

## CHAPTER 5

### Findings

The findings on the problems and constraints at home and workplace which affect women's participation and the causes which lead to gender discrimination in the construction sector in India along with the factors which influence the women construction workers to be trained as masons are given below.

#### **Personal, Social and Educational Background of Construction Workers**

Most of the construction workers are between the age 25 and 40 years and only a few work after 45 years of age. As age increases, the number of women working in this sector decreases. Above 40 years of age, women workers are less as they are not able to do the hard work. There are also more widows (14.8%) and divorced (4.5%) among women construction workers, when compared to men (only 0.2%). Nearly one out of three women (35.9%) in construction are the only earning member of their family. This shows that majority of construction workers' families are women headed household with no men or without any other family member to support them. This is consistent with the findings of the study (Habitat, 1997) which gives four case studies - from India, Mexico, Ghana and Jamaica and reports that in India, a relative large number of construction sector women are widows or other female heads of households.

Of the total female population in Tiruchirappalli only 16.7 per cent are Scheduled Caste and of the total male population, 16.4 per cent are scheduled caste. In the sample studied, majority (41.4%) of women construction workers are from the Scheduled Caste. Scheduled Caste men are 28.9 per cent. More than half of women and men construction workers are from Backward Caste and Most Backward Caste but only a few are from

Forward Caste. This is consistent with the report (Madhok, 2005) that majority of construction workers come from Scheduled Castes and Other Backward Castes.

Nearly three out of four women are forced to enter into construction work because of their poverty, misery and unemployment. More than half of women engage in construction work (56.6%) due to poverty when compared to men (10.7%). Though Tiruchirappalli has a female literacy rate of 88.73 per cent, more than half (51.1%) of the women construction workers are illiterate. Majority of the men are literate. Majority (42%) of the women are uneducated whereas only 14.5% of men are uneducated. Educated women do not consider this job as there is no promotion for women and the work is unskilled with fewer wages. Educated men enter this sector because the pay is more for men and they can progress in their career and get promoted with higher wage.

### **Residence and Transportation of Workers**

More than half of the construction workers work in the urban areas but most of them live in rural areas. More men workers (59.8%) are immigrant from other places, when compared to women (35.5%). This is because men who are unemployed and live below poverty line in rural parts move to urban centres like Tiruchirapalli for employment.

More than half of the women (56.6%) prefer to work near their home (within 5 kms), when compared to men. Both men and women construction workers prefer traveling by walk or bus or cycle because it is the cheapest mode of transport for these poorly paid workers. On comparison with women, men travel long distances. Nearly half (47%) of the men and more than half of the women (54.5%) use the bus, and the rest walk or go by cycle to the work spot.

### **Harassment of Married Women Construction Workers at Home**

Majority (37.9%) of their husbands drink (addicted to alcohol) and some even beat their wives. Minority have affair, some of them are continuously absent from home and give no money to their wives. More than half of the married women (54.6%) say that their husbands do not take good care of their family. Usually women from Tamil Nadu hesitate to reveal personal matters with others, and so the actual harassment of women construction workers at home would be much more than what is reported.

### **Facilities for Women Construction Workers**

The study of the facilities that women have at the work place, shows that nearly 10 per cent of women construction workers do not have safe drinking water, more than half of the women work with no toilet facility, three out of four women work without canteen facility and two out of three women have no first aid facility in the work place.

Only a few women leave their children in crèches and majority of the workers leave their children with relatives. This shows that crèche facilities are not available to all the children of workers. Even though these facilities are a necessity by legislation, they are not provided in all work places. This is consistent with the ILO (2001a) report that in most countries, there was no provision of facilities that women need in work sites.

### **Harassment of Women Construction Workers at Workplace**

The study reveals that 45.7 per cent of women and nearly 25 per cent of men say that there is verbal abuse of women at work. Some women and men agree that there is even teasing at work and regular employment is being denied for women at work. More men than women say that women are criticised in the work place.

Minority of men and women agree that women are being beaten and sexually harassed at workplace. More women (22.7%) report that the contractors are arrogant and abusive when compared to men. Women admit that they face harassment but are scared of admitting what type of harassment is prevalent in the work place. The actual harassment may be much more than what is reported in this study. This is consistent with Haripriya's (2000) study in Kerala (India) which has reported that construction workers are exposed to various types of violence like abuse by co-workers and extra marital relations, because they are poor and destitute.

These issues could be resolved only by bringing changes in the worldview level of people. Change in the mindset of women and men is needed which should be done by education. This will release the under-utilised potential in these women which will benefit the family, society and consequently the nation.

