

A Study on the Problems and Challenges Faced by the House Construction Workers with Special Reference to Thrissur District

Dr. Chaithanya U

N.S.S. College, Nemmara

doi.org/10.64643/IJIRTV12I12-201143-459

Abstract - The present study examines the problems and challenges faced by house construction workers in Kerala, focusing on their working conditions, job satisfaction, and socio-economic status. The study is descriptive and analytical in nature and is based on both primary and secondary data. Primary data were collected from 150 house construction workers in Thrissur district using a random sampling method. Statistical tools such as descriptive statistics, Kaiser-Meyer-Olkin (KMO) Test, Bartlett's Test of Sphericity, Principal Component Analysis (PCA), and factor analysis with Varimax rotation were used for analysis. The findings reveal that workers face multiple challenges, including unsafe working conditions, long working hours, job stress, health issues, and wage-related problems. Personal conflicts and lack of social respect emerged as the most significant concerns. The study identified four major factors—payment-related issues, safety and health concerns, working conditions, and social issues—affecting workers' well-being and overall job satisfaction.

Key Words: Construction workers, Working conditions, Occupational health and safety, Labour welfare.

I. INTRODUCTION

The construction industry in Kerala is one of the fastest-growing sectors and plays a significant role in infrastructure development and employment generation. Many workers, including both native and migrant labourers, are engaged in construction activities such as house building, road construction, and commercial projects. However, most of these workers belong to the unorganized sector and often work under difficult conditions with

limited job security and social protection. Studies show that migrant workers form a significant portion of the workforce and are mainly engaged in low-skilled jobs, often facing inequality and poor working conditions. Construction workers in Kerala face numerous problems and challenges that affect their overall well-being and job satisfaction. These include unsafe working environments, irregular wages, lack of proper housing and sanitation, long working hours, and limited access to healthcare facilities. Many workers are also exposed to occupational hazards such as dust, extreme weather conditions, and physical strain, which can lead to serious health issues. Additionally, the absence of effective implementation of labour laws and welfare schemes further worsens their situation.

This study aims to analyze the various problems and challenges faced by the house construction workers in Thrissur district of Kerala. By identifying the key issues affecting workers, the study seeks to provide insights that can help in improving their living and working conditions and contribute to the sustainable development of the construction sector.

II. LITERATURE REVIEW

A health-related study conducted by Thasneem, Sulaiman, Sheraf, & Pinheiro in 2025 revealed that construction workers in Kerala are prone to respiratory diseases, musculoskeletal problems, and other occupational health risks due to continuous exposure to dust, heavy physical work, and unsafe environments.

A recent study by Sreedevi and Gopinath (2024) examined wage inequality among construction workers in Kerala and found significant differences between migrant and local workers. The study reported issues such as wage disparity, lack of job security, and poor working conditions, particularly among migrant laborers.

Chandran and Selvaraj (2024) conducted a study in Kozhikode district and observed that construction workers face inadequate welfare measures, poor housing conditions, and irregular payment of wages. The study also highlighted that most workers have limited educational backgrounds, which restricts their access to better job opportunities.

Research by Kerala State Planning Board (2020) revealed that the construction sector in Kerala is heavily dependent on migrant labor. These workers often face poor living conditions, low wages, and exploitation, along with limited access to healthcare and sanitation facilities. The report emphasized the need for better regulation and monitoring of labor conditions.

A study by Thomas and Nair (2018) focused on safety conditions at construction sites in Kerala and found that workers are frequently exposed to unsafe working environments and occupational hazards. The lack of proper

safety equipment and training increases the risk of accidents and injuries, particularly in small-scale house construction projects.

III.STATEMENT OF THE PROBLEM

The construction industry is a major contributor to economic development and employment generation in Kerala. A significant proportion of the workforce in this sector consists of construction workers who are engaged in labour-intensive activities under varying and often challenging conditions. Despite their crucial role in infrastructure development, these workers largely belong to the unorganized sector and continue to face numerous socio-economic and occupational problems. Issues such as low and irregular wages, unsafe working environments, long working hours, lack of basic amenities, and limited access to healthcare and welfare benefits adversely affect their quality of life.

