

CHAPTER 2

Review of Literature

There are many studies in India and abroad on construction workers and about gender division of labour in the construction sector. This review of literature aims to show the need for the study of gender discrimination of construction workers and the ways to empower women construction workers in the present Indian context.

Literature on Gender Discrimination among Construction Workers and Skill

Acquisition in Foreign Countries

An analysis of human resource development issues in the Sri Lankan construction industry (Jayawardane & Gunawardena, 1998) shows that the work force in Sri Lanka consists of 51 per cent unskilled workers and 49 per cent skilled workers. The highest percentage of skilled workers is aged 30-39 years. Approximately 86 per cent of the skilled work force have received informal training only. Low income, lack of job security and difficulty in finding regular work are the causes for dissatisfaction of more than 20 per cent of the work force. The study compares the HRD practices in Sri Lanka with the USA and the UK and reveals that Sri Lanka needs to adopt a more formal training system and proper grading of the skilled work force.

According to Bureau of Labour Statistics (2000), U.S. Department of Labour, women's rate of participation in the labour force has been increasing and is expected to continue to increase. The numbers of women employed in construction have grown by 76 per cent from 1980 to 2000. This change reflects a boom in the industry. In 2000, 37,000 women were construction labourers and helpers. In addition, 1,41,000 women were employed in

production crafts and occupations that operate equipment, including painters, carpenters, electricians, operating engineers, plumbers, repair workers, carpet layers and welders.

Currently there are over 11 million women employed in the UK, accounting for 49.5 per cent of the workforce (Fielden, Davidson, Gale & Davey, 2000). There is an increase in the number of women employed in the construction industry in UK over the past decade but they still constitute only 13 per cent of the industry's workforce. Construction continues to be the most male dominated of all the major industrial groups. Fielden, et al., (2000) identify the barriers preventing women's entry into the industry, the subsequent barriers faced by those working within the construction industry, and initiatives committed to promoting equality for women and men in construction. The study reveals that the barriers arise from a number of sources including: the construction industry's image; career knowledge among children and adults; selection criteria and male dominated courses; recruitment practices and procedures; sexist attitudes; male dominated culture; and the work environment.

In another study in the UK, Greed (2000) addresses the question of whether an increased number of women entering the construction professions is resulting in the build-up of critical mass, with associated changes in the culture of the construction industry, and thus in its organisation and conditions of employment. The study identifies the change agents such as governmental regulatory bodies, and bottom-up agents such as minority groups and community organizations which are responsible for the changes in the construction industry. One important professional body is the women-led Equal Opportunities in Construction Taskforce, which has produced and is promoting guidelines for equal opportunities in the industry. The study reveals the trends which work against the build-up of critical mass and

culture change. They are high job turnover among women in construction, occupational isolation, and limited promotion prospects.

The condition of construction industry in China is studied by You- Jie and Fox (2001), in terms of its image, its employment characteristics and skill requirements for the 21st Century. The study reveals that the rural skills are not keeping pace with the demands, especially from the rapidly modernising urban areas. Construction Labour Bases have been established in China, and these are major sources of the workforce in the urban places. These centres where skills are developed have played an important part in meeting the demand from employment opportunities created in the sustained building boom. The image of the construction industry in China is strong, with society recognition given to useful skills and the steady employment opportunities that these skills provide. The study reveals that the skills of rural workers need to be enhanced through better education, better skills training, better organisation and better discipline.

Remodeling the training delivery to workers in South Africa is researched by English and Mbuthia (2002). The study reveals that the post-apartheid government realised that it had to raise workers' skill levels and increase their 'employability' through education and training to eradicate unemployment. A survey of house building firms in Western Cape found that the majority are trained on site because it was not practicable to use the facilities offered by Building Industry Federation of South Africa (BIFSA). The study shows that BIFSA was aware that training was reaching an inadequate number of workers and approximately 80 per cent of formal industry members had received no training.

A study on women construction workers in New Jersey reveals that women currently comprise an extremely small percentage of the building trades workforce (Gatta, 2002). The

study further shows that in the construction industry many of the on the job skills training opportunities are done informally through observation, mentoring, and coaching and women are often excluded from these informal training venues due to the hostile work climate, and the lack of possible female mentors on site. As a result, women report that they are not assigned to the variety of assignments that would allow for informal skills training. Instead women report that they are assigned to routine, unskilled tasks, such as cleaning and sorting. Women then are not able to break through many of the male dominated informal training and mentoring activities that occur on site.

According to Jha (2002), the construction sector in Nepal plays a vital role in providing employment for a large proportion of the poorest sections of the population in Nepal. The study reveals that the main priority of the construction workers is to find work on a regular basis and improve their income. Male workers can raise their income considerably by acquiring skills and it is rare to find an unskilled male worker having more than five to seven years of experience in this sector. Thus men in Nepal are trained through on the job training. But this opportunity to acquire skills is denied to female labourers. The contribution of women to the construction industry of Nepal is significant. It was found that the women constituted 25 to 40 per cent in roof casting groups and roughly 75 per cent in production of construction materials. The female construction workers are exploited also in terms of lesser wage rates than their male counterparts. In Nepal, females are employed only as helpers and continue working as helpers throughout their working lives.