### **Discrimination in Wages and Work**

More women (14.1%) get daily wages when compared to men (5.5%), which shows these women are hired on daily basis. More women (11.8%) pay commission out of their wages to masons or contractors than men, and the amount paid as commission by women are more when compared to men. This shows that women have to give more money from the meager wage that they earn to get employment.

The family income of women is very less when compared to men. This shows that women are from a poorer background than men. There is clear gender discrimination in payment of wages to women. No man receives wage less than Rs. 70 per day, whereas 6.4 per cent of women get the wage below Rs. 70 per day. No women receive more than Rs. 150 per day whereas more than half (55.5%) of men get more than Rs. 150 per day.

The wages of women range from Rs. 51 to Rs. 150. The wages of men range from Rs 71 to more than Rs. 250. The average wage for women is only Rs. 92 whereas the average wage for men is Rs. 170. Men on the average get nearly twice the wages of women. The minimum daily wage for unskilled workers in India is Rs. 120 per day (The Gazette of India, 2008). More than 90 per cent of women receive wages below the minimum wage set by the government gazette notification. This is consistent with various empirical studies in India in the last century that have shown that the wages of the women workers in the construction industry, have been significantly below the minimum wage (Anand 1998; Cherian & Prasad 1995; Sinha & Ranade 1975).

Women are doing most of the hard work in construction but they are denied the right to receive the wage of men, and most of the women receive only approximately half of the wage of men. The only reason that men are paid more is that men are in a position to demand more wages whereas women have no say in fixing their wages. Men are assigned skilled work which fetches higher wages whereas women are restricted to unskilled head loading and menial jobs and men are paid more for the same type of work carried out by women. Jha (2002) has reported that there is exploitation of women construction workers in terms of lesser wage rates than their male counterparts also in Nepal.

Women and men get regular employment but the number of days that women work is less than men. Only 58.4 per cent of women get work for 21 to 25 days in a month and more women get work for less than 20 days than men because women are preferred for shorter duration than regular employment. Women choose construction sector mainly because it pays more than domestic work or agricultural work. But in the construction sector they are exploited in wages and employment.

### **Discrimination in Promotional Opportunities**

Women prefer to work in projects under the same contractor when compared to men. They also prefer to be on contract in projects and not on daily basis. Nearly half of the women have less than five years of experience. As the number of years of experience increases, the number of women workers decreases. Many men have experience more than 10 years when compared to women but only a few women have more than 25 years of experience. This shows that the construction workers, especially women find it difficult to continue their hard work after 40 years of age.

Construction is one of the few industries where people can work their way to the top from the bottom level (Fisher, 2007). But women in India are denied promotional opportunities. All the 440 women interviewed in this research study are in the same job title whereas men have many job titles and promotional opportunities. Women have only one job title *chithal*, which means one who is small in the local language. Men have many job titles like centering labourers, *periyal* (one who is big), *manvettial* (those who dig), masons and contractors. Thus men can be promoted whereas women have no scope for promotion.

Women enter as *chithal* and retire as *chithal*. The potential in women is still dormant. They serve the male skilled workers by carrying stones, bricks and mortar to them. This is very heavy work and requires more physical strength than masonry. The differentiation in work between men and women on building sites occurs on the grounds of what is considered appropriate for men and women, not on the basis of capabilities. So women do not outgrow their positions and never really progress in this profession to become masons, supervisors or contractors. This is consistent with the observation by Shah (1996) that the women construction workforce in India is integrated into the building workforce at the bottom end of

the industry, as unskilled workers or head-load carriers. Access to training is denied to them. Similarly Lingam (1998) reported that women remained as head workers whereas men move up to become a helper, mason, supervisor and even a contractor.

### **Major Problem of Women Construction Workers by Contractors**

Poverty, child care and absenteeism are major problems cited by the contractors. But most of them agree that these women are being exploited.

### **Involvement of Women Construction Workers in Union Activities**

This study reveals that only one third of women construction workers are aware of union activities and only one out of ten of these women had become members in the union. The women who have got union benefit are negligible and only a considerable number of women join union to get the welfare support. This is due to the absence of the knowledge of the role of unions for the advancement of the welfare of the working class people.