In addition to physical and economic challenges, construction workers also encounter social and psychological issues, including job stress, lack of job security, interpersonal conflicts, and inadequate recognition in society. Although various labour welfare schemes and regulations exist, their implementation and accessibility remain inadequate, resulting in continued vulnerability among workers. These problems not only impact the well-being and job satisfaction of construction workers but also affect productivity and the overall growth of the construction sector. Therefore, it becomes essential to systematically examine and analyze the problems and challenges faced by construction workers in Kerala. This study seeks to identify the key

issues affecting them and provide insights that can help in improving their working conditions, ensuring better welfare measures, and enhancing their overall quality of life.

IV.OBJECTIVE OF THE STUDY

1. To find out the most significant problems faced by construction workers, and
2. Prioritize the predominant challenges encountered by construction workers in Kerala.

V.RESEARCH METHODOLOGY

The present study is descriptive and analytical in nature, aiming to examine the problems and challenges faced by house construction workers. It is based on both primary and secondary data. Primary data were collected from construction workers working at different locations in Thrissur district, while secondary data were obtained from journals, reports, and other relevant sources. The sample size consists of 150 construction workers selected using a random sampling method. For data analysis, statistical tools such as descriptive statistics (mean and standard deviation), Kaiser-Meyer-Olkin (KMO) Test, Bartlett’s Test of

Sphericity, Principal Component Analysis (PCA), and factor analysis with Varimax rotation method were used to identify key factors influencing the problems faced by the workers.

VI.DATA ANALYSIS

The construction industry, a vital component of Kerala's workforce, relies heavily on the contributions of construction workers who face a myriad of challenges in their daily endeavours. Understanding and addressing these challenges are imperative for fostering a sustainable and equitable working environment. This study aims to identify and prioritize the most significant problems faced by house construction workers in Kerala through a comprehensive exploration employing factor analysis. Construction workers encounter a range of issues, spanning from safety concerns to job-related stress and financial struggles. By leveraging factor analysis, the researcher intends to discern the interconnectedness of various problems and prioritize those that have a more pronounced impact on the well-being of construction workers.

Table 1: Descriptive statistics on Problems related to workers

Problems related to workers	Mean	Std. Deviation
Unsafe working condition	2.2500	1.23902
Long working hours	1.4800	0.85631
Compulsory over time work	1.2500	0.67063
Violation of safety rules	1.8400	1.17529
Delay in payment	1.3200	0.74860
Un paid wages	1.1400	0.53086
Low wage	1.2100	0.68428
In adequate amenities	1.2000	0.72292
Job stress	1.7100	0.05426
Health issues	1.8100	0.20046

Disrespect from society	2.9800	0.34486
Personal conflict among workers	3.3600	1.53040

Source: Primary data

The descriptive statistics provide (Table 1) a comprehensive view of workers' perceptions of various problems in the construction setting. While some issues, such as unpaid wages and inadequate amenities, are perceived to be low, others, like disrespect from supervisors and personal conflicts among workers, are perceived to be more significant challenges. The standard

deviations highlight the variability in workers' responses for certain issues, indicating that experiences and perceptions may differ among individuals in the workforce. Addressing these challenges would likely contribute to improved job satisfaction and well-being among construction workers.

Table 2: KMO and Bartlett's Test on Problems related to workers

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.738
	Approx. Chi-Square	997.299
Bartlett's Test of Sphericity	df	66
	Sig.	0.000

The presented output from (Table 2) the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity is an assessment of the suitability of the data for factor analysis, particularly Principal Component Analysis (PCA). The KMO value provides an indication of the adequacy of the data for factor analysis. A KMO value close to 1.0 suggests that the data is suitable for factor analysis. The obtained value of 0.738 indicates a moderate level of sampling adequacy. While it may suggest

that factor analysis could be conducted, researchers often aim for KMO values above 0.7 for a robust analysis. Bartlett's Test of Sphericity assesses whether the variables in the dataset are correlated, indicating whether factor analysis is appropriate. A significant p-value (in this case, $p = 0.000$) suggests that correlations between variables are not zero, supporting the use of factor analysis. The results indicate that the dataset is suitable for factor analysis, as suggested by both the KMO measure and Bartlett's Test of Sphericity.