A study of the employment relationships in construction labour in Nairobi, Kenya by Mitullah and Wachira (2003) reveals that informal construction workers are mostly young men below 45 years of age. They operate under difficult working environment. They have no

formal employment contracts, social security, health insurance, and are exposed to several health hazards. There are no relevant policies and regulations aimed at addressing the problems facing the sub sector. The study by Mitullah and Wachira (2003) has found that most respondents have primary and secondary level of education, with none having no formal education. Although the average daily wage is well above the legal minimum, most workers are unable to find work throughout the year. Also, the sample was skewed towards skilled workers. The survey showed that most workers are not satisfied with their work and most of those employed within the sector would not want their family members to join the sector. In Kenya, construction work is considered to be tedious and tiresome with work done not being commensurate with payments. Most of the construction workers interviewed have skills and some further training (formal or informal) in their areas of specialisation which are predominantly masonry, plumbing and electrical work. However, experience and reputation (rather than formal qualifications) are the main requirements of employment within the informal construction system.

The genesis of the informal sector concept is described by Gërkhani (2004). Keith Hart (1970, 1973) – a social anthropologist – was the first person to bring the term informal sector into the academic literature. He introduced the concept of the informal sector to describe a part of the urban labour force, which works outside the formal labour market. Hart considered the informal sector as almost synonymous for all categories of (small) self-employed individuals. Even though Hart's original notion of the informal sector is limited to the self-employed, the introduction of the concept made it possible to incorporate activities that were previously ignored in theoretical models of development and in national economic accounts. This was an important characteristic of the subsequent use of the term.

In spite of the early work by Hart, the pioneering research on the informal sector is widely considered to be a report of the International Labour Office (ILO, 1972) on employment in Kenya. Informality in this report is mainly characterised by the avoidance of government regulations and taxes. Initially, the ILO considered the main aim of the informal sector to be the provision of subsistence to families. It related the growth of the informal sector to its positive effects on employment opportunities and the distribution of income. As a consequence, it argued that solving the problems of the informal sector is only possible if issues like employment relationships and inequality are solved.

The quality of women's employment in the South Asian and African regions is examined by Ruwanpura (2004). She has explored the key determinants that influence the links between gender and employment quality, the institutional and economic factors which increase women's participation in the labour force, and the relationship between gender and quality of employment opportunities available.

In the United States, the important aspects of women's economic status are women's earnings, the female/male earnings ratio, the occupation and industries in which women work, women's business ownership, and women's poverty (Caiazza, Shaw & Werschkul, 2004). Although women have made gains in all these areas in past decades, they still earn less, are less likely to own a business, and are more likely to live in poverty than men across the States. With median annual earnings of \$ 30,100, women in the United States still earn only 76.2 per cent of what men earn. In the United States, women's wages continue to lag behind men's. Among working women, 33.2 per cent work in professional and managerial positions. About 26.0 per cent of businesses are owned by women, and 87.9 per cent of women live above poverty. Caiazza et al., (2004) provide an overview of women's status in the United

States to assess the progress women have made and find out remaining obstacles to their economic equality and well-being across the country.

The common employment practices in large construction projects, in the United Republic of Tanzania (ILO, 2005a) reveals that there is discrimination in the work sites. The workforce at the construction sites consists mostly of males. Females constitute less than 15 per cent of the total and most are working in the offices. On only one project are females doing manual work on site. No evidence was found of discrimination in the wages paid to men and women executing the same amount of work.

The ILO report (2005a) shows that the law in the United Republic of Tanzania requires that contractors provide the following facilities for all workers and members of their family living with them: an adequate supply of fresh water for drinking, washing and other purposes; adequate and suitable accommodation; catering facilities; and sanitary facilities like toilets, showers and changing rooms. The temporary and casual labourers who form more than 70 per cent of the workforce are not provided with these facilities in most of the projects. Contractors provide welfare facilities mainly to permanent workers. The provision of welfare facilities is considered to be adequate in only three projects.

The law specifies a normal working week of 45 hours, after which workers are entitled to overtime pay at 1.5 times the normal hourly rate, or two times the rate on Sundays. On seven of the 11 sites visited, working hours are well in excess of 45 per week. The maximum number of hours worked per week is 84 on two projects and these are projects where no payment is made for overtime. The law also states that workers should get two days off per week with pay and paid vacation of 28 days for those who have worked for more than

280 days per year. But on all but two projects temporary and casual workers do not receive any time off with pay.

On the basis of evidence provided by contractors themselves it is concluded that on seven of the 11 projects, the laws on minimum wage requirement are not being complied with. In only three projects the contractors are paying their labourers the minimum wage. These same contractors are also providing overtime payment. However the research has found that most of the labourers are not members of a trade union and there is no evidence of trade union activities on vast majority of sites. Contractors generally claim to allow their workers to join trade unions and to hold union meetings on the site. But there is evidence of limitations on freedom of association on some project sites (ILO, 2005a).

The interviewed labourers are concerned that wages and benefits should be improved. But they also would like to see proper contractual agreements between employers and workers so that they are more aware of their entitlements. It is concluded in the paper that the legal framework on labour practices in the construction industry is generally adequate. However, there is a serious lack of monitoring and enforcement. The government and its agencies have been weak in monitoring labour practices on construction sites and enforcing the laws and regulations designed to protect the workers. At the same time, workers are generally not aware of their rights and entitlements under the law and the contract.