### **Women Spend their Income mostly on Family**

Men are spendthrift while majority of women spend most of their meager income only for meeting the basic needs of the family. The study shows that ninety eight per cent of women do not drink whereas two thirds of men construction workers waste their income on drinking and smoking which will affect their health and family. Women, when compared to men do not drink or smoke or waste resources. Majority of women manage without cell phone. When compared to men, more women are willing to go without food at the time of unemployment, which is the natural quality of women. More than half of the men construction workers go for a loan whereas less number of women avail loan. More than four out of five women use their wages only to meet their basic needs and spend mostly on family whereas only three out of ten men do so. This is consistent with the findings of

Mencher (1988) in 20 villages in Tamil Nadu and Kerala, India that women who earn tend to hold back less of their own income for themselves. On average, women contributed 98 percent of their earnings toward family maintenance whereas men contributed only 78 percent and kept the rest for personal use. Women spend their income more single-mindedly than men for their family's nutrition, health and education. Thus the family and society are benefited when women get more wages for their skills and enable them to attain their full potential for the improvement of the family which is the basic unit in any society.

### **Sincere Work of Women Construction Workers**

The study shows that 80.4 per cent of women obey the instruction of contractors and 72.5 per cent of women are always sincere in their work. The disobedience rate for women is negligible which shows that women will also excel as masons or supervisors or contractors because of their sincerity and obedience. This is consistent with the findings of Hodgkinson (2006) in New Zealand about the opinion of employers of women working in construction trade, that women raise on site behavioural standards.

### **Socio Demographic Characteristics of Contractors**

Nearly half of contractors are in domestic and commercial construction. More than half of the contractors are dealing with workers on daily and project basis. Age of contractors ranges from 21 years to more than 55 years. Majority of contractors are married. Majority of wives of contractors are not working.

Monthly income ranges from less than 10,000 to more than 50,000 per month. Majority of the contractors are fulltime contractors. Majority are SSLC or HSC pass or diploma holders. Only minority are UG and PG educated. Majority are by own choice and

some because their father is in construction. Majority are experienced by less than 15 years. Majority of contractors have worked as supervisors before becoming contractors.

### **Test Results for Problems of Women Construction Workers**

#### ***Independent Samples T - Test Results for Problems of Women Construction Workers***

It is found that there is a 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. It is found that there is a significant difference among the women construction workers who work in daily basis and project type contract, with respect to family income, and days of work.

It is found that there is a 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. There is a 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.

There is a significant difference among the women construction workers who are illiterate and literate, with respect to age, family income and experience

There is a significant difference among the women construction workers who work under same contractor and those working under different contractors, with respect to days of work and distance from home.

#### ***One Way Analysis Of Variance Test Results for Problems of Women Construction Workers***

It is found that there is a 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.

It is found that there is a 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.

It is found that there is a 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.

It is found that there is a significant difference among the women construction workers with different family income, with respect to area, construction type, contract type, dependants, their opinion to earn more, education, entry into construction work, literacy, marital status, native and being only earning member of the family.

### **Gender Comparison of Women Construction Workers**

#### ***Independent Samples T Test Results for Gender and Wages Education, Family Income, Experience and Days of work***

There is a significant difference among the men and women construction workers, with respect to wages, family income, education, experience and days of work.

#### ***Chi-Square Analysis Results for Gender Comparison among Construction Workers***

There is a significant relationship between gender and contract type.

Gender has a significant relationship with the marital status. There are more widows and also more divorced among women construction workers when compared to men construction workers. These women are pushed into construction out of necessity.

Unmarried women who work in construction is less than unmarried men construction workers.

Gender has a significant relationship with the age. Gender has a significant relationship with the native. Immigrants among men are more when compared to women.

Gender has a significant relationship with the residence. Most of the men construction workers are from the rural area. There are more women from urban area when compared to men.

Gender has a significant relationship with the community. Women construction workers are more from the scheduled tribe and scheduled caste community. This shows that more women from the deprived section come to this job as they have no other way of earning. Overall those from forward caste are less. Among men nearly half are from Backward class.

There is a significant relationship between gender and literacy. Among the men construction workers most of them are literate whereas among women more than half are illiterate. This shows that they are forced to come to do this unskilled work as they get no other job.

Gender has a significant relationship with the only earning member of the family. Some of women construction workers families are headed by women with no men or any other family member to support them. These women come to this job as it pays more compared to domestic work even though the working conditions are bad.

Gender has a significant relationship with the dependants. Gender has a significant relationship with reason for entry into construction work. Majority of women construction workers are forced by poverty to enter into construction. Among the men construction

workers more are in construction by own choice or because many family members are in this job.

Gender has a significant relationship with the contractor type. Most of the women construction workers remain with the same contractor. Gender has a significant relationship with the experience. Those who have more than 15 years of experience are less. Majority of women have less than five years of experience. As experience increases, the number of women are less. The reason is women find it difficult to perform the hard manual work and they get tired and sick once they reach their 40's.

Gender has a significant relationship with the awareness of unions. Women Construction workers are more aware about unions than men. Gender has a significant relationship with contractor attitude. More women construction workers agree that contractors are arrogant at women at work while few men feel that they are abusive.