Table 3: Communalities on Problems related to workers

Problems related to workers	Extraction
Unsafe working condition	0.651
Long working hours	0.655
Compulsory over time work	0.638
Violation of safety rules	0.670
Delay in payment	0.678
Un paid wages	0.748

Low wage	0.769
In adequate amenities	0.768
Job stress	0.648
Health issues	0.506
Disrespect from society	0.784
Personal conflict among workers	0.871

Extraction Method: Principal Component Analysis.

The table 3 provides communalities for each variable in the dataset related to problems faced by construction workers. Communalities represent the proportion of each variable's variance that is accounted for by the extracted factors in the Principal Component Analysis (PCA). The communalities provide an indication of how well each variable is represented by the extracted factors in the PCA. Higher communalities suggest that a larger proportion of the variance in the variables is accounted for by the factors.

Table 4: Total Variance Explained related to Problems of Construction workers

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.541	37.838	37.838	4.541	37.838	37.838	3.536	29.468	29.468
2	1.392	11.597	49.435	1.392	11.597	49.435	2.113	17.611	47.079
3	1.203	10.029	59.464	1.203	10.029	59.464	1.312	10.934	58.013
4	1.050	8.747	68.211	1.050	8.747	68.211	1.224	10.198	68.211
5	0.898	7.480	75.691						
6	0.661	5.510	81.201						
7	0.660	5.497	86.698						
8	0.481	4.011	90.709						
9	0.447	3.728	94.437						
10	0.336	2.803	97.239						
11	0.204	1.698	98.937						
12	0.128	1.063	100.000						

Extraction Method: Principal Component Analysis.

This table 4 provides information on the total variance explained by the principal components related to problems faced by construction workers. The table shows the variance explained by each component, both in terms of the initial eigenvalues and the extraction sums of squared loadings. The cumulative percentages indicate the

proportion of total variance explained as we consider more components. The first four components contribute significantly to the total variance explained. Component 1 alone explains 37.838% of the variance. As the researchers add more components, the cumulative percentage increases, indicating how much of the total variance is captured by

the selected components. The Rotation Sums of Squared Loadings are important after the extraction phase, as they represent a more interpretable solution of the factor structure. The rotation process aims to simplify and clarify the interpretation of the factors. These

results suggest that a meaningful reduction in dimensionality and interpretation of the problems faced by construction workers can be achieved by considering the first four components.

Table 5: Rotated Component Matrix of Problems related to workers

Variables	Component			
	1	2	3	4
1 Unsafe working condition	0.116	0.636	0.436	-0.046
2 Long working hours	0.062	0.789	-0.120	-0.119
3 Compulsory over time work	0.317	0.607	0.038	-0.014
4 Violation of safety rules	0.298	0.713	0.101	0.250
5 Delay in payment	0.813	0.072	0.017	-0.110
6 Un paid wages	0.794	0.266	0.209	0.060
7 Low wage	0.819	0.273	0.145	0.037
8 In adequate amenities	0.270	0.057	0.870	-0.064
9 Job stress	0.138	0.178	0.738	0.357
10 Health issues	0.386	0.345	0.710	-0.329
11 Disrespect from society	0.081	-0.279	0.119	0.819
12 Personal conflict among workers	-0.020	-0.004	0.104	0.927
Eigenvalues	4.541	1.392	1.203	1.050
% of Variance	37.838	11.597	10.029	8.747