The New Zealand Building and Construction Industry is one of the most gender-imbalanced sectors of the New Zealand economy (Hodgkinson, 2006), with only 1.79 per cent of its manual workers being female. The study reveals that women are unable to join a career that offers high pay rates and excellent job satisfaction while employers miss out on being able to draw from a larger and more diverse pool of recruits.

The project by Hodgkinson (2006), identifies and thoroughly analyses these aspects through literature review and extensive surveys and interviews, highlighting the following as the main barriers to women entering and remaining in the New Zealand Building and Construction industry: Lack of leadership in the industry over the promotion of diversity, poor overall public image of the industry, lack of knowledge among employers and other industry members about the benefits of diversity and equal opportunities business practice, lack of knowledge among New Zealand women about the options available to them in the industry, stifled opportunities for women already working and training in the industry and lack of support for those women already working and training in the industry.

The report by Hodgkinson, (2006) recommends the following actions: First develop a culture of diversity, then improve the overall public image of the industry. 'Inform the industry' - Educate employers, clients and other industry members about diversity benefits and Equal Opportunity business practice. Improve knowledge of the building and construction industry and its career options among New Zealand women. Increase the opportunities for women in the industry. Implement support initiatives for women in construction.

A study to create a theory of women's career choice and development in the context of the construction industry in Colorado was carried out by Moore (2006). Focused on female constructors, or those engaged in the management of construction projects or companies, this study investigated the relevant factors, processes, and experiences of women who choose to enter the construction industry in Colorado through construction management degree programs. The goal was to communicate as a theoretically and practically grounded theory of career choice and development an understanding of who female constructors are

and those factors which led them to the construction industry and those influencing their career development. The recommendations are to develop formal mentoring programs and encourage participation in support networks. The National Association of Women in Construction (NAWIC) or other such networks which are designed to provide a support system for women in the construction industry as well as provide a means of career networking. Support networks such as these are invaluable in showing that women are doing well in industry and help to off-set the challenges faced (or at least provide a forum to talk them through). A final recommendation from the findings of this study would be to include diversity training of *all* construction employees; enforce a code of ethics or similar standard for treatment of *all* employees. There is no reason why female constructors should have to endure, on a common basis, any form of harassment. In all, this study (Moore, 2006) provides insights and recommendations for those focused on attracting, hiring, and retaining the employees necessary to meet ever-increasing staffing demands.

The gendered division of labour in construction sites in Zanzibar is examined by Eliufoo (2007). The findings reveal that through the gendered division, women are subordinated; and the social position of women in Zanibar, which has an influence of the Arab culture, prevents the women construction workers from acquiring construction skills. The recommendations show that women need to acquire technical training on their own initiative which in turn would improve their employment situation in Zanibar. Moreover, women working on construction sites are called to reject discriminatory values in the work sites.

Craw, Clarke, Jefferys, Beutel, Roy and Gribbling (2007) examined the employment of Black, Asian and Minority Ethnic (BAME) people, women and disabled people in 'manual'

occupations in construction, and the engagement of small and medium-sized enterprises (SMEs) owned or run by these target equality groups in London.

This report (Craw et al., 2007) was commissioned to help construction industry lead bodies, regional public authorities and employee representatives to understand the many complex and interlinking factors that determine the diversity performance of the construction industry in London. The findings reveal that it is through partnership and co-operative action between these bodies and employers, that the industry can become more diverse, providing equal opportunities for individuals and groups as well as benefiting the industry by increasing the available pool of skilled labour. The supply of adequately skilled labour is a key issue for London construction firms. A majority of companies are experiencing difficulties in recruiting and the demand for skilled and experienced labour is set to grow even further over the next 20 years.

These difficulties are compounded by the poor diversity performance of the construction industry to date (Craw et al., 2007). The construction industry must make the promotion of a diverse workforce and supply chain an urgent imperative. Action to deliver greater equality of opportunity to under-represented groups: women, Black, Asian and minority ethnic communities, and disabled peoples will be an integral part of developing a sustainable labour market for the industry in London.

The findings of a study that investigated the skilling of Kenyan craftsmen (Wachira, Root & Bowen, 2008) show that the majority of the craftsmen acquired their skills via informal skilling with contractors or self-employed craftsman. This informal skilling is mainly characterised by minimal theoretical input and an emphasis on the productivity of the craftsman. Two years and one year were the most frequent training periods for skilled

workers in construction in Kenya suggesting that the most suitable training period is within this range. This prevalence of informal skilling among craftsmen has major implications for skills development and challenges the formulation of appropriate training policies in Kenya and other developing countries.

Gender discrimination as defined by the International Labour Organisation (ILO, 2003a), is any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin which has the effect of nullifying or impairing equality of opportunity and treatment in employment or occupation is discriminatory.

The ILO (2003a) distinguishes between direct and indirect discrimination. The first form arises if, without being less qualified, certain groups of society are explicitly excluded or disadvantaged by the legal framework due to characteristics such as gender. Indirect discrimination occurs if intrinsically neutral rules or laws negatively affect certain groups, like female workers. Discrimination of part-time workers against full time employees is still present in nearly every country. As a major proportion of part-time workers are female, this disadvantages women as well. The discrimination of gender which occurs in various forms in everyday life is identified by Busse and Spielmann (2003). Discrimination in economic opportunities can be both at entry to the labour market and during the contract. This means women participate less in the official labour market and tend to work in certain occupations.