Gender has a significant relationship with distance from home. Women prefer to work at places near their home whereas men travel long distances.

### **Awareness of Construction Workers on Gender Discrimination (Inequality)**

#### ***Binary Logistic Regression for Opinion about Inequality of Women Construction Workers among women***

It is found that there is a significant relationship between opinion of women construction workers about inequality in women and literacy, contractor, area, entry why, and contract type of women construction workers. More women who are working under different contractors agree with the opinion that women are not encouraged to become masons because of inequality than those who are working under the same contractor. Rural women

are more aware than urban women that women are not encouraged to become masons because of inequality.

More literate women agree with the opinion that women are not encouraged to become masons because of inequality. Women getting daily wages are more aware than those working on projects in the opinion that women are not encouraged to become masons because of inequality. The odds ratio is negative for those on projects. Widows/no other employment women are more aware than those who enter by own choice into construction field.

***Chi-Square Results for factors affecting Opinion of Men Construction Workers of Inequality among Construction Workers***

Only earning member influences the opinion of men construction workers of inequality among construction workers. Nearly half of men who are only earning members in their family are of the opinion that women are not encouraged to become masons because of inequality while only minority of those who are not only earning members think so.

Experience influences the opinion of men construction workers of inequality among construction workers. Majority of men who have experience of 21 to 25 years are of the opinion that women are not encouraged to become masons because of inequality. As experience increases, the opinion that women are not encouraged to become masons because of inequality also increases.

Job Title influences opinion of men construction workers of inequality among construction workers. Nearly half of masons, more than half of *periyal* are of the opinion that women are not encouraged to become masons because of inequality.

Literacy influences the opinion of men construction workers of inequality among construction workers. Nearly half of literate men agree that women do not become masons because of inequality.

***Binary Logistic Regression Analysis for opinion about inequality by men construction workers***

There is a significant relationship between opinion about inequality in construction workers and contract type, native, community, number of dependents and family income.

As family income increases, the opinion that women are not encouraged to become masons because of inequality also increases. More immigrants when compared to natives of Trichy agree with the opinion that women are not encouraged to become masons because of inequality. As community level changes from Scheduled caste to Forward caste, the opinion that women are not encouraged to become masons because of inequality also increases. The odds ratio also increases. Men getting daily wages are more aware than those working on projects that women are not encouraged to become masons because of inequality. As the number of dependents increases, the awareness of gender discrimination decreases.

***Opinion on Inequality of Women Construction Workers by Contractors***

Majority of contractors do not accept that gender discrimination is present among construction workers. Only 13.7% of the contractors accept the fact.

**Factors Affecting Wages of Construction Workers**

***One Way Analysis of Variance Test Results for Wages of Women Construction Workers***

There is a significant difference among the women construction workers who earn different wages, with respect to area, desire to earn more, residence and union awareness.

***Independent Samples T Test Results for Wage Discrimination among Construction Workers***

There is a significant difference between the men and women construction workers, with respect to wages.

***Multiple Regression Analysis Results for Wages of Construction Workers***

It is found that there is a significant difference among the construction workers who earn different wages, with respect to experience, contract type, area, gender, community and only earning. Gender has the greatest influence on wages. Men receive more wages while women receive less. There is a marked discrimination in wages of women. Scheduled caste workers receive less wages when compared to others. Those who are only earning member get higher wages than those who are not. As experience increases, the wages also increase. Urban workers receive more wages when compared to rural workers. Those who are under project type get more wages than daily wages.

***Multiple Regression Analysis Results for Wages of Men Construction Workers***

It is found that there is a significant relationship between wages of men and job title, dependants, area, community and experience. Masons get more wages than others. As experience increases, the wages also increase. Urban area construction workers are paid more than rural area. Scheduled caste workers receive less wages when compared to others. As number of dependants increases, there is an increase in wages. Those who are only earning member get higher wages than those who are not.

***Multiple Regression Analysis Results for Wages of Women Construction Workers***

The independent variables family income, only earning, and area significantly explains the variance in the dependant variable, wages of women construction workers.

As the wages increase, there is an increase in the family income. Urban area construction workers are paid more than rural area. Those who are only earning member get higher wages than those who are not. These variables have a positive influence. Education and experience have no significance for wages of women construction workers. Thus for women the wages are not dependant on education or experience or job title. While men have various pay for different Job Title, women have only one job title – *chitaal* or unskilled worker.

