and the reasons for women not undertaking masonry work are determined. This study aims at describing and quantifying the distribution of certain variables in the study population at one point of time. They cover the following - Socio-economic characteristics of men construction workers, women construction workers and contractors such as their age, education, marital status, number of children and income, the problems faced by women construction workers, the reasons for not involving women in masonry work, women construction worker's willingness to be trained as masons and willingness to become masons and willingness of men construction workers and contractors to train and accept masons are described.

Universe

Total population of construction workers in Trichy, Tamil Nadu.

Sampling Method

Various strategies can be used to collect quantitative data. However in this study, stratified sampling was carried out. A sample of 440 women construction workers in Trichy was interviewed to find out their views on equal wages and motivation levels to be trained as women masons. A sample of 440 men construction workers in Trichy was interviewed to find out the suggestions for removing the gender disparity and women involving in masonry work. A sample of 51 Contractors/ Engineers in Trichy was asked to fill questionnaire to find out their views, ideas and suggestions on women in construction work. The construction workers were selected from *Santhai* (place where they are recruited for work), workplaces and wage disbursement centers.

Sampling Size

Sample size Calculation (Krejcie & Morgan 1970)

$$\text{Sample Size} = \frac{\chi^2 NP(1-P)}{d^2(N-1) + \chi^2 P(1-P)} \quad \dots(1)$$

Where χ^2 - table value of chi-square at d.f. = 1 for desired confidence level
(0.05 = 3.84)

N = Total Population size (42,422)

P = Population Proportion assumed to be 0.5

d = degree of accuracy (expressed as a proportion) = 0.0327

SAMPLE SIZE – 880 construction workers (440 women construction workers and 440 men construction workers) and 51 contractors

Population size of construction workers – 42,422 (Census of India 2001- Projection)

Validity and Reliability

The content validity of the questionnaire was tested by a panel of experts. The validity of responses was tested using SPSS 15. The reliability of the study was tested using Cronbach Coefficient Alpha. The Cronbach Coefficient Alpha is in a scale of 0 to +1. The higher the coefficient the better the measuring instrument. Cronbach's Alpha based on standardized items for the schedule for women constructional workers is 0.668. Cronbach's Alpha for the schedule for men construction workers is 0.624. Cronbach's Alpha based on standardized items for the questionnaire for contractors is 0.648.

Sources of Data Collection

The method of data collection adopted for the study is primary. The Primary data collected, is through interview schedule, which was collected from the men and women construction workers, and questionnaire was used to collect data from contractors in the study area (Appendix A, B & C). As majority of the construction workers are illiterate, two schedules were prepared, one for women construction workers and another for men construction workers, and the construction workers were interviewed in the local language (Tamil) and the responses were noted in the schedule. The tools used for data collection is schedule and questionnaire. This was pre-tested by conducting a pilot study through which primary data was collected from 70 respondents. Analysis was done and changes were made in the schedule to overcome the errors.

In the schedule for women construction workers, question numbers 1-17 deal with socio-demographic factors of the respondents, question numbers 18 – 23 deal with the work remuneration, question numbers 24 - 28 deal with awareness of the respondents on

unions, question numbers 29 -42 deal with workplace conditions and home background, question numbers 43 – 50 deal with bringing about an awareness in the women interviewed that they are also doing masonry job but are still paid lower and not allowed to take up the job of a mason, questions 51-53 deal with the reason for not doing masonry job and 54 – 57 deal with their willingness to be trained and to become masons.

In the schedule for men construction workers, question numbers 1 - 19 deal with socio-demographic factors of the respondents, question numbers 20 – 25 deal with the work remuneration, question numbers 26 - 30 deal with awareness of the respondents on unions, question numbers 31 - 43 deal with workplace conditions, question number 44 deals with bringing about an awareness in the men interviewed that men are able to be promoted and take up masonry job as soon as they learn the skill, questions 45 - 47 deal with the reason for not doing masonry job and 48 - 52 deal with their willingness to train women as masons and to employ masons.

In the questionnaire for contractors, question numbers 1 - 10 deal with socio-demographic factors of the respondents, question numbers 11 - 14 deal with the work remuneration, question numbers 15 - 19 deal with unions, question numbers 20 - 22 deal with behavior of women in workplace, question numbers 23 - 26 deal with workplace conditions, question numbers 27 - 34 deal with workers attitude and number, question numbers 35 – 38 deal with reason for no women mason, 39 - 41 deal with their willingness to train women as masons and to employ masons and finally question 42 deals with the major problem that women construction workers face in the opinion of the contractor.

Statistical Tools Employed

The statistical tools employed are Econometric analysis – t- test, One Way ANOVA, Chi Square, Multiple Regression, Logistic binary regression and Charts.

Scope

This research is undertaken in Trichy, to remove gender discrimination in the construction industry in wages as women are paid less than men for the same job. There is a need to educate, train and motivate the women to take up the job as masons. There is also a need to educate the supervisors/ contractors and other male masons to train and accept women masons and pay them equal salary like male masons and eradicate gender discrimination. This training of women masons can be done as experimental research.

Limitations

A pilot study was conducted and primary data were collected from 75 women construction workers. Analysis was done and certain difficulties were experienced. However these were isolated and methods to overcome these hindrances were incorporated. The final data were collected from 440 men and 440 women construction workers and 51 contractors. The population of construction workers is scattered and coverage was a major problem.

Chapterisation

The framework of the study is divided into six units in which the first unit which consists of the Introduction. The second unit consists of the Review of Literature. The third unit discusses the objectives of the study, sampling design and scope of the study. The fourth unit consists of data analysis and interpretation. The fifth unit consists of findings. The sixth unit consists of suggestions and conclusion.