ILO (2007) report states that severe and persistent discrimination at work contributes to poverty and social exclusion. Prejudices based on people's social and family backgrounds often prevail over their actual skills and aspirations, thus forcing them to social immobility. Deprivation is especially severe for people who face multiple discriminations, such as those

who not only happen to be poor but also belong to a religious or racial minority, in addition to being older. This is why the incidence of discrimination is so high among the poor and why poverty prevents people from escaping discrimination. It is clear from the above that only deliberate policy interventions by the State, the social partners and other stakeholders can effectively overcome structural discrimination, along with direct and indirect discrimination.

Indian Literature on Women Construction Workers

In India, various empirical studies have shown that the wages of the women workers in the unorganised sector, particularly in the construction industry, have been significantly below the minimum wage (Anand, 1998; Cherian & Prasad, 1995; Khanna & Mathew, 1979; Sinha & Ranade, 1975).

Although formally there is no discrimination against women workers, wage differentials and gender discrimination does happen in the job market, both in organised and in the unorganised sectors. Women are often seen to be employed in the lower paying jobs. Other than wages, discrimination against women workers is also found at the level of recruitment, selection for skilled jobs and promotions. The employers are prejudiced against employing women, especially in jobs where workers have always been men (Sarma, 1990). In some cases the wage differentials are fixed by Wage Boards based on geography, occupation and industry. Still several studies have shown severe wage discrimination against women. According to Harilal (1986) construction workers in India are overwhelmingly rural landless migrants compelled to seek employment in the construction sector due to indebtedness, inadequate employment and insufficient income.

Kaveri (1995) notes that in Tamil Nadu women and children on worksites are called *chithals*, literally small people. Male workers on the other hand are *periyal* or big people. On large construction sites, *periyals* act as watchmen. They often have the responsibility for curing operations at night that require watering freshly laid cement at intervals so that it sets without cracking. The *periyal's* wife is expected to help him with this job but it is he who gets paid for it. Women construction workers in Tamil Nadu are employed only on a temporary and casual daily basis as unskilled workers (lifting earth loads, cutting soil, mixing cement, breaking stones) and not as masons. There is also considerable hostility from the contractors and male workers to women masons.

Women need help in breaking into new areas of economic activity (McGrath & King, 1994), for they are likely to face hostility and resentment from men who see their livelihoods threatened. In addition, they face social disapproval for there are strongly entrenched social and cultural norms regarding women's involvement in the labour market. However there have been some successes in a few areas. For example, SEWA has enabled women to break into what have been in the Indian context the traditional male activities of dairying, weaving and pottery, often in the face of strong male disapproval (D'Souza & Thomas, 1993).

An interesting example, also from India, of women entering a male dominated field is provided by the Tamil Nadu Joint Action Council for Women (TNJACW) which persuaded contractors in the construction industry to employ women masons. Women were usually employed only on a temporary and casual daily basis as unskilled workers for lifting earth loads, cutting soil, mixing cement and breaking stones. Although there was considerable hostility from the contractors and male workers to women masons, financial incentives persuaded a number of contractors to take on a group of women who had been trained by

TNJACW and some of the prejudices against women in these jobs were broken down, although the women masons still earned significantly less than the men for the same work.

The study on *Women Constructing Their Lives: Women Construction Workers - Four Evaluative Case Studies* (Habitat, 1997) gives four case studies – from India, Mexico, Ghana and Jamaica. The study states that several stereotypes exist about women and houses. In many cultures, women's primary role is considered to be that of child bearers and home makers. From the four cases, the sharpest differentiation of tasks along gender lines occurs in India. Women in India are not considered to be able to do skilled work, so that even when they do master such skills, they don't find work because they are simply not considered.

Table 6
Training Conducted In Various Countries

Country		Duration	Subjects	Results	
India	Madras	I	10 months	Masonry, plastering, literacy	No job opportunities
		II	6 weeks	Masonry, plastering, literacy	
		III	4 weeks	Masonry, plastering, literacy	
Ghana	Bombay		Shelter training	Empowerment (no jobs)	
	Sasekpe	2 years	Masonry, block production	No job opportunities	
	Ekroful	1 year	Masonry, carpentry, painting, block production	Not much work outside community yet	
Mexico		I	3 months	Both theory & practice, various skills	No (lasting) job opportunities
		II	3 months		
Jamaica		6-8 weeks	basic skills, mainly masonry	successful	

(Source: Habitat (1997), United Nations Centre for Human Settlements)

To compensate for the head start that men have in the construction industry, all four projects had training as the core activity of their group (Habitat, 1997). Other activities such as networking as a group and job placement, at least for the first job were considered vital for success as well. But the main focus was on training in the widest sense of the word. The duration as well as the content of the training varied greatly. The basic course in Jamaica was only six to eight weeks, which seems to be enough to launch the women into the building industry. On the other hand in India and Ghana, 10 months and one - two year courses that

included more academic subjects like reading plans, calculation and literacy, turned out to be no guarantee for entry into the industry.