Gender has the greatest influence on the wages of the construction workers. Women are paid less than men workers for the same category of work. Thus there is discrimination in wages. This gender discrimination in wages and promotion is also observed among construction workers in Karnataka (India) by Suchitra and Rajasekar (2006).

### **Barriers that Prevent Women from Becoming Masons**

The men construction workers and the contractors are of the opinion that the important barrier for women to become masons in construction sector is that the job is difficult, women are not physically fit, there is no training and women are scared of heights. At present, women climb up the scaffolding and work in multi-floor buildings with ease as *chithals*. So women being scared of heights shows the bias that men have against women. The prejudices like women are scared of heights and physically not fit have to be changed. Women have the same potential and the courage like men to do masonry work. The skilled work of a mason is less tiresome and easy, once it is learned, when compared to carrying loads of bricks and sand on the head again and again, digging, breaking stones and other work of a *chithal*.

More women agree that there are no women mason because they consider it a difficult task, men will not accept it, they are not trained, scared of heights and they are not

given opportunities. These barriers are expressed by the women because of the worldview that only men are fit for the job. This is consistent with the findings of Hodgkinson (2006) about the barriers to women entering construction trade in New Zealand. According to Hodgkinson's study, 46% of employers (contractors) say women lack physical strength, majority of women workers say it is a male dominated industry and men workers say women are not fit physically for the industry.

Nearly half (40%) of men workers in the present study feel women do not become masons because there is no training for them. Gatta (2002) reports the same about the construction trades in New Jersey that women are often excluded from informal training venues. Women are not able to break through many of the male dominated informal training and mentoring activities that occur on site.

#### ***Reasons for Encouraging Women to do Masonry job***

Nearly half of women and more than half of men and contractors say that it will give more remuneration to women. The interesting discovery in this study is that many women and men say that women can do masonry work since women perform well in other professions.

#### **Willingness of Women Construction Workers to be Trained as Masons**

#### ***Chi-Square Test Results for Willingness of Women Construction Workers to be Trained as Masons***

Area of work has a significant relationship with willingness to be trained as masons. Majority of women who work in rural area are willing to be trained as masons when compared to those in urban area of work. Construction type has a significant relationship with willingness to be trained as masons. More than half of women in government

construction are willing to be trained as masons. Marital status has a significant relationship with willingness to be trained as masons. Majority of unmarried women are willing to be trained as masons. Native has a significant relationship with willingness to be trained as masons. More than half of immigrants are willing to be trained as masons. Immigrants come to the city for work and they are more willing than the natives of Trichy to be trained.

Literacy has a significant relationship with willingness to be trained as mason. More than half of the literate women construction workers are willing to be trained. Only 39.6 per cent of illiterate women construction workers are willing to be trained.

Education has a significant relationship with willingness to be trained as masons. As the educational level increases, those who are willing to be trained also increases.

Married/unmarried has a significant relationship with willingness to be trained as masons.

More unmarried women are willing to be trained as masons as their responsibility at home is less. Men worker's acceptance has a significant relationship with willingness to be trained as masons. Majority of those who are sure of men mason's acceptance are willing to be trained as masons. Opinion of women construction workers of Inequality among Construction Workers has a significant relationship with willingness to be trained as masons. Majority of those who say that because of inequality women are not becoming masons, agree to be trained as masons.

### **Binary Logistic Analysis Results for Willingness of Women Construction Workers to be Trained as masons**

There is a significant relationship between willingness of women construction workers to be trained and contract type, age, residence, community, only earning member contractor, and literacy.

Women working on projects are more willing than those getting daily wages to be trained. The likelihood of willingness to be trained of those working on projects is 115 per cent more than those on daily wages. As age increases, there is a decrease in willingness to be trained as masons. As the residence levels changes from rural, semi-urban to urban, there is a decrease in willingness to be trained as masons. More rural women are willing to be trained. As the community levels changes from Scheduled Caste to Backward Caste, there is an increase in willingness to be trained as masons. Those who are the only earning member of the family are more willing to be trained than those who are not. More women who are working under different contractors are more willing to be trained than those who are working under the same contractor. More literate women are willing to be trained when compared to illiterate women.

### **Willingness of Women Construction Workers to become Masons**

#### ***Chi-Square test Results for factors influencing Mason Work Tried by Women***

##### ***Construction Workers***

Construction Type has a significant relationship with whether Mason Work is Tried. More women who work in domestic construction have tried masonry work.

Literacy has a significant relationship with whether Mason Work is Tried.

Union Membership has a significant relationship with whether Mason Work is Tried.

#### ***Binary Logistic Regression Analysis Results for Mason Work Tried (Women Construction Workers)***

There is a relationship between the independent variables, wage, area, contract type, residence, community, only earning member, family income, type of contractor and union membership and the dependent variable Mason Work Tried.