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

The first four eigenvalues (4.541, 1.392, 1.203, and 1.050) of the rotation matrix of 12 variables are considered to recommend a factor solution with four factors, as given in Table 5. The principal component factor analysis method was used to estimate the factor loadings. In the first factor, the 5th, 6th, and 7th variables have high loading with an eigenvalue of 4.541, which has 37.838 percent of variation. This factor is termed payments related issues. The second factor in which the 1st, 2nd, 3rd, and 4th variables have

heavy loading with an eigenvalue of 1.392, which has 11.597 percent of variation, is called healthy and safety related issues. The third factor in which 8th, 9th and 10th variables have massive loading with an eigenvalue of 1.203 and 10.029 percent of variation. This factor is called working conditions related issues. In the case of the fourth factor, the 11th and 12th variables have heavy loading with an eigenvalue of 1.050 and 8.747 percent of variation. This factor is labelled Co-workers related issues. The total variance explained

by the four factors together is approximately 68.211 percent.

VII.FINDINGS

The study reveals that construction workers face multiple significant problems, with personal conflicts among workers and disrespect from society emerging as the most serious issues. Moderate concerns include unsafe working conditions, violation of safety rules, job stress, and health issues, indicating the continued presence of safety and well-being challenges. The statistical analysis confirms the suitability of the data for factor analysis, as reflected by the adequate KMO value and significant Bartlett's Test, while the communalities indicate that most variables are well explained by the extracted factors. The factor analysis identifies four major dimensions accounting for a substantial portion of total variance: payment-related issues, safety and health concerns, working conditions, and co-worker and social issues. Among these, payment-related problems such as delay in payment, unpaid wages, and low wages are the most influential, followed by safety-related issues like long working hours and unsafe environments. Additionally, inadequate amenities and job stress highlight poor working conditions, while interpersonal conflicts and lack of social respect further affect workers' overall satisfaction. Overall, the findings indicate that financial insecurity, unsafe work environments, poor working conditions, and social challenges are the key factors influencing the problems faced by construction workers.

VIII.SUGGESTIONS

To overcome the problems faced by construction workers, it is essential to ensure timely and fair payment of wages, including proper compensation for overtime work, to reduce financial stress. Employers should improve workplace safety by providing adequate protective equipment and strictly following safety regulations to minimize accidents and health risks. Basic amenities such as clean drinking water, sanitation, and rest facilities must be made available at worksites to enhance working conditions. Regulating working hours and avoiding excessive overtime can help reduce job stress and fatigue among workers. Skill development and training programs should be encouraged to improve workers' productivity and income opportunities. In addition, the effective implementation of labour welfare schemes and increasing awareness among workers about their rights and benefits are crucial for their well-being. Improving employer-worker relationships through better communication and mutual respect can help reduce conflicts, while regular health check-ups and medical support can address occupational health issues. Finally, promoting social awareness to enhance the dignity and respect of construction workers in society is necessary for improving their overall quality of life.

IX.CONCLUSION

The study concludes that construction workers in Kerala face a wide range of socio-

economic and occupational challenges that significantly affect their job satisfaction and overall well-being. While the construction industry plays a crucial role in economic development and employment generation, the workers in this sector continue to experience issues such as low and irregular wages, unsafe working conditions, inadequate amenities, job stress, and health-related problems. The findings of the study reveal that payment-related issues, safety concerns, poor working conditions, and interpersonal as well as social issues are the major factors influencing the problems faced by construction workers. Among these, financial insecurity and lack of social respect emerge as the most critical challenges. The statistical analysis further confirms that these problems are interconnected and collectively impact the quality of life of workers. Despite the existence of welfare measures, their implementation and accessibility remain limited, reducing their effectiveness. Therefore, there is a strong need for coordinated efforts from government authorities, employers, and society to improve working conditions, ensure fair wages, strengthen safety measures, and enhance awareness about workers' rights. Addressing these challenges will not only improve the living standards of construction workers but also contribute to increased productivity and sustainable growth of the construction industry.

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