Of the four case studies (Habitat, 1997), India portrays the most rigid forms of gender discrimination. Women tend to get employment in construction sector only when male migration has led to a shortage of male labour, and even then, women are likely to get less pay than men. Apart from gender, the construction sector in India is also strongly divided on the basis of age, caste, religion, geographical origin and place of residence making it difficult to bargain for better wages. A study into employment for women in the urban informal sector in India reveals that construction pays better than more traditional work like weaving, domestic services or the cigarettes sale and production.

A relative large number of women in the informal sector are widows or other female heads of households, suggesting that they are pushed into the work out of necessity rather than choice. The access to the construction sector is easy, the pay is better than other occupations; but the work has a bad image because one has to work together with men which is not considered appropriate for women. Before starting as construction labourers half of the women had tried other jobs, but the wages were not high enough to meet the needs of their families.

The results show (Habitat, 1997) that the outcome of the impact of training on women measured in terms of their ability to acquire employment as skilled workers, in both the Madras (Chennai) and Bombay (Mumbai) cases is negative. In Madras, the training was specifically aimed at creating for women an opportunity to train which is normally denied to them. Most of the trained women found that the labour market frustrated their efforts to get skilled jobs. Entrenched stereotypes about what women can do became a barrier to their entry

into skilled jobs. When women have to compete with men for jobs, however, the market seems to discriminate against them.

Patel (1998) examines how the contemporary women movement in India has addressed the issue of women's education. She writes that the challenges before the women's movement are enormous and what is needed is to address multi-faceted and long-term perspectives and approaches. It is crucial to develop alternatives outside the formal system of education to promote women's empowerment. However, it is equally important to develop strategies and mechanisms to change the institutionalised practices and organisational structures of the existing system of education that reproduce gender inequalities. If women's education for equality is not only a women's issue, but a political issue, then the women's movement can develop multi-pronged and long-term strategies and approaches with the help of broad-based support from grassroots organisations and other movements.

Lingam (1998) reported that women remained as head-loaders while men had an opportunity to move up to become a helper, mason, supervisor, labour agent or even contractor. Ironically, women workers were preferred to men workers because they were docile, and carried out strenuous jobs without complaint and for fewer wages.

Saxena (1999) examines the working conditions for women in India, in industry and analyses possible discrimination against women with the view to shape future strategies from four perspectives: the woman worker, the male worker, the management and union leader. It looks at specific working conditions like wages and timings, promotions and benefits, facilities, occupational health and safety, collective bargaining and harassment at the work place. The study also tried to surface any best practices with respect to women workers so

that worker's organisations could use these as precedents to advocate change in working conditions, of workers in general and of women in particular.

The key findings in the study (Saxena, 1999) are women are slotted into certain jobs, based on the real differences caused by their differential access to skills and perceived constraints which takes the form of jobs predominantly staffed by women, categorised as low skilled and low paying. The second and more overt form of discrimination found is unequal pay for equal work. Inequity in pay was also dependent on the following factors: Women not deployed for overtime or night shifts where payments are higher. In general, men receive more promotions and for men, unlike women, the nature of their jobs often changed with these promotions. A higher proportion of men received benefits in all categories compared to women. The presence of unions has generally meant more benefits for the workers, including women.

The study (Saxena, 1999) revealed that a larger proportion of men reported having access to facilities at the workplace than did women. In general there was an inadequate provision of those work facilities specifically for women workers such as rest rooms and childcare. There is not much of a difference in facilities for women even where there is a union.

More than three fourths of the men received training compared to less than half the women. Among those trained, a higher proportion of women reported getting basic training, while a higher proportion of men reported getting higher skilled training. During periods of modernisation and restructuring, more men got retrained rather than women. Barriers to women's access to training include mobility (freedom to travel), the management's male bias in choice of who gets training and the fact that there fewer women in the work- place.

The problems of women construction workers in Kerala are highlighted by Hari Priya (2000). Her findings are: Majority of the respondents needs to cover a distance of five to ten km, to reach their work place. Majority of the workers have an experience of less than five years and only 18.7 per cent has more than 10 years of experience. Majority of them joined this sector due to circumstantial poverty (husband/parents died) by chance and not by choice. More than half of the respondents (53.3 per cent) are illiterate without attending any formal schooling. Being a politically active and aware state, 68 per cent of the respondents are members of construction union affiliated to either ruling left party or opposition party. The union provides variety of welfare activities such as old age pension, and crisis support. The union also educates its members on entitlement and other rights. At the same time 28 per cent of the respondents felt that the number of women respondents in the union is inadequate and the existing women members are not pro-active. The respondents who have infants and children under 6 years of age is 24.7 per cent. The organisations never provide crèche facility and these women are depending on neighbours, parents and in laws to look after the infants. 76.6 per cent are unskilled manual labourers.

Majority of the respondents could not get any skilled job due to family responsibilities and poverty (Hari Priya, 2000). None of the organisations provides toilet facilities, and these women depend on neighbours' toilets or go to isolated places or bushes for their needs. Abusive tendency of co-workers and sub contractors are the main type of harassment, and harassment leads to mental depression, uneasiness and adversely affects the productivity. Respondents did not report rape and molestation cases but many of them have extra marital relations with co-workers and sub contractors and contractors. Most of them

have only emotional attachment because 36 per cent of the respondent's husbands are alcoholic and 30 per cent are wife beaters.