More women working in rural area have tried mason work when compared to those working in urban area. More women working on daily basis have tried mason work when compared to those getting daily wages. As the residence levels changes from rural, semi-urban to urban, there is a decrease in women who have tried mason work. More rural women have tried mason work. More women who are the only earning member of the family have tried mason work than those who are not. More women who are working under different contractors have tried mason work than those who are working under the same contractor. More women who are union members have tried mason work when compared to those who are not. As income increases, women who has tried mason work also increases. As wage increases, women who have tried mason work also increases.

***Chi-square test Results for factors influencing Willingness to Become Skilled Mason by Women Construction Workers***

Area has a significant relationship with willingness to become skilled mason. Women working in rural area are more willing to become skilled mason than women working in urban area.

Contract Type has a significant relationship with Willingness to become Skilled Mason. More women who work on daily basis are willing to become skilled masons when compared to those who work in project. Education has a significant relationship with Willingness to become Skilled Mason. As education increases, willingness to become skilled mason increases.

Men mason acceptance has a significant relationship with Willingness to become Skilled Mason. Majority of those who are sure of men mason's acceptance of women masons are willing to become skilled masons.

Seeing women do mason's work has a significant relationship with Willingness to become Skilled Mason. Majority of women who have seen women perform masonry work are willing to become skilled women mason.

***Binary Logistic Regression Results for Willingness of Women Construction Workers to become skilled masons***

There is a relationship between willingness of women construction workers to become skilled masons and native, literacy, contractor, union member and age.

More women who are immigrants are willing to become skilled masons when compared to natives of Trichy. More women who are working under different contractors are willing to become skilled masons than those who are working under the same contractor. More women construction workers who are literate are willing to become skilled masons when compared to the illiterate. As age increases, there is a decrease in willingness to become masons. More women who are union members are willing to become skilled masons when compared to those who are not.

***Willingness of Men Construction Workers and Contractors to Train Women as Masons***  
***Contractors opinion about Women workers***

Majority of the contractors are willing to train the women construction workers. Majority of contractors agree that women construction workers are obedient at work in general. A few of the contractors agree that women construction workers are always trainable at work in general. Majority disagree. Majority of contractors agree that women construction workers are sincere at work in general.

More than half of contractors agree that women construction workers are regular to work. More than half of contractors provide training sometimes and some of contractors provide training always.

***Chi Square Test Results for Willingness of Men Construction Workers to Train Women***

Residence has a significant relationship with willingness to train women workers as masons. More men from urban area are willing to train women masons when compared to rural and semi-urban men construction workers.

Community has a significant relationship with willingness to train women workers as masons. As the caste changes from Scheduled caste to Forward caste, the number of men who are willing to train women as masons increases.

Experience has a significant relationship with willingness to train women workers as masons. Majority of men with more than 25 years of experience are willing to train women as masons. As experience increases, the willingness to train women as masons also increases. Union membership has a significant relationship with willingness to train women workers as masons. Majority of men who are members of unions are willing to train women as masons when compared to non members.

***Impact of Experience on Willingness of Men Masons to Train Women Construction***

***Workers as Masons***

It is found that 57.8 per cent of men masons are willing to train women as masons. As experience increases, the willingness to train women as masons also increases. More than half of the men masons have agreed to train women as masons. So the best way to empower women construction workers is to train women construction workers who are willing, and offer them placement opportunities in the construction sector.

***Binary Logistic Regression Analysis for Willingness of Men Construction Workers to Train Women Construction Workers as masons***

There is a significant relationship between Willingness of Men Construction Workers to Train Women Construction Workers as masons and area of work, contract type, wife working, entry why, job title and union awareness.

More men working in urban area are willing to train women as masons when compared to men working in rural area. More men whose wife are not working and unmarried men are willing to train women masons when compared to those whose wife are working in other job or construction.

More men who are aware of unions are willing to train women as masons when compared to those who are not aware. Men working on daily wages are more willing than those working on projects to train women. Those who came to construction because of no other employment and those forced by poverty are willing to train women as masons. Comparatively those whose family members are in this job, by own choice are less inclined to train women masons. Men who are aware of unions are willing to train women workers when compared to those who are not aware.

**Willingness of Men Construction Workers and Contractors**

**to Employ Women as Masons**

***Factors Influencing Opinion of Men Construction Workers that Women can work as Masons***

Majority of the contractors are of the opinion that women can become skilled masons. It is found that majority of contractors who have less education are of the opinion that women can become masons whereas others who are well educated are not so sure. Age has a

significant relationship with Opinion of Men Construction Workers that women can become skilled masons. Majority of men who are above 45 years of age agree that women can become skilled masons whereas only half of those below 18 years think so.

Residence has a significant relationship with Opinion of Men Construction Workers that women can become skilled masons. Majority of men from urban area are of the opinion that women can become skilled masons. Other work has a significant relationship with opinion that women can become skilled masons. More than half of those who work only in construction are of the opinion that women can become skilled masons. Family income has a significant relationship with Opinion of Men Construction Workers that women can become skilled masons. It is found that as family income increases, the number of men who are of opinion that women can become skilled masons, also increases.

***Binary Logistic Regression Analysis for on opinion of men Construction workers that women can become skilled masons***

There is a significant relationship between Opinion of Men Construction Workers that women can become Skilled Masons and Area, Community, contractor, union awareness and job title.

More men working in urban area are of the opinion that women can become masons when compared to men working in rural area. More masons are of the opinion that women can become skilled masons when compared to those who are not. As the community levels changes from Scheduled caste to Forward caste, there is an increase in the opinion that women can also become masons.

More men who are working under different contractors are of the opinion that women can also become masons than those who are working under the same contractor. Those men

who are aware of unions are of the opinion that women can become skilled masons when compared to those who are not aware.

***Factors influencing employability of Women Mason by Men Construction Workers and Contractors***

Majority of contractors say that they will accept women masons and give them work. Native has a significant relationship with Women Mason Acceptance. Majority of immigrants from other places for work are willing to accept women masons. More men immigrants are willing to accept women masons when compared to men from Trichy. Family Income has a significant relationship with Women Mason Acceptance. Majority of men with family income of above Rs. 5000 are willing to accept women masons.

Experience has a significant relationship with Women Mason Acceptance. As experience increases, the men who are willing to accept women masons also increases. Union Awareness has a significant relationship with Women Mason Acceptance. Majority of men who are aware of unions are willing to accept women masons. Union Membership has a significant relationship with Women Mason Acceptance. Majority of men who are union members are willing to accept women masons.

***Binary Logistic Regression Analysis for Men construction workers Acceptance of Skilled Women Mason***

There is a relationship between men workers acceptance of skilled women mason and the independent variables like Area, construction type, age, native and job title. More men working in urban area (odds ratio is 2.536) are willing to accept and employ women skilled masons when compared to men working in rural area. More men working in domestic construction type are willing to accept and employ women skilled masons when compared to

men in commercial and other establishment. More men in government construction type (odds ratio is 1.348) are willing to accept and employ women skilled masons when compared to those in domestic constructions.

As age increases willingness to accept and employ women skilled masons also increases. More masons are willing to accept and employ women skilled masons when compared to centering labourers and others. Whereas more *periyal*, *manvettial* and *chithal* are willing to accept and employ women skilled mason when compared to masons. More men who are immigrants are willing to to accept and employ women skilled mason when compared to the natives.

### ***Binary Logistic Regression Analysis for Men Masons acceptance of women masons***

There is a relationship between acceptance and employment of skilled women mason by masons and Area, wage, age, wife working and entry why.

More masons working in urban area are willing to accept women as masons when compared to men working in rural area. More men whose wife are not working and working in other job are willing to accept women masons when compared to those whose wife are working in construction. Those masons who came to construction because of no other employment and those forced by poverty are willing to train women as masons.

Comparatively those whose family members are in this job or by own choice are less inclined to accept women masons. As wage increases willingness to accept women masons is more.

### **Methodology to Empower Women Construction Workers**

#### ***Competency of Women to Carry out Masonry Work***

The study shows that women workers are already performing most of the work of masons in the work sites now. This study reveals that majority of women accept that

women's work is just carrying load, breaking stones and mixing the mortar. Very few women say that women's work is digging, laying bricks, plastering, concreting or leveling because these skilled tasks are not assigned to women in construction sector in India but are carried out by men masons. But some women have reported that they are doing the tasks of masons like laying bricks, leveling, concreting and plastering. Some women (12.3%) have reported that they have done masonry work even when they are not paid for the work or given the job title of mason. These women do masonry tasks and work, even though they are not paid on par with men or allowed to become masons or trained to do this work. Steps should be taken to educate women that they are competent to do the work of masons because some women are already doing the mason's job.

#### ***Capability of Women to Carry out Masonry Work***

The study shows that some women have performed the tasks of a mason like concreting, leveling and plastering. So the study shows that women have the ability and capacity to do the masonry work. Hodgkinson (2006) also reports that in New Zealand, when the employers of women were asked about the quality of work done by skilled women workers, they did not find any fault and said women were very meticulous in their work.