A survey (SEWA, 2000) was conducted by SEWA to study the socio-economic aspects of the lives of construction workers and to accelerate the process of organising women construction workers of Ahmedabad. Some of the key findings of the study are: about 70 per cent of women construction workers belong to the age group of 26 - 45 years; only 19.2 per cent of women workers are in the age group of 15-25 years; 36.8 per cent of men workers are in the age group of 15-25 years; 81.6 per cent of women workers were married while 72 per cent of male workers were married; 14.4 per cent of women respondents were widows; During the study, majority of the women workers (68.8 per cent) said that they work as head loaders on construction sites; 90 per cent of women workers surveyed were unskilled labourers, while a nominal 10 per cent work as semi-skilled labourers, mostly assisting the male masons. The women workers said they did nine main types of work on the construction site, whereas their male counterparts were engaged in 21 different construction related types of work.

A key finding of the study (SEWA, 2000) was that almost all the women workers were engaged in unskilled jobs (manually carrying/transferring construction materials). Out of 125 women workers surveyed, 36 per cent women are engaged in construction work for the last 6 years while 18 per cent of them have been doing this work for the last 20 years. The remaining joined the construction sector during the previous 3-5 years. It was found that 65 per cent of the women's families had been doing construction work from one generation to the next, while the remaining 35 per cent of women joined this sector to support their

families mainly due to the non-availability of other work and the closure of the textile mills in the city.

Sixty per cent of the male workers were occupied in this work from one generation to the next, while 40 per cent had joined this work for the first time. The average daily wages of the female workers were found to be substantially lower than the male workers. The average daily income of the female worker was Rs. 60, as against Rs. 128 for the male worker, who earned more than double that of the women. The average monthly income of the female worker was found to be Rs. 1,815, whereas the monthly average income of the male worker was around Rs. 3,842. Annually, the male worker earned more than double the female worker. These women also expressed their willingness to upgrade their skills in various construction related techniques.

ILO (2001a), reports that in most countries, construction jobs are undertaken almost exclusively by men. However, in the countries of South Asia, women play an important role which consists of performing unskilled tasks for low pay. For example, in India it is estimated that up to 35 per cent of the construction workforce are women. They are 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. Discrimination in pay is widespread. A survey of 2,600 construction workers in five cities found open inequality in pay with women earning 10-20 per cent less than men for similar work. Moreover, women are often employed as part of a family work unit, as the piece-rate system encourages workers to engage their wives and children to increase output, and in these circumstances women may work but may not (directly) receive any payment at all. In the survey noted above, no female workers were on the payroll of any contractor, although they comprised

from 23 per cent (Hyderabad, Delhi) to 34 per cent (Mumbai, Pune) of the construction workforce. Not surprisingly, no site had separate rest areas for females or nurseries for children and no women had received maternity benefit payments.

Perhaps even more salutary than the current status of women in the construction industry is the attitude of skilled craftsmen towards them. Of the 670 workers interviewed on 11 sites in Delhi, 70 per cent of masons and 72 per cent of plumbers felt that women should not receive equal pay for equal work. The bias seemed to be more deeply embedded in the junior than in the senior craftsmen – which no doubt reflects a fear of potential competition for scarce positions (Anand, 2000). Even in Kerala, where many other basic labour rights are observed and there is a well-established construction workers' welfare board, a disparity in wages between men and women is socially accepted and indeed expected. It is also institutionalised in the “schedule of rates” for state-level engineering departments, with the result that efforts to enforce equality legislation have not yet yielded fruit (Jennings, 2001).

Training is fundamental to meeting the skill requirements of the construction industry. It is also an important factor in the realisation of several other objectives, notably securing improvement in occupational safety and health and improving wages and other terms on which labour is engaged. For example, research in India concluded that the only way to improve the wages and other terms of employment of construction workers is to give them an opportunity to acquire skills. Whereas unskilled workers are exploited, in current market conditions skilled workers can dictate their rates and terms of appointment (Vaid, 1999).

In the note on proceedings of *Tripartite Meeting on the Construction Industry in the Twenty-first Century: Its Image, Employment Prospects and Skill requirements* (ILO, 2001b) Ms. Christine Nathan presented an overview of women workers in the construction industry

in India. She said that the construction industry was the second largest employer of women in India. According to her estimates, about 35 per cent of the 20 million construction workers were women. Yet despite the importance of women in the workforce they were largely invisible. Most women construction workers were hired in the rural areas by subcontractors. They were generally hired and paid through their husbands, which meant that their names were not listed in the payroll record of the subcontractors. The traditional, male-dominated social system in India, the nature of women's work as casual labourers and the subcontractors' unwillingness to disclose the number of women workers to avoid the obligation to pay social costs, contributed to their invisibility.

The invisibility of women workers hindered them from improving their working and living conditions. Women workers were forced to work in unsafe and unsanitary environments for long hours. They suffered from many kinds of injuries and accidents at work which often harmed their reproduction capacity. Companies did not provide safety equipment or maternity leave, and miscarriages were common. Although contractors provided living quarters for workers, these were inhumane, with no water or toilet facilities and no electricity.

Women workers' wages were lower than male workers' wages. Needless to say, the industry took advantage of this situation. Contractors sometimes threatened that they would not hire women workers if they insisted on receiving equal pay. The inequality was rooted in the lack of skill, as well as the failure to recognise skills, among women workers. The traditional system whereby skills were transferred from father to son prevented women workers from receiving skill training, which was given only to male workers. But even when women workers did possess skills, they did not receive a fair evaluation and contractors

would never hire them as skilled workers. At the time when labourers were hired, any obstacles to women taking jobs should be removed (for example, by advertising the jobs in places where women were found) and efforts should be made to ensure that women were fully aware of their terms of employment. Further, there should be encouragement to hire women workers in higher positions. This could be achieved by a three-pillar strategy. First, training programmes should be developed locally with community participation and special training programmes targeting women should be conducted. Second, there was a need for education, with the development of an improved and equal schooling system. Third, it was necessary to avoid any requirements which could cause discrimination against the promotion of women and to sensitise supervisors, site engineers and decision-makers on promoting more women workers to higher positions.

In Kerala, a registered society by name Socio-Economic Unit Foundation (SEUF) was founded to remove gender discrimination in construction sector. This society took efforts to train and empower women as masons. Not only have they breached the male bastion, they have also subverted the institutionalisation of gender disparity in wages. As workhorses, doing all the heavy work, they received a paltry Rs 35, but as masons, they are earning up to Rs 150 a day. This unique feat is the achievement of Thresiamma, Director, Socio-Economic Forum, who has organised them under the Jeevapoorna Masons' Society in Thrissur, Kerala.

About this effort Menon (2002) reports:

The macho male-centric construction sector in Kerala is in a cultural shock with the entry of women masons. Maistries, a gender-specific term to define the male mason, has become gender-neutral in the aftermath. 'Women in masonry' is an anomaly in feudalistic Kerala, which bestows gender on labour. Ploughing and sowing, are considered male monopoly, while weeding and reaping are female chores. It is this traditional concept that is being upturned now, thanks to Thresiamma Mathew, an uncloistered nun, who is grooming women to become masons or maistries and construct buildings instead of just carrying stones and sand.

Shah (2002) attempts to present the Indian case in construction. She writes that construction is a human activity. All kinds of actors (from the architect to construction labourer to the manufacturer of an air conditioning plants) and factors (tools, technologies, materials, bylaws) influence the process and shape the product. It is important that the players, while pursuing their agenda and immediate goal—speed and profit, luxury and comfort, aesthetics and utility—remain sensitive to the wider picture and make conscious efforts to prevent damage to the environment and society. Construction is a vehicle and also an expression of development. Unsustainable development cannot promote sustainable construction. Unsustainable construction cannot produce sustainable cities and settlements. And unsustainable cities and settlements cannot lead to sustainable happiness-- everyone's ultimate pursuit.

A field survey in the two cities of Ahmedabad and Trivandrum in India reveals the gender discrimination in the construction industry (Kakad, 2002). The results show that women construction workers are unskilled and receiving low wages when compared to men. The study reveals the wide gender gap in the areas of education, skill development, upward mobility, and the importance of women's earnings to family when compared to men's earnings. Kakad (2002) suggests amendments in the Building and Other Construction Workers Act, enforcement of its implementation, and market- based mechanisms where the demand for higher skill levels and better services might create conditions to arrest gender discrimination and inhuman exploitation in the construction industry. Regarding training of women it is found that, due to most people's cultural and social orientations, women are rarely taught the skills that are considered 'male work,' and women who have skills must be taught new emerging techniques to retain their employment (Jhabvala & Sinha 2002). At the

same time it is important to help younger women to break into the higher paid employments that were traditionally reserved for men and remove gender discrimination.

In Kerala, John (2004) revealed that the social status of construction workers was not higher than that of the other poverty-ridden groups. Literacy levels, health status, and housing conditions of construction workers are below the State average. Among the construction workers, a positive correlation was found between active participation of workers in trade union activity and membership in Welfare Fund. It was also found that the construction workers engaged themselves during their free time in agricultural and other non-agricultural activities. Wage rates existing in the construction sector are one of the highest in the unorganised sector in the State. In the study on Women Construction Workers (WCWs) in Hyderabad, Mathew (2005) reveals that a majority of the WCWs were aware of social issues, like sexual immorality, excessive drinking leading to ill health and gambling ruining a family, considering they were illiterate, ignorant and in an environment uncongenial for progress and development.

On comparing the level of awareness of the WCWs of different age groups, data clearly indicate that it is the WCWs aged 22– 33 years who seemed more conscious about social issues than WCWs in other age groups. This shows the high receptivity of the WCWs in this age group to understanding social norms and practices. Similarly, the fact that the duration of stay in the city was significantly associated with the level of awareness carries strong implications. The WCWs who had stayed in the city for more than three years felt unsure of these social issues. This may imply that the WCWs felt the impracticability of the application of these social issues. They may have come to the city with great expectations about gender equality and gender justice and perhaps found it difficult to practise them in

reality, while those who had stayed in the city for a short period may have still felt hopeful of a change. Lack of awareness in social issues can be considered as one of the threats that could lead to low self-esteem and helplessness in the WCWs. They can become more vulnerable to exploitation and powerlessness.

Luke and Munshi (2005) assess the role that women might play in reducing the disparities in income and education that persist across social groups in India. In the South Indian setting, low caste women - who have historically been disadvantaged in terms of both caste and gender - emerge as agents of change, using their income to move their families from the traditional network-based economy to the modern market economy. An exogenous increase in low caste female income, net of total household income, weakens the family's ties to the home community as the woman gains bargaining power within the household. The children are significantly less likely to marry in the traditional fashion, to be schooled in the ancestral location, and to ultimately settle there. At the same time, an exogenous increase in relative female income increases the educational attainment of the low caste children, particularly the girls. Female income effects, in contrast, are absent among the high castes, emphasising the importance of social affiliation in shaping household decisions in a developing economy. The results in this paper suggest that historically disadvantaged groups and, in particular, disadvantaged individuals within those groups, may in fact be most responsive to new opportunities when resources are made available to them.

Madhok (2005) reports that work on construction sites is invariably divided along gender lines. The types of work that men do are labeled as skilled work and fetch higher wages than the work that women are allowed to do. Women are restricted to headloading and *beldari* jobs that involve fetching and carrying of materials and

this type of work is labeled as unskilled work. Naturally, unskilled work is paid less than skilled work. This division of labour seems to be prevalent everywhere in the country. Even where men are hired to do *beldari* jobs, they are, by custom, paid a higher wage than women. The Equal Remuneration Act is flouted everywhere. On some jobs, men and women are treated as a couple and wages are paid to the man, not the woman. Assisting a mason and anticipating his exact requirement so that work can progress smoothly requires a high degree of skill, as does climbing scaffoldings and balancing loads of brick. However these are not considered skilled activities.

Vankar's (2005) survey of women construction workers in Ahmedabad revealed that a majority of workers seek to upgrade their skills. During the survey, 70 per cent of the total workers reported that they are willing to participate in training programmes to help them improve their skills. The following findings were reported: 22 per cent of the women workers said that they wanted to be trained in all work, but did not name any specific work, 14 per cent of the women workers said that they wanted to undergo training in masonry work, plaster work and tiles fitting and that they wanted to participate in such specific training so as to improve their standard of living and increase their income. As many as 83 per cent of the workers claimed that their income and job opportunities would increase and risk in work would be reduced after training.

The draft National Housing and Habitat Policy, 2005 states that skill up gradation would result in higher income for the workers (Sarbajeet, 2005). The construction sector is the largest employer of women workers who are often exploited through the disparity in wages, it adds. The solution lies in skill upgradation and induction of women at supervisory levels and also encouraging women as contractors. Public agencies would like to take a lead

in this. All training institutions must enroll women on a preferential basis. Empowerment of women construction workers by means of training them is the need of the hour.

Suchitra and Rajasekar (2006) focus on the promotional aspect of employment security in the context of unorganised workers. Regarding skill in case of construction workers, they find that skill level and continuous improvements in the same are very important for upward mobility. There exists a marked hierarchy among these workers based on their skill levels. The sample construction workers included skilled, semiskilled and unskilled workers. Skilled workers include masons, painters, polishers, carpenters, electricians and road layers. Semi skilled workers usually belonged to the category of apprentices. They are those learning a particular skill such as masonry or carpentry. The unskilled workers constituted helpers in all trades, and usually, they were involved in carrying mud, bricks and cement. These workers were highly marginalised and vulnerable in terms of the competition they faced and the low wages that they were paid. A gender differential was found in the case of construction workers and skill levels. Women construction workers are, in general, unskilled workers and are paid wages even lesser than those paid to the men unskilled workers. The few women workers interviewed mentioned that no matter what skills they learnt (for instance, some had learnt bricklaying and basic masonry), they were always classified as unskilled and paid the associated wage. The study finds that the key factors that determine the employment security of the construction workers are area of residence, human development, average wages and age of workers.

Jeyanthi (2006) conducted a socio economic study on women construction workers in Tiruchirappalli. She studied the socio-economic conditions, working conditions, nature of

benefits and facilities in the workplace, contribution of income to household and the problems faced by women construction workers in Edamalaiputhur area in Tiruchirappalli.

On Gender Discrimination and Women's Development in India, Sivakumar (2008) writes about the various forms and causes of gender discrimination in India, its importance for women in development, legislation for women and solution for gender discrimination. He concludes that a nation or society, without the participation of women cannot achieve development. In Kerala, Mahatma Gandhi University offers a three month certificate training course for masons (Jacob, 2008). Most of the workers trained in this course are women. After teaching them the basic theory of masonry, these workers are sent to local construction sites for practical training. Their incomes have increased by more than 300 per cent. They have not yet been accepted as full-fledged masons at the work sites, but are accepted to assist the male masons and are paid higher salary.

So far many studies have been carried out on the working conditions, safety aspects, awareness of social issues and inclination to upgrade the skill of women in construction, but there is no study in Tamilnadu on finding the barriers for women not undertaking skilled masonry work, or the factors affecting willingness of women to undertake masonry work and their readiness to be trained. The factors affecting willingness of men construction workers and contractors to train and employ women has not been studied in the present Indian context. Hence this present study aims to study the reasons for gender discrimination and determines ways to bring women on par with men in the construction sector by training them as masons and empower them.