#### ***Methodology of Empowerment of Men to become Masons***

The study shows that 95.2 per cent of men have been trained informally. Most of the men are not trained for masonry work by institutional training or by attending special seminars organised by any agency. Majority (88.2%) of contractors say that the training given to men workers in construction sector to become masons is informal training. This practice is prevalent in most of the places around the world. Informal training is common in the construction sectors of many developing countries, including the Philippines, Indonesia,

Egypt, Kenya, India, Mexico and Brazil (ILO, 2001b). In China, 90% of the craftsmen are trained informally (Sha & Jiang, 2003). A study on construction workers in Srilanka (Jayawardane & Gunawardena, 1998) reports that 86 per cent of the skilled work force have received informal training only. Most of the men in construction receive practical training only on the job. Studies in the UK have shown that in construction industry, workers who have learnt skills by on the job training qualify informally as semi-skilled or skilled (Byrne, Clark & Van der Meer 2005). Work experience is important to gaining employment in the construction sector in UK. Gaining work experience is a problem for women, who often face more difficulties due to discriminatory practices in placements (Byrne et al, 2005).

In India, the men construction workers join construction sector as unskilled workers. After a few months, they are asked to do the semi skilled work of *periyal* or *manvettial* and paid more wages. While they work as *periyal* or *manvettial*, they start assisting the masons in certain tasks and receive spot practical training. But this type of informal training is not extended for women construction workers in construction sector because of the worldview of people, gender discrimination and the absence of motivation for women to learn informally.

So it is proposed in this study that this informal training could be offered to women by changing the mindset of men and motivating women to work as assistants to masons.

#### ***Time Taken for Training Men Workers to become Masons***

The study shows that most of the men get informal training for about a year. For some men it takes more than one year and some others it is six months. The duration varies according to the learning aptitude of the person. This shows that able men are trained in less than one year. Wachira, Root and Bowen (2008) report that in Kenya, two years and one year were the most frequent training periods for skilled workers in construction suggesting that

the most suitable training period is within this range. So the optimum duration of informal training that could be offered to women would be one to two years.

#### ***Method of Training Women Construction Workers as Masons***

It is found that nearly all of the women construction workers are willing to be trained on the job. Only about 5% ask for off days or institutional training. This will ensure that the women get wages during the time they are trained and placement is also possible by their employers. Women workers if trained institutionally or on off days must be provided with stipend. Most of the workers are in this job out of necessity and need to be paid stipend for sustenance. Majority of men were trained on the job and this is the informal way of training men construction workers.

#### ***Role of Trade Unions in Implementing the Informal Training to Women Construction Workers***

Trade unions have played a positive role in the past in many countries to improve diversity in construction, in particular through challenging discrimination in the workplace against women (Craw et al., 2007). So the union awareness and membership among construction workers was studied to find out how unions could support in organising informal training in the construction sector in India. This study reveals that only one third of women construction workers are aware of union activities and only one out of ten of these women had become members in the union. The women who have got union benefit are negligible and only a considerable number of women join union to get the welfare support. This is due to the absence of the knowledge of the role of unions for the advancement of the welfare of the working class people. More women who are union members have tried mason

work when compared to those who are not. More women who are union members are willing to become skilled masons when compared to those who are not.

This study has revealed that women could be empowered by informal training. The unions in construction sector must be strengthened and motivated to take steps to offer this informal training to women. All women should be encouraged to become members of unions. These women groups must be educated and motivated to demand informal training through the union. Unions can also conduct basic literacy and masonry skill training programmes for women and motivate men mason members of unions to offer informal training to women and give placement opportunities.

#### ***Motivating Men Construction Workers to Train their Wives and Women Relatives***

The study has shown that the wives of 14.1 percent of men workers are in construction sector. In India, the wives of construction workers work along with their husbands in the same site and workers move from rural areas to work in cities as a team of relatives. Most of them are from the same family. So male construction workers can be motivated to give informal training to their wives and relatives and these women can work along with them in the project.

The findings of the study show that many women construction workers are illiterate, widows, only earning members of the family, from depressed class and from low income families when compared to men construction workers. Women construction workers face harassment at home and work place, and they are discriminated in wages and promotion. The findings of the study also show that the important reasons why women are not promoted as masons is the gender bias which men and women have, and women construction workers are not given an opportunity to be trained informally like men in the construction sector. It is

found that women are willing to become masons, and men, especially the contractors, are willing to accept them, train them and give them placements in the construction sector. The findings also show that women construction workers are competent enough to be trained to become masons and they could be first formally trained and then informally trained to become mason in the construction sector